As confidentially submitted to the Securities and Exchange Commission on December 18, 2020.
This draft registration statement has not been publicly filed with the Securities and Exchange Commission and all information herein remains strictly confidential.

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Sana Biotechnology, Inc.
(Exact Name of Registrant as Specified in Its Charter)

Delaware	**2836**	**83-1381173**
(State or Other Jurisdiction of Incorporation or Organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

188 East Blaine Street, Suite 400
Seattle, Washington 98102
(206) 701-7914 (Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Steven D. Harr, M.D.
President and Chief Executive Officer
Sana Biotechnology, Inc.
188 East Blaine Street, Suite 400
Seattle, Washington 98102
(206) 701-7914
(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent For Service)

Copies to:

Brian J. Cuneo **B. Shayne Kennedy** **Latham & Watkins LLP** **140 Scott Drive** **Menlo Park, California 94025** **(650) 328-4600**	**James J. MacDonald** **Executive Vice President, General Counsel & Corporate Secretary** **Sana Biotechnology, Inc.** **188 East Blaine Street, Suite 400** **Seattle, Washington 98102** **(206) 701-7914**	**Charles S. Kim** **Kristin VanderPas** **Dave Peinsipp** **Cooley LLP** **440 Eastgate Mall** **San Diego, California 92121** **(858) 550-6000**

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☐

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐ Accelerated filer ☐ Non-accelerated filer ☒ Smaller reporting company ☐

Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☐

CALCULATION OF REGISTRATION FEE

Title Of Each Class Of Securities To Be Registered	**Proposed Maximum Aggregate Offering Price(1)(2)**	**Amount Of Registration Fee**
Common stock, par value $0.0001 per share	$	$

(1) Includes the aggregate offering price of additional shares that the underwriters have the option to purchase.
(2) Estimated solely for the purpose of computing the amount of the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.

The Registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and we are not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED , 2021

Shares

Common Stock

This is an initial public offering of shares of common stock of Sana Biotechnology, Inc.

We are offering shares of our common stock. Prior to this offering, there has been no public market for our common stock. It is currently estimated that the initial public offering price per share will be between $ and $. We intend to apply to list our common stock on the Nasdaq Global Select Market under the symbol "SANA."

We are an emerging growth company under the federal securities laws and, as such, have elected to comply with certain reduced public company reporting requirements.

Investing in our common stock involves a high degree of risk. See the section titled "Risk Factors" beginning on page 18.

	Per Share	Total
Initial public offering price	$	$
Underwriting discounts and commissions(1)	$	$
Proceeds, before expenses, to us	$	$

(1) See the section titled "Underwriting" for additional disclosure regarding the estimated underwriting discounts and commissions and estimated offering expenses.

We have granted the underwriters the right to purchase up to an additional shares of common stock solely to cover over-allotments, if any.

The underwriters expect to deliver the shares against payment in New York, New York on , 2021.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Morgan Stanley **Goldman Sachs & Co. LLC** **J.P. Morgan** **BofA Securities**

, 2021

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In this prospectus, "Sana Biotechnology," "Sana," the "Company," "we," "us," and "our" refer to Sana Biotechnology, Inc. and, its subsidiaries.

We and the underwriters have not authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses prepared by us or on our behalf. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may provide you. We are offering to sell, and seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of the common stock. Our business, financial condition, results of operations, and future growth prospects may have changed since that date.

"SANA," the Sana logos, and other trade names, trademarks, or service marks of Sana Biotechnology appearing in this prospectus are the property of Sana Biotechnology. Other trade names, trademarks, or service marks appearing in this prospectus are the property of their respective holders. Solely for convenience, trade names, trademarks, and service marks referred to in this prospectus appear without the ®, ™ and SM symbols, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or that the applicable owner will not assert its rights, to these trade names, trademarks, and service marks.

Until , 2021 (the 25th day after the date of this prospectus), all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus. This summary may not contain all of the information that you should consider before deciding to invest in our common stock. You should read this entire prospectus carefully, including "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations," and "Business," and our audited consolidated financial statements and unaudited condensed consolidated financial statements and related notes included elsewhere in this prospectus before making an investment decision.

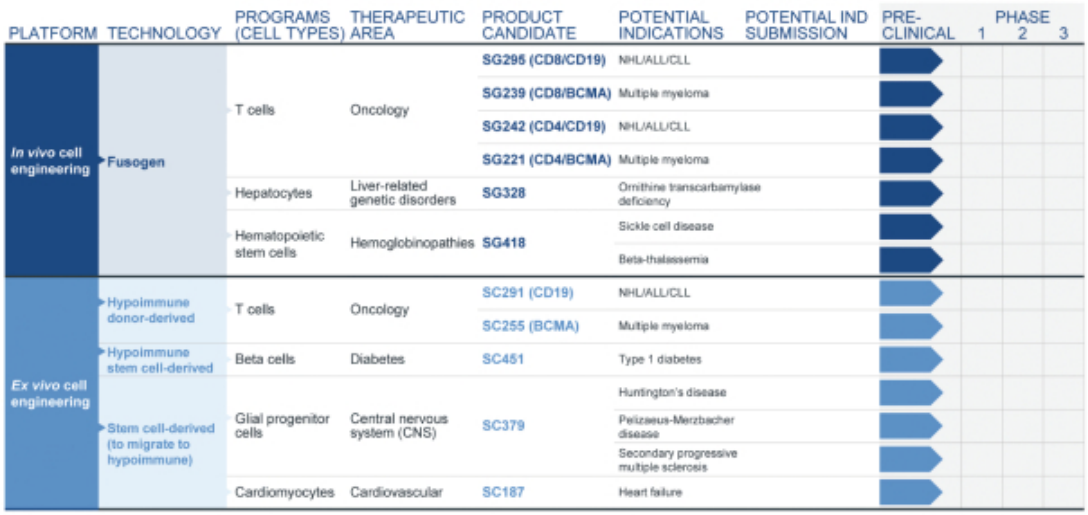
Overview

We were founded on the belief that engineered cells will be one of the most important transformations in medicine over the next several decades. The burden of diseases that can be addressed at their root cause through engineered cells is significant. We view engineered cells as having the potential to be as therapeutically disruptive as biologics to clinical practice. Our long-term aspirations are to be able to control or modify any gene in the body, to replace any cell that is damaged or missing, and to markedly improve access to cellular and gene-based medicines. We have brought together an experienced group of scientists, engineers, and company builders and combined them with the necessary technologies to move this vision forward. We are developing *in vivo* and *ex vivo* cell engineering platforms to revolutionize treatment across a broad array of therapeutic areas with unmet treatment needs, including oncology, diabetes, central nervous system (CNS) disorders, cardiovascular diseases, and genetic disorders, among others. While our current product candidates are all in preclinical development, our goal is to file multiple investigational new drug applications (INDs) both in 2022 and 2023.

The process of repairing and controlling genes in the body, referred to as gene therapy or *in vivo* cell engineering, requires *in vivo* delivery of a therapeutic payload and modification of the genome. Of these, we believe delivery of a therapeutic payload represents the greatest unmet need and is thus at the core of our strategic focus, with our ultimate goal being the delivery of any payload to any cell in a specific and repeatable way. Our initial effort is on cell-specific delivery and increasing the diversity and size of payloads. Using our fusogen technology, we have shown in preclinical studies that we can specifically target numerous cell surface receptors that, when combined with delivery vehicles to form fusosomes, allow cell-specific delivery across multiple different cell types. We have initially chosen to focus this technology on delivering payloads to T cells, hepatocytes, and hematopoietic stem cells (HSCs).

Frequently in disease, cells are damaged or missing entirely, and an effective therapy needs to replace the entire cell, an approach referred to as cell therapy or *ex vivo* cell engineering. A successful therapeutic requires an ability to manufacture cells at scale that engraft, function, and have the necessary persistence in the body. Of these, long-term persistence related to overcoming immunologic rejection of another person's cells has been the most challenging, which has led many to focus on autologous, or a patient's own, cells as the therapeutic source. However, autologous therapies require a complex process of harvesting cells from the patients, manipulating them outside the body, and returning them to the patient. Products utilizing this approach have had to manage significant challenges such as scalability, product variability, product quality, cost, patient accessibility, and a limited number of cell types being amenable to this approach. Given these limitations, rather than utilizing autologous cells to overcome immune rejection, we have invested in creating a hypoimmune cells that can "hide" from the patient's immune system. We are striving to make therapies utilizing pluripotent stem cells with our hypoimmune genetic modifications as the starting material, which we then differentiate into a specific cell type, such as a pancreatic beta cell, before treating the patient. Additionally, for cell types for which effective differentiation protocols from a stem cell have not yet been developed, such as T cells, instead of starting from a pluripotent stem cell, we can utilize an allogeneic cell, differentiated cells sourced from a donor, as the starting material to which we then apply our hypoimmune genetic modifications.

We believe the time is right to develop engineered cell therapies across a broad range of therapeutic areas. Substantial progress in the understanding of genetics, gene editing, gene control, protein engineering, stem cell biology, immunology, process analytics, and computational biology have converged to create an opportunity to markedly increase the breadth and depth of the potential impact of genetic and cellular medicines. We are focused on creating transformative *in vivo* and *ex vivo* engineered cell therapies across a range of therapeutic areas. We are in the early stages of development across a broad pipeline of product candidates, all of which are currently in the preclinical stage of development and are summarized below:



Our People and Values

Our people are the most important strength of the company. We have assembled a diverse group of experienced company builders, scientists, manufacturing scientists, engineers, and operators to execute our business plan.

- **Experienced Company Builders**. Our founder and Chief Executive Officer, Dr. Steve Harr, was previously CFO of Juno Therapeutics, helping to build the company and its chimeric antigen receptor (CAR) T cell therapy platform until its acquisition. He is a physician-scientist with experience in basic research, clinical medicine, finance, company building, and operations. Our Chairman of the Board and co-founder, Hans Bishop, is an experienced company builder and operator with success across a number of companies.
- **Leading Scientists**. Our leadership team includes multiple individuals with deep experience building high growth, disruptive companies as well as world-class scientists, including researchers who have made seminal discoveries in gene delivery, immunology, CAR T cells, gene editing, and stem cell biology such as Drs. Richard Mulligan, Terry Fry, Ed Rebar, Chuck Murry, Sonja Schrepfer, Steve Goldman, and Jagesh Shah. We have surrounded this team of discovery scientists with a team of drug developers experienced in advancing drug product candidates through the drug development process.
- **Experienced Manufacturing Scientists, Engineers, and Operators**. Since our founding, we have proactively assembled manufacturing sciences and operations expertise on our board, on our executive team, and across the company. Our manufacturing organization is led by Dr. Stacey Ma, an experienced executive with over two decades in manufacturing leadership, contributing to the commercialization of over ten products across multiple modalities.

- **Board of Directors and Investors with Shared Long-Term Vision**. Our board of directors is composed of renowned company builders, operators, leaders, scientists, drug developers, and investors with experience across a diverse array of companies. This team is supported by investors who share our long-term vision around building the leading company of the cell engineering era including ARCH Venture Partners, Flagship Pioneering, Canadian Pension Plan Investment Board, Baillie Gifford, The Alaska Permanent Fund, The Public Sector Pension Investment Board, F Prime, GV, and ADIA, amongst others.

We aspire to a core set of values that drive us every day:

- **Lead from every seat**. We have a humble and unrelenting commitment to deliver for patients and our community—we seek to understand, act with honesty, and engage in the crucial conversations.
- **Thrive as a team**. We make each other better than we ever thought possible—we hire amazing people, are intensely curious, and cultivate personal connectivity.
- **Make it happen**. We make great choices with urgency and integrity—we value vigorous debate, alignment around our decisions, and resilient execution.

Our Strategy and Capabilities

Our vision is to build the pre-eminent company focused on engineered cells to create medicines for patients. Our mission is to do so at a scale that allows broad accessibility for patients so that we can democratize access to curative therapies. To achieve this, we have strategically focused on the key limitations for generating engineered cell therapies, whether the cell modulation occurs *in vivo* or *ex vivo*. We also continue to aggregate the people and technologies that will allow us to research, develop, manufacture, and ultimately commercialize differentiated products across a range of diseases. To execute on this strategy and tackle the most critical limitations of engineering cells, we have built deep internal capabilities and technologies across a wide range of areas including:

- **Gene Delivery**. We believe our delivery technologies have broad potential, with both near-term and long-term applications across a number of indications. We are investing in technologies that allow payload delivery to specific cell types, increase the diversity and size of payloads, enable repeat dosing of patients, and increase the volume of distribution inside the body in order to target and access more diverse cells.
- **Gene Modification**. The ability to knock-out, knock-in, modify, and control expression of genes is fundamental to our platforms' success. We have hired world-class scientists with experience in all of these capabilities and across multiple modalities. We are building internal capabilities that enable high throughput cell engineering and gene editing and control using multiple technologies through use of natural systems, protein engineering, and synthetic biology. Our capabilities across multiple modalities allow us to utilize the appropriate system for the biologic problem of interest. We are developing proprietary gene editing capabilities as well as seeking strategic partnerships in key areas.
- **Immunology**. The immune system can be harnessed to treat multiple diseases, and it can also limit the therapeutic effect of most cell- and gene-based therapies. Understanding and harnessing the immune system can have a broad impact across our *in vivo* and *ex vivo* cell engineering portfolio. We are investing in our people and technologies to harness the immune system, particularly T cells, for the treatment of cancer and other diseases. Additionally, our hypoimmune technology has the potential to hide cells from the immune system, unlocking the potential of allogeneic *ex vivo* therapies for the treatment of numerous diseases.
- **Stem Cell and Disease Biology**. Developing our platforms into therapies for patients requires a deep understanding of both cell and disease biology. Furthermore, we are investing significantly in our

people and the technologies that enable the differentiation of pluripotent stem cells into mature cells that can be used as therapeutics. In each therapeutic area we intend to pursue, we have brought senior world-class scientists into the company to lead our efforts, and our research teams have significant experience in various areas of biology.

We also are investing early in building differentiated capabilities in key areas of manufacturing sciences and operations. These include process development, product characterization, and process analytics from the time candidates are in early research phases. Our investments also include scaled research solutions, scaled infrastructure, and novel technologies to improve efficiency, characterization, and scalability of manufacturing.

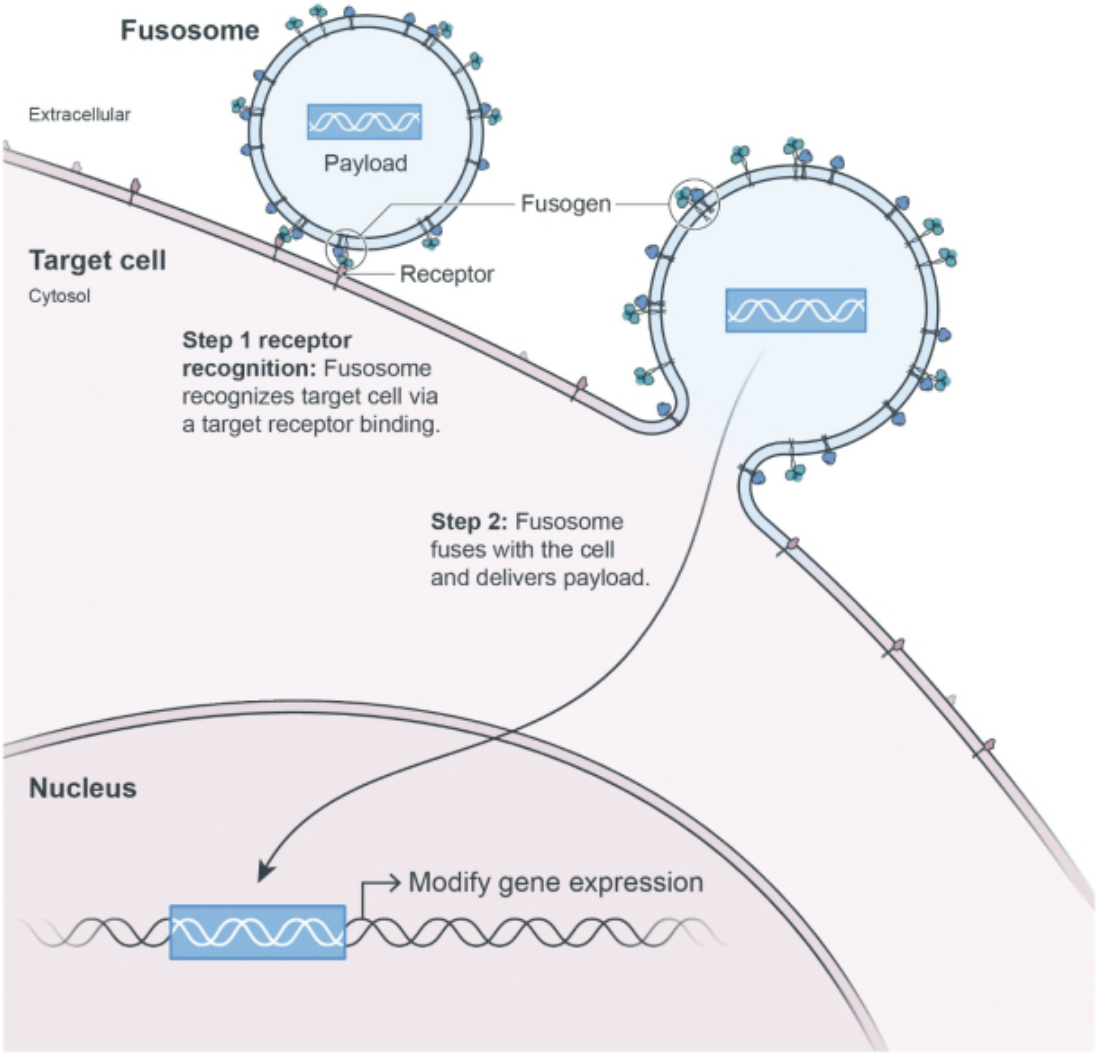
Our portfolio strategy seeks to:

- minimize biology risk where there is platform risk, or in other words, prioritize opportunities where success with our platform should lead to success in addressing the underlying disease;
- prioritize program investments in diseases where the strengths of our *in vivo* and *ex vivo* platforms can address key limitations of existing therapeutic approaches;
- focus on conditions of high unmet need, including the most grievous diseases; and
- prioritize efforts where success in one area begets success in others.

Our *in vivo* Cell Engineering Platform and Programs

Cell-specific delivery of genetic payloads inside the body has the potential to transform the treatment of a number of diseases. For example, CAR T cells have shown impressive potential in oncology, but the current need to genetically modify T cells outside of the body, and then transplant the cells into a patient under conditions where the cells will engraft, limits the breadth of application of the technology. Similarly, while there has been early clinical success using several gene editing technologies to modify hemoglobin expression and provide potentially curative treatments to patients with sickle cell disease and beta-thalassemia, the breadth of application of these approaches has been significantly limited by the need to genetically modify HSCs outside of the body and transplant the cells back into the patient using chemotherapy regimens. Our fusogen technology is designed to enable the delivery of payloads specifically to the target cells in the patient *in vivo*, as illustrated in the figure below, thereby bypassing manipulation of cells out of the body and the need for transplantation. This technology has broad potential applicability, including in for CAR T and HSCs where it could eliminate both the complicated cell manufacturing and the need for high-dose chemotherapy.

Our Fusogen Technology

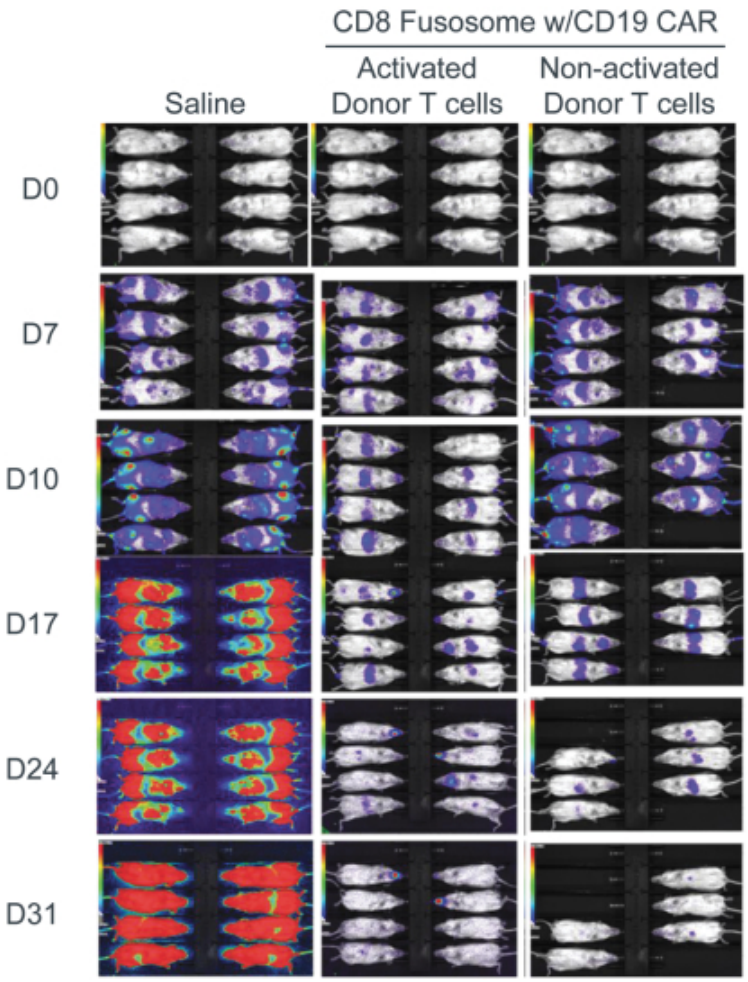


We are developing our fusogen technology to enable the delivery of any payload to specific cells by first, enabling recognition of a specific target membrane (Step 1) and second, by promoting membrane fusion by acting as thermodynamic engines for opposing membranes, pulling them together and thereby promoting fusion (Step 2).

Once we have achieved the desired specificity and potency for a certain cell type, we have the ability to deliver a variety of payloads to that cell. This feature of the technology should allow us to create multiple therapies targeting a variety of diseases with each successful fusogen. As a result, we believe success with any initial therapy targeting a given cell type may meaningfully accelerate lead candidate selection for other indications and increases our confidence that we will be successful with subsequent therapies targeting that same cell type.

Our most advanced fusosome programs target T cells, either CD8+ T cells, which are also known as killer or cytotoxic T cells (CD4+ T cells) which are also known as helper T cells. Targeting these cells, we believe we can deliver a genetic payload with a single intravenous injection, with the goal of transforming some of a patient's T cells into therapeutic CAR T cells. These T cells that are modified to express a CAR are programmed to target specific cells, including cancer cells. Our most advanced fusosome CAR T product candidates (SG242, SG295) target cancer cells which express CD19, a cell surface antigen that is present across several B cell malignancies, including non-Hodgkin lymphoma (NHL), chronic lymphocytic leukemia (CLL), and acute lymphoblastic leukemia (ALL). Together, NHL, CLL, and ALL result in over 70,000 deaths per year in the United States and Europe. While currently approved CAR T therapies targeting CD19, such as Novartis' Kymriah (tisagenlecleucel) and Gilead's Yescarta (axicabtagene ciloleucel), have demonstrated impressive response rates in relapsed or refractory (R/R) disease, the delivery of these therapies requires a complex and costly manufacturing process, as well as toxic conditioning regimens, which have limited patient access. Our goal is to make a therapy which is at least as effective as autologous CAR T therapies but avoids the aforementioned manufacturing complexities and conditioning-regimen associated toxicities. Our preclinical data demonstrate that we can make a CAR T cell *in vivo* with a single intravenous injection and no conditioning chemotherapy, and effectively clear B cell tumors in a commonly used human xenograft mouse model for leukemia (Nalm-6) model. We expect to file INDs for our CD19 CAR programs (SG242, SG295) as early as . We also intend to develop CAR T therapies against other antigens, including BCMA for the treatment of multiple myeloma (SG221, SG239), with the goal of filing INDs for multiple therapies in a spectrum of cancers over the coming years.

Delivery of CD19 CAR to CD8 Cells Leads to *in vivo* Killing of Leukemia Cells in a Human Xenograft Mouse Model



Panel demonstrates activity of CD8 Fusosome delivering CD19 CAR to human T cells in a murine leukemia xenograft model (Nalm-6). Note that when compared to untreated controls, fusosome delivery results in eradication of leukemia cells. Activated T cells were cultured with CD3/CD28 beads for three days prior to injection. CD8 Fusosome delivering the CD19 CAR is effective regardless of activation status of T cells at time of injection.

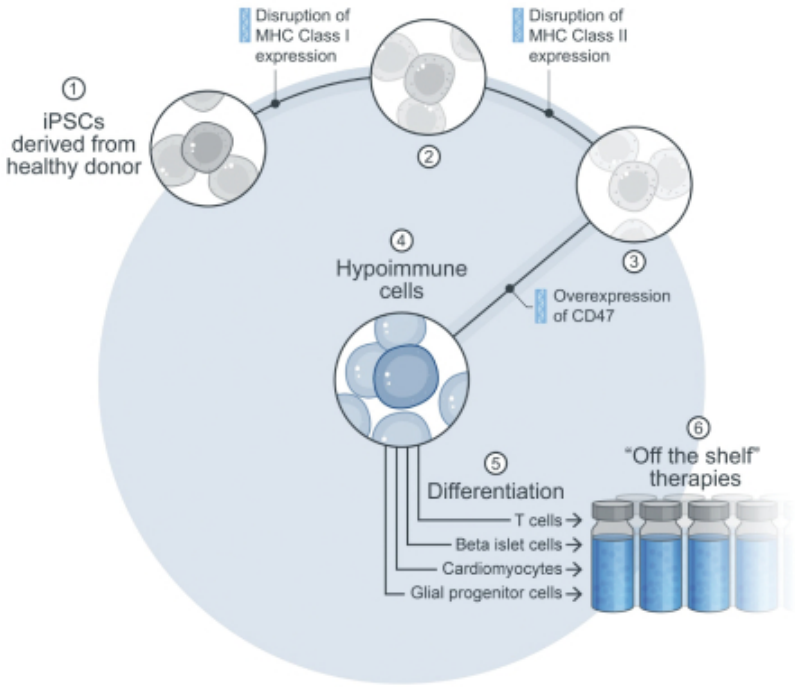
We also have fusosome programs focused on delivering payloads to hepatocytes (SG328) and to HSCs (SG418). While several modalities exist that enable delivery of genetic material to liver cells, including adeno-associated virus (AAV) and lipid nanoparticles (LNPs), these approaches have limitations, including the inability to provide for the stable integration of a genetic payload, a limited payload size, pre-existing immunity, and a lack of cell specificity. Our fusogen technology, which can enable delivery of a payload specifically to hepatocytes in the liver, can potentially address these limitations. We have developed fusosomes that, in *in vivo* murine studies, transduce a meaningful percentage of hepatocytes in a range that we believe will allow us to treat a myriad of genetic disorders. We have chosen to initially focus on severe genetic diseases where we believe treating pediatric patients is likely to lead to significant clinical benefit. Our technology can integrate the desired genetic payload, DNA in this case, into a target cell's chromosomal DNA, thereby, in contrast to non-integrating

gene transfer systems, providing for sustained payload expression as the hepatocytes of the pediatric patient divide and amplify during organ growth. We are developing our lead hepatocyte fusosome product candidate, SG328, for ornithine transcarbamylase (OTC) deficiency, the most common defect in urea metabolism with clinical manifestations of neurologic damage and severe multi-organ failure, affecting approximately 10,000 patients worldwide, including approximately 3,000 patients in the United States. Our goal is to file an IND as early as . We intend to develop our HSC-targeted fusosomes to repair genetic abnormalities underlying diseases such as sickle cell disease and beta-thalassemia (SG418), with the goal of achieving preclinical proof of concept as early as .

Our *ex vivo* Cell Engineering Platform and Programs

Cell death leads to the manifestations of many of the most serious and common diseases, such as heart disease, Type I diabetes, and advanced multiple sclerosis. We believe that the most effective mechanism to treat these patients is to replace their missing or damaged cells. Our goal is to manufacture genetically modified cells that are capable of both replacing missing cells and evading a patient's immune system, which otherwise would recognize these cells as foreign and reject them. We believe our hypoimmune technology will enable us to manufacture cells cost-effectively, at scale, with product consistency, providing the potential for global patient access.

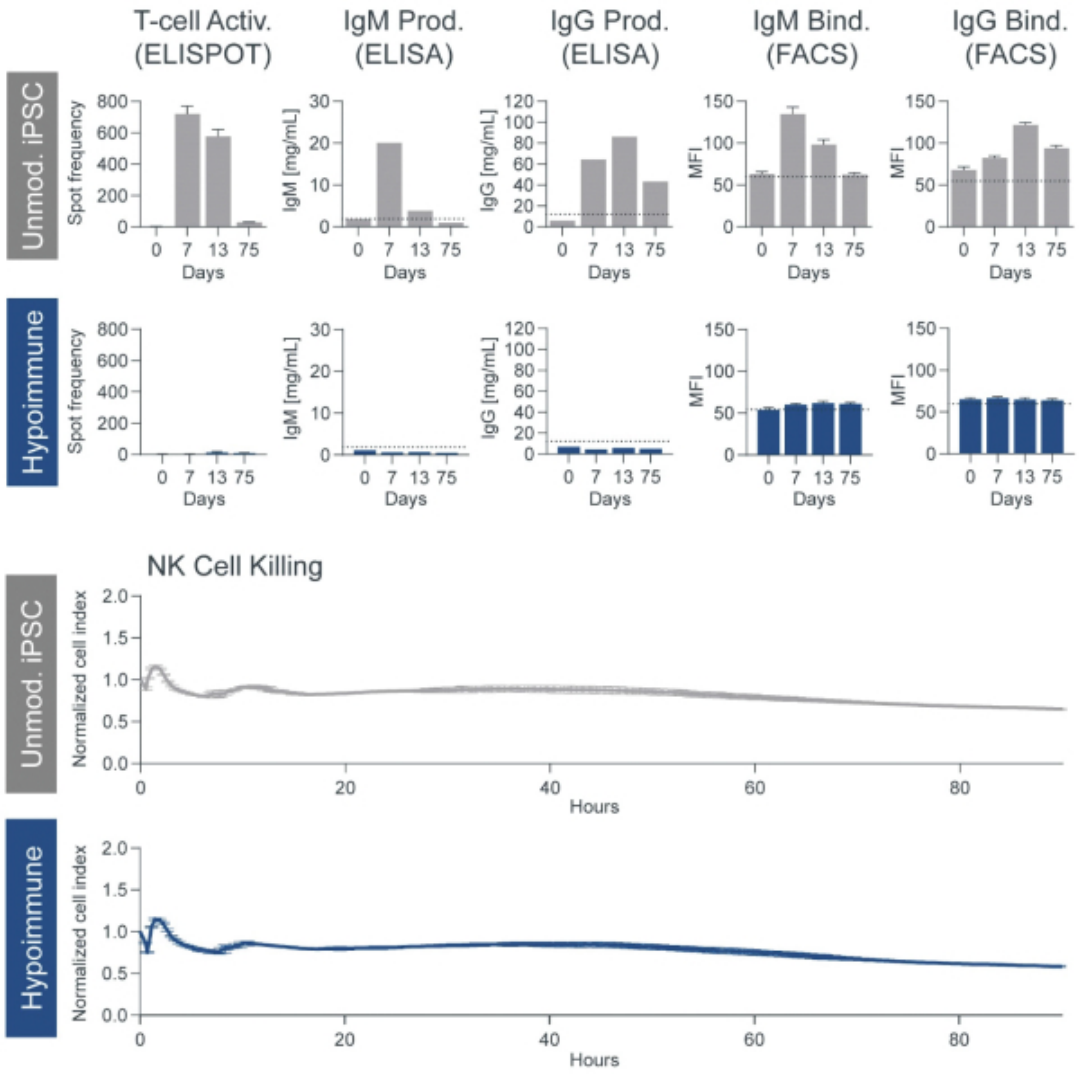
Creating Hypoimmune Therapeutic Cells from Human Induced Pluripotent Stem Cells (iPSCs)



Our hypoimmune technology combines the three gene modifications below to hide cells from the host immune system: Disruption of MHC class I and class II expression (which inactivates adaptive immune responses), and overexpression of CD47 (which hides cells from the innate immune system, including macrophages and natural killer (NK) cells). Pluripotent stem cells from healthy donors are used as the starting material and are then genetically modified with the hypoimmune edits. These edited cells are then differentiated into cell types of therapeutic interest, which are administered to the patient as "off the shelf" therapies.

We have shown across multiple species preclinically that our hypoimmune cells are able to hide from the immune system and avoid immune rejection, and we are now developing this technology to make *ex vivo* therapies to treat multiple diseases.

Absence of T Cell, B Cell, or NK Cell Responses Following the First Delivery of Hypoimmune Human iPSCs into Non-Human Primates (NHPs)



Immune cells from animals receiving unmodified (wild type, wt) human iPSCs show robust T cell interferon responses when exposed to wt iPSCs in vitro (Row 1). In contrast, immune cells from animals receiving hypoimmune iPSCs showed no response when exposed to hypoimmune iPSCs in vitro (Row 2). Delivery of wt iPSCs activated B cells, as evidenced by production of IgM, IgG, and by binding of these antibodies to the surface of donor cells (increased mean fluorescent intensity, MFI) (Row 1). Delivery of hypoimmune iPSCs did not induce antibody production above background, and no binding of IgM or IgG to the cell surface was seen (Row 2). Neither

unmodified nor hypoimmune-edited cells were susceptible to killing by natural killer (NK) cells, indicating protection from the "missing self" signal (Rows 3 and 4). Data above from a single NHP; results representative of studies in four NHPs. Dotted lines, background level of assay.

Our most advanced hypoimmune product candidates are allogeneic CAR T cells for cancer (SC291, SC255). In order to make an effective allogeneic CAR T cell, we must overcome two different biologic barriers. First, the allogeneic CAR T cell must be prevented from causing graft versus host disease (GvHD), which occurs when transplanted T cells attack a patient's cells. Preventing this adverse reaction is relatively straightforward through gene edits such as deleting the TCR-alpha gene. Second, an allogeneic CAR T cell must evade host versus graft disease (HvGD), which occurs when a patient's immune system tries to kill the transplanted T cells, thereby limiting the potential benefit of the therapy. One approach to avoid HvGD has been to eliminate a patient's immune system, which both puts the patient at risk for severe infections and may limit the effectiveness of the therapy, as recovery of the immune system will lead to elimination of the CAR T cells. Our hypoimmune technology is designed to hide cells from the patient's immune system, giving our allogeneic CAR T cell program the potential to avoid these issues. Our lead allogeneic CAR T product candidate (SC291) is a CD19 directed CAR T cell for NHL, CLL, and ALL. We believe that our allogeneic CAR T program has the potential to serve a different, later-stage patient population than our fusosome CD19 CAR T program. We expect to file an IND for this program as early as . We also intend to develop other CAR T therapies, including BCMA for the treatment of multiple myeloma (SC255), with a goal of developing for multiple CAR T therapies for a spectrum of cancers over the coming years.

We are also utilizing our hypoimmune technology to develop pancreatic beta cells for the treatment of diabetes, with an initial focus on Type I diabetes mellitus (T1DM). Almost 1.6 million people in the United States, and 2.4 million in Europe have T1DM. T1DM is a disease in which a patient's immune system attacks and kills pancreatic beta cells, leading to complete loss of insulin production in affected individuals. Patients need to take multiple insulin shots every day for life, and, while insulin has a profoundly positive impact on patients, people with T1DM have approximately 15 years shorter life expectancies than people without diabetes and are consistently at risk for complications such as coma, stroke, kidney failure, and blindness from poorly controlled blood glucose. We and our collaborators have shown that we can develop high quality beta cells that, when transplanted, normalize blood glucose and cure diabetes in animal models. We have also shown that our hypoimmune cells induce no systemic immune response, even in NHPs with a pre-existing immune response to non-hypoimmune cells. As a result, we believe our stem cell derived hypoimmune pancreatic cells have the potential to create a disruptive treatment for T1DM, offering patients life-long normal blood glucose. We are working through the process development and IND-enabling studies to allow for an IND filing for SC451 as early as .

There are also a number of CNS disorders in which the primary manifestations are caused by missing cells. We are developing stem cell-derived allogeneic glial progenitor cells (GPCs) to treat various diseases of the white matter in the brain. GPCs are part of the support system of the brain and can differentiate into either myelin-producing oligodendrocytes or astrocytic support cells for neurons. These GPC cells have the potential to treat a host of childhood myelin diseases, such as congenital leukodystrophies, as well as more common adult diseases of the glia and myelin such as multiple sclerosis and Huntington's disease. In the United States and Europe, multiple sclerosis affects approximately 1.6 million people, Huntington's disease affects approximately 90,000 people, and in aggregate congenital leukodystrophies affect 1 in 7,600 births. We and our collaborators have shown that injecting GPCs into the brain can reverse some or all of the CNS manifestations of these diseases in animal models. We expect to file three INDs for SC379 with an initial focus on Pelizaeus-Merzbacher disease (PMD), secondary progressive MS (SPMS), and Huntington's disease as early as .

Heart disease remains the most common cause of death worldwide and results in over $280 billion in direct medical costs in the United States. Despite this unmet need, there has been little progress in treating diseases of

the heart over the past several decades. After a myocardial infarction, or heart attack, patients have dead heart tissue that reduces pump volume in each cardiac cycle, leaving them at risk for heart failure. To this end, we are developing stem-cell derived cardiomyocytes as a treatment for these patients. We and our collaborators have shown that injecting these cells into animal hearts after a heart attack can meaningfully improve heart function, potentially even returning it to normal. We intend to initially develop our cardiomyocytes for patients who have had a recent myocardial infarction and are at high-risk of developing severe heart failure, a disease that affects approximately 1.4 million in the United States and Europe annually. Success in this indication may allow us to treat the larger market of severe chronic heart failure, which impacts millions more patients in the United States and Europe. We expect to file an IND for SC187 as early as .

SanaX

Our goal is to lead both the present and future of cell engineering and we are committed to making significant investments in research and other activities that will ensure a leadership position throughout the next decade. Towards this end we have established SanaX as a distinct research arm. SanaX research efforts are aimed at making fundamental improvements of existing technology and establishing new paradigms for gene and cell delivery that will ultimately lead to the development of completely new therapeutic modalities. Current SanaX research activities are focused on areas such as: cells as delivery vehicles, novel viral vectors, novel production approaches to current viral vectors, novel methods for enabling the exogenous control of transgene expression via small molecule drugs, and new paradigms for genetically manipulating specific immune response in order to engender immunological tolerance to specific antigens, cells, and organs. SanaX is currently also involved in COVID-19 related research focused on the delivery of specific antibodies for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and the evaluation of novel direct anti-viral strategies.

Dr. Mulligan, our Executive Vice-Chairman and Head of SanaX, directly oversees the SanaX research effort. SanaX maintains an independent research budget in order to ensure that these longer-term, disruptive priorities are not sacrificed for near-term needs. Once SanaX develops an understanding of how a technology can translate into the clinic, a program will move from SanaX into our internal R&D and manufacturing organization or partnered externally.

Risks Associated with Our Business

Our business is subject to a number of risks of which you should be aware before making a decision to invest in our common stock. These risks are more fully described in the section titled “Risk Factors” immediately following this prospectus summary. These risks include, among others, the following:

- We are a preclinical-stage biotechnology company and have incurred significant losses since our inception, and we expect to incur losses for the foreseeable future. We have no products approved for commercial sale and may never achieve or maintain profitability.
- Our limited operating history may make it difficult for you to evaluate our prospects and likelihood of success.
- Our *in vivo* and *ex vivo* cell engineering platforms are based on novel technologies that are unproven and may not result in approvable or marketable products, which exposes us to unforeseen risks and makes it difficult for us to predict the time and cost of product development and potential for regulatory approval, and we may not be successful in our efforts to use and expand our technology platforms to build a pipeline of product candidates.
- All of our product candidates are in preclinical development and have not commenced clinical development. Preclinical and clinical drug development is a lengthy and expensive process with uncertain timelines and uncertain outcomes. If preclinical studies or clinical trials of a product

candidate are prolonged or delayed, we may be unable to obtain required regulatory approvals, and therefore be unable to commercialize our product candidates on a timely basis or at all.

- The development and commercialization of biopharmaceutical products is subject to extensive regulation, and the regulatory approval processes of the U.S. Food and Drug Administration (FDA) and comparable foreign authorities are lengthy, time-consuming, and inherently unpredictable. If we are ultimately unable to obtain regulatory approval for our product candidates on a timely basis if at all, our business will be substantially harmed.
- Our clinical trials may fail to demonstrate substantial evidence of the safety and efficacy of our product candidates or any future product candidates, which would prevent or delay or limit the scope of regulatory approval and commercialization.
- We may encounter difficulties in managing our growth, which could disrupt our operations.
- The outbreak of the novel coronavirus disease, COVID-19, could materially and adversely affect our preclinical studies and development, any clinical trials we subsequently commence, and our business, financial condition, and results of operations.
- Even if this offering is successful, we will require additional funding in order to finance operations. If we are unable to raise capital when needed, or on acceptable terms, we could be forced to delay, reduce, or eliminate our product development programs or commercialization efforts.
- Our success payment and contingent consideration obligations may result in dilution to our stockholders, may be a drain on our cash resources, or may cause us to incur debt obligations to satisfy the payment obligations.
- If we are unable to successfully identify, develop, and commercialize any product candidates, or experience significant delays in doing so, our business, financial condition, and results of operations will be materially adversely affected.
- Our success depends on our ability to protect our intellectual property and our proprietary technologies.
- We depend on intellectual property licensed from third parties and if we breach our obligations under these agreements or if any of these agreements is terminated, we may be required to pay damages, lose our rights to such intellectual property and technology, or both, which would harm our business.
- While we believe our pipeline will yield multiple INDs, we may not be able to file INDs to commence clinical trials on the timelines we expect, and even if we are able to, the FDA may not permit us to proceed.

Corporate and Other Information

We were founded in July 2018 as a Delaware corporation. Our principal executive offices are located at 188 East Blaine Street, Suite 400, Seattle, Washington 98102, and our telephone number is (206) 701-7914.

Our website address is www.sana.com. The information on, or that can be accessed through, our website is not part of this prospectus and is not incorporated by reference herein. We have included our website address as an inactive textual reference only.

Implications of Being an Emerging Growth Company

We are an emerging growth company as defined in the Jumpstart Our Business Startups Act of 2012 (the JOBS Act). We will remain an emerging growth company until the earliest of: (i) the last day of the fiscal year following the fifth anniversary of the consummation of this offering; (ii) the last day of the fiscal year in which

we have total annual gross revenue of at least $1.07 billion; (iii) the last day of the fiscal year in which we are deemed to be a "large accelerated filer" as defined in Rule 12b-2 under the Securities Exchange Act of 1934, as amended (the Exchange Act), which would occur if the market value of our common stock held by non-affiliates exceeded $700.0 million as of the last business day of the second fiscal quarter of such year; or (iv) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period. An emerging growth company may take advantage of specified reduced reporting requirements and is relieved of certain other significant requirements that are otherwise generally applicable to public companies. As an emerging growth company:

- we will present in this prospectus only two years of audited annual financial statements, plus any required unaudited financial statements, and related management's discussion and analysis of financial condition and results of operations;
- we will avail ourselves of the exemption from the requirement to obtain an attestation and report from our independent registered public accounting firm on the assessment of our internal control over financial reporting pursuant to the Sarbanes-Oxley Act of 2002;
- we will provide less extensive disclosure about our executive compensation arrangements; and
- we will not require stockholder non-binding advisory votes on executive compensation or golden parachute arrangements.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This provision allows an emerging growth company to delay the adoption of some accounting standards until those standards would otherwise apply to private companies. We have elected to use the extended transition period for any other new or revised accounting standards during the period in which we remain an emerging growth company; however, we may adopt certain new or revised accounting standards early.

The Offering

Common stock offered by us	shares.
Underwriters' over-allotment option	shares.
Common stock to be outstanding immediately after this offering	shares (or shares if the underwriters exercise their over-allotment option to purchase additional shares in full).
Use of proceeds	We estimate that the net proceeds to us from this offering will be approximately $ million (or approximately $ million if the underwriters exercise their over-allotment option to purchase additional shares in full) assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We currently intend to use the net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities, to fund the ongoing development of our *in vivo* cell engineering platform and product candidates, which we anticipate will allow us to advance at least *in vivo* product candidates to a potential IND filings; to fund the ongoing development of our *ex vivo* cell engineering platform and product candidates, which we anticipate will allow us to advance at least *ex vivo* product candidates to a potential IND filings; to fund research efforts focused on advancing and broadening the scope of our *ex vivo* and *in vivo* cell engineering platforms; to continue developing manufacturing capabilities for our product candidates; and the remainder for working capital and other general corporate purposes. We may also use a portion of the net proceeds to in-license, acquire, or invest in, complementary technologies, assets, or intellectual property. We periodically evaluate strategic opportunities; however, we have no current commitments to enter into any such acquisitions or make any such investments. See the section titled "Use of Proceeds."
Risk factors	See the section titled "Risk Factors" beginning on page 18 and other information included in this prospectus for a discussion of factors you should carefully consider before deciding whether to invest in our common stock.
Proposed Nasdaq trading symbol	"SANA"

Unless we specifically state otherwise or the context otherwise requires, the number of shares of our common stock to be outstanding after this offering is based on 641,259,249 shares of common stock outstanding as of September 30, 2020 (including (i) the automatic conversion of all of our shares of convertible preferred stock outstanding as of September 30, 2020 into an aggregate of 536,450,939 shares of our common stock immediately prior to the completion of this offering and (ii) 47,806,730 shares of unvested restricted common stock outstanding as of September 30, 2020) and excludes:

- 38,709,333 shares of common stock issuable upon exercise of stock options outstanding as of September 30, 2020, with a weighted-average exercise price of $0.58 per share;
- 23,410,081 shares of common stock issuable upon exercise of stock options granted subsequent to September 30, 2020, with a weighted-average exercise price of $1.95 per share;
- 1,302,718 restricted stock units subject to vesting conditions, and as of September 30, 2020, (of which, 585,039 shares have satisfied the vesting conditions), and which will become outstanding six months after the effective date of the completion of this offering;
- 1,426,521 shares reserved for future issuance under our 2018 Equity Incentive Plan, as of September 30, 2020;
- 1,783,974 shares reserved for future issuance under our 2018 Equity Incentive Plan, which was increased subsequent to September 30, 2020;
- shares of our common stock reserved for future issuance under our 2021 Incentive Award Plan (the 2021 Plan), which will become effective on the date immediately prior to the date our registration statement relating to this offering becomes effective, as well as any future increases in the number of shares of common stock reserved for issuance under the 2021 Plan; and
- shares of our common stock reserved for future issuance under our Employee Stock Purchase Plan (the ESPP), which will become effective on the date immediately prior to the date our registration statement relating to this offering becomes effective, as well as any future increases in the number of shares of common stock reserved for issuance under the ESPP.

Unless we specifically state otherwise or the context otherwise requires, this prospectus reflects and assumes the following:

- the adoption, filing and effectiveness of our amended and restated certificate of incorporation immediately prior to the completion of this offering;
- the conversion of all outstanding shares of our convertible preferred stock outstanding into 536,450,939 shares of our common stock immediately prior to the completion of this offering;
- no exercise of outstanding stock options;
- a -for- stock split of our capital stock to be effected prior to the completion of this offering; and
- no exercise by the underwriters of their over-allotment option.

Summary Consolidated Financial Data

The following tables summarize our consolidated financial data for the periods and as of the dates indicated. We have derived the summary consolidated statements of operations data for the period from July 13, 2018 (inception) to December 31, 2018 and the year ended December 31, 2019, except for pro forma amounts, from our audited consolidated financial statements and related notes included elsewhere in this prospectus. We have derived the summary consolidated statements of operations data for the nine months ended September 30, 2019 and 2020, except for pro forma amounts, and the summary consolidated balance sheet data as of September 30, 2020, except for pro forma amounts, from our unaudited condensed consolidated financial statements and related notes included elsewhere in this prospectus. Our unaudited condensed consolidated financial statements as of and for the nine months ended September 30, 2019 and 2020 were prepared on a basis consistent with our audited consolidated financial statements and include, in our opinion, all adjustments of a normal and recurring nature that are necessary for the fair statement of the financial information set forth in those statements included elsewhere in this prospectus. Our historical results are not necessarily indicative of results that may be expected in the future and our interim results are not necessarily indicative of results that may be expected for the full year. You should read the following summary consolidated financial data together with our audited consolidated financial statements and our unaudited condensed consolidated financial statements, and the related notes included elsewhere in this prospectus and the information in the sections titled "Selected Consolidated Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	Period from July 13, 2018 (Inception) to December 31, 2018	Year Ended December 31, 2019	Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2020
	(in thousands, except share and per share data)			
Consolidated Statements of Operations Data:				
Operating expenses:				
Research and development(1)	$ 9,040	$ 119,375	$ 80,101	$ 153,762
General and administrative	4,206	21,777	15,959	19,063
Total operating expenses	13,246	141,152	96,060	172,825
Loss from operations	(13,246)	(141,152)	(96,060)	(172,825)
Interest income, net	—	2,856	2,175	622
Other (expense) income, net	(1)	(29)	(52)	68
Loss before income taxes	(13,247)	(138,325)	(93,937)	(172,135)
Benefit from income taxes	—	7,547	6,204	—
Net loss	$ (13,247)	$ (130,778)	$ (87,733)	$ (172,135)
Net loss per share, basic and diluted(2)	$ (3.48)	$ (6.67)	$ (6.06)	$ (3.51)
Weighted-average shares outstanding used in computing net loss per share, basic and diluted(2)	3,808,344	19,610,571	14,480,086	48,997,930
Pro forma net loss per share, basic and diluted (unaudited)(3)		$ (0.33)		$ (0.33)
Weighted-average shares outstanding used in computing pro forma net loss per share, basic and diluted (unaudited)(3)		397,200,251		521,067,049

(1) Research and development expense for the year ended December 31, 2019 and the nine months ended September 30, 2019 and 2020 included non-cash expense of $1.9 million, $1.4 million, and $40.6 million for the success payment liabilities, respectively, and

$17.9 million, $15.6 million, and $16.7 million for contingent consideration, respectively. Research and development expense for the year ended December 31, 2019 and the nine months ended September 30, 2019 and 2020 included non-cash expense of $11.9 million, $11.9 million, and $0.4 million, respectively, in connection with license agreements. See Note 3, Acquisitions, Note 5, License and collaboration agreements, and Note 7, Fair value measurements to each of our audited consolidated financial statements and our unaudited condensed consolidated financial statements included elsewhere in this prospectus, and the subsection titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" for more detail on the success payments and contingent consideration.

(2) See Note 15, Net loss per share to each of our audited consolidated financial statements and our unaudited condensed consolidated financial statements included elsewhere in this prospectus for an explanation of the calculations of our basic and diluted net loss per share, and the weighted-average number of shares outstanding used in the computation of the per share amounts.

(3) See the subsection titled "Management's Discussion and Analysis of Financial Condition and Results of Operations—Unaudited Pro Forma Information" for an explanation of the calculations of our basic and diluted pro forma net loss per share, and the weighted-average number of shares outstanding used in the computation of the per share amounts.

	September 30, 2020		
	Actual	Pro Forma(1)	Pro Forma as Adjusted(2)
		(in thousands)	
Consolidated Balance Sheet Data:			
Cash, cash equivalents and marketable securities	$ 459,070	$ 459,070	$
Working capital(3)	429,031	429,031	
Total assets	767,715	767,715	
Convertible preferred stock	852,897	—	
Accumulated deficit	(316,262)	(316,262)	
Total stockholders' (deficit) equity	(311,175)	541,722	

(1) The pro forma consolidated balance sheet data gives effect to: (i) the filing and effectiveness of our amended and restated certificate of incorporation, which will be in effect immediately prior to the completion of this offering, and (ii) the automatic conversion of all of our outstanding convertible preferred stock into an aggregate of 536,450,939 shares of our common stock immediately prior to the completion of the offering.

(2) The pro forma as adjusted consolidated balance sheet data gives effect to: (i) the pro forma adjustments set forth in footnote (1) above; and (ii) the sale of shares of our common stock in this offering at the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. The pro forma as adjusted consolidated balance sheet data discussed above is illustrative only and will depend on the actual initial public offering price and other terms of this offering determined at pricing. Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, each of our pro forma as adjusted cash, cash equivalents, and marketable securities, working capital, total assets, and total stockholders' equity (deficit) by approximately $ million, assuming the number of shares of common stock offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase or decrease of 1.0 million shares of common stock offered by us would increase or decrease, as applicable, each of our pro forma as adjusted cash, cash equivalents, and marketable securities, working capital, total assets, and total stockholders' equity (deficit) by approximately $ million, assuming the assumed initial public offering price of $ per share remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

(3) We define working capital as current assets less current liabilities. See our consolidated financial statements and the related notes included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

RISK FACTORS

Investing in shares of our common stock involves a high degree of risk. You should carefully consider the following risks and uncertainties, together with all of the other information contained in this prospectus, including our financial statements and related notes included elsewhere in this prospectus, before making an investment decision. The risks described below are not the only ones facing us. Many of the following risks and uncertainties are, and will be, exacerbated by the COVID-19 pandemic and any worsening of the global business and economic environment as a result. The occurrence of any of the following risks, or of additional risks and uncertainties not presently known to us or that we currently believe to be immaterial, could materially and adversely affect our business, financial condition, reputation, or results of operations. In such case, the trading price of shares of our common stock could decline, and you may lose all or part of your investment.

Risks Related to Our Limited Operating History, Financial Condition and Need for Additional Capital

We are a preclinical-stage biotechnology company and have incurred significant losses since our inception, and we expect to incur losses for the foreseeable future. We have no products approved for commercial sale and may never achieve or maintain profitability.

We are a preclinical-stage biotechnology company with a limited operating history. Biotechnology product development is a highly speculative undertaking and involves a substantial degree of risk. We have incurred significant losses since inception, have not generated any revenue from product sales, and have financed our operations principally through private financings. We expect that it will be several years, if ever, before we have a commercialized product and generate revenue from product sales. Our net losses were $13.2 million and $130.8 million for the period from July 13, 2018 (inception) to December 31, 2018 and for the year ended December 31, 2019, respectively, and $87.7 million and $172.1 million for the nine months ended September 30, 2019 and 2020, respectively. As of September 30, 2020, we had an accumulated deficit of $316.3 million. Our losses have resulted principally from expenses incurred for the research and development of our *in vivo* and *ex vivo* cell engineering platforms and from management and administrative costs and other expenses that we have incurred while building our business infrastructure.

We expect our expenses and operating losses will continue to increase substantially for the foreseeable future as we expand our research and development efforts, expand the capabilities of our cell engineering platforms, identify product candidates, complete preclinical studies and commence clinical trials, seek regulatory approval and commercialization of our product candidates, and operate as a public company. We anticipate that our expenses will increase substantially as we:

- continue to advance our *in vivo* and *ex vivo* cell engineering platforms;
- continue preclinical development of our current and future product candidates and initiate additional preclinical studies;
- commence clinical studies of our current and future product candidates;
- establish our manufacturing capability, including developing our contract development and manufacturing organization (CDMO) relationships and building our internal manufacturing facilities;
- acquire and license technologies aligned with our *in vivo* and *ex vivo* cell engineering platforms;
- seek regulatory approval of our current and future product candidates;
- expand our operational, financial, and management systems and increase personnel, including personnel to support our preclinical and clinical development, manufacturing, and commercialization efforts;
- continue to develop, perfect, and defend our intellectual property portfolio; and

- incur additional legal, accounting, or other expenses in operating our business, including the additional costs associated with operating as a public company.

We have devoted a significant portion of our financial resources and efforts to building our organization, developing our *in vivo* and *ex vivo* cell engineering platforms, identifying and developing potential product candidates, executing preclinical studies, acquiring technology, organizing and staffing the company, business planning, establishing our intellectual property portfolio, raising capital, and providing general and administrative support for these operations. We are in the early stages of development of our product candidates, have not yet commenced any clinical trials for any of our product candidates, and have not completed development and commercialization of any product candidate.

To become and remain profitable, we must succeed in identifying, developing, getting regulatory approval for and eventually commercializing products that generate significant revenue. This will require us to be successful in a range of challenging activities, including completing preclinical studies and clinical trials of our product candidates, continuing to discover and develop additional product candidates, obtaining regulatory approval for any product candidates that successfully complete clinical trials, accessing manufacturing capacity, establishing marketing capabilities, commercializing and ultimately selling any products for which we may obtain regulatory approval. We may never succeed in any or all of these activities and, even if we do, we may never generate revenue that is sufficient to achieve profitability. Even if we do achieve profitability, we may not be able to sustain profitability or meet outside expectations for our profitability. If we are unable to achieve or sustain profitability or to meet outside expectations for our profitability, the value of our shares of common stock could be materially adversely affected.

Because of the numerous risks and uncertainties associated with pharmaceutical products and biological development, we are unable to accurately predict the timing or amount of increased expenses or when, or if, we will be able to achieve profitability. If we are required by the U.S. Food and Drug Administration (FDA) or comparable foreign regulatory authorities to perform studies in addition to those we currently anticipate, or if there are any delays in commencing or completing our clinical trials or the development of any of our product candidates, our expenses could increase and commercial revenue could be further delayed and more uncertain, which will have a material adverse impact on our business.

Even if this offering is successful, we will require additional funding in order to finance operations. If we are unable to raise capital when needed, or on acceptable terms, we could be forced to delay, reduce, or eliminate our product development programs or commercialization efforts.

Developing biopharmaceutical products, including conducting preclinical studies and clinical trials, is a very time-consuming, expensive and uncertain process that takes years to complete. Our operations have consumed substantial amounts of cash since inception, and we expect our expenses to increase in connection with our ongoing activities, particularly as we conduct clinical trials of, and seek regulatory and marketing approval for, our product candidates. Even if one or more of our product candidates is approved for commercial sale, we anticipate incurring significant costs associated with commercializing any approved product candidate. To date, we have funded our operations primarily through private financings. We expect our expenses to increase in connection with our ongoing activities, particularly as we continue the preclinical development of our *in vivo* and *ex vivo* platforms and product candidates, commence clinical studies for any product candidates, initiate clinical trials, and continue to research, develop, and conduct preclinical studies of other potential product candidates.

In addition, if we obtain regulatory approval for any of our product candidates, we expect to incur significant commercialization expenses related to product manufacturing, marketing, sales, and distribution. Furthermore, upon the completion of this offering, we expect to incur additional costs associated with operating as a public company. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we could be forced to delay, reduce, or eliminate our research and development programs or any future commercialization efforts.

As of September 30, 2020, we had $459.1 million in cash, cash equivalents and marketable securities. Based on our current business plans, we believe that the net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities, will be sufficient to fund our operating expenses and capital expenditure requirements through . We have based this estimate on assumptions that may prove to be wrong, and we could use our capital resources sooner than we currently expect, requiring us to seek additional funds sooner than planned, through public or private equity or debt financings or other sources, such as strategic collaborations. In addition, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. Attempting to secure additional financing may divert our management from our day-to-day activities, which may adversely affect our ability to develop our product candidates. Our future capital requirements will depend on many factors, including:

- the scope, timing, progress, costs, and results of discovery, preclinical development, and clinical trials for our current or future product candidates;
- the number of clinical trials required for regulatory approval of our current or future product candidates;
- the costs, timing, and outcome of regulatory review of any of our current or future product candidates;
- the cost of manufacturing clinical and commercial supplies of our current or future product candidates;
- the costs and timing of future commercialization activities, including manufacturing, marketing, sales, and distribution, for any of our product candidates for which we receive marketing approval;
- the costs and timing of preparing, filing, and prosecuting patent applications, maintaining and enforcing our intellectual property rights, and defending any intellectual property-related claims, including any claims by third parties that we are infringing upon their intellectual property rights;
- our ability to maintain existing, and establish new, strategic collaborations, licensing, or other arrangements and the financial terms of any such agreements, including the timing and amount of any future milestone, royalty, or other payments due under any such agreement;
- the revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- expenses to attract, hire, and retain skilled personnel;
- the costs of operating as a public company;
- our ability to establish a commercially viable pricing structure and obtain approval for coverage and adequate reimbursement from third-party and government payers;
- addressing any potential interruptions or delays resulting from factors related to the COVID-19 pandemic;
- the effect of competing technological and market developments; and
- the extent to which we acquire or invest in businesses, products, and technologies.

Our ability to raise additional funds will depend on financial, economic, political and market conditions and other factors, over which we may have no or limited control. Market volatility resulting from the COVID-19 pandemic or other factors could also adversely impact our ability to access capital as and when needed. Additional funds may not be available when we need them, on terms that are acceptable to us, or at all. If adequate funds are not available to us on a timely basis, we could be required to:

- delay, limit, reduce, or terminate preclinical studies, clinical trials, or other research and development activities, or eliminate one or more of our development programs altogether; and

- delay, limit, reduce, or terminate our efforts to access manufacturing capacity, establish sales and marketing capabilities or other activities that may be necessary to commercialize our product candidates, or reduce our flexibility in developing or maintaining our sales and marketing strategy.

Our success payment and contingent consideration obligations in our license and acquisition agreements may result in dilution to our stockholders, may be a drain on our cash resources, or may cause us to incur debt obligations to satisfy the payment obligations.

We agreed to make success payments in cash pursuant to our license agreement with the President and Fellows of Harvard College (Harvard) and contingent consideration and success payments, payable in cash or stock at our discretion, pursuant to the terms and conditions of our acquisition agreement with Cobalt Biomedicine, Inc. (Cobalt). The success payments to Harvard (Harvard Success Payments) are based on increases in the fair value of our Series A convertible preferred stock, or any security into which such stock has been converted or exchanged, payable in cash. The potential Harvard Success Payments are based on multiples of increased value ranging from 5x to 40x based on a comparison of the fair value of our Series A convertible preferred stock relative to the original $1.00 issuance price at pre-determined valuation measurement dates. The amount of the Harvard Success Payments does not exceed an aggregate of $175.0 million which would only occur upon a 40x increase in value. The Harvard Success Payments can be achieved over a maximum of 12 years from the effective date of the agreement. The valuation measurement dates for the Harvard Success Payments are triggered by events which include: an equity financing prior to an initial public offering (IPO) of more than $25.0 million, the one year anniversary of an IPO, and periodically thereafter, a merger, an asset sale, the sale of the majority of the shares held by our Series A convertible preferred stockholders, and the last day of the term of the success payments. If a higher success payment tier is met at the same time a lower tier is first met, both tiers will be owed. Any previous success payments made to Harvard are credited against the success payment owed as of any valuation measurement date so that Harvard does not receive multiple success payments in connection with the same threshold.

The contingent consideration related to the Cobalt acquisition (Cobalt Contingent Consideration) is up to an aggregate of $500.0 million upon the achievement of certain pre-defined development milestones. The success payment to Cobalt (Cobalt Success Payment) of $500.0 million is payable if, at pre-determined valuation measurement dates, our implied value is equal to or exceeds three times our implied value based on the per share value of the Series B convertible preferred stock at issuance, which equates to $12.00 per share, or any security into which such stock has been converted or exchanged, and we have a program based on the fusogen technology in a clinical trial pursuant to an investigational new drug application (IND), or have filed for, or received approval for, a biologics license application (BLA) or new drug application (NDA). The valuation measurement dates for the Cobalt Success Payment are triggered by an arms' length equity financing, or an IPO, and periodically thereafter. In addition to an arms' length equity financing and an IPO, a valuation measurement date is triggered upon a change of control when at least one of our programs based on the fusogen technology is the subject of an active research program. If there is a change of control and our valuation falls below three times our implied value based on the per share value of the Series B convertible preferred stock at issuance, which equates to $12.00 per share, the amount of the potential Cobalt Success Payment will decrease and the amount of potential Cobalt Contingent Consideration will increase. The term of the Cobalt Success Payment is 20 years from the date of acquisition. See Note 3, Acquisitions, to each of our audited consolidated financial statements and our unaudited condensed consolidated financial statements included elsewhere in this prospectus for details on the different Company valuation thresholds and impact to the value of the potential Cobalt Success Payment and potential Cobalt Contingent Consideration if there is a change of control.

In order to satisfy our obligations to make these success payments, if and when they are triggered, we may issue equity or convertible debt securities that may cause dilution to our stockholders, or we may use our existing cash or incur debt obligations to satisfy the success payment obligation in cash, which may adversely affect our financial position. In addition, these success payments may impede our ability to raise money in future public offerings of debt or equity securities or to obtain a third party line of credit. We expect the first valuation

measurement date for the Harvard Success Payments to be the one-year anniversary of an IPO. See Note 5, License and collaboration agreements, to each of our audited consolidated financial statements and our unaudited condensed consolidated financial statements included elsewhere in this prospectus for the Series A convertible preferred stock prices that trigger a Harvard Success Payment and the corresponding payment amount. We expect the first valuation measurement date for the Cobalt Success Payment to be an IPO, but we do not expect to owe a Cobalt Success Payment upon an IPO or within one year of an IPO. However, such payment is dependent on the stock price which is unpredictable and may fluctuate significantly from quarter to quarter and year to year.

The contingent consideration and success payment obligations in our license and acquisition agreements may cause operating results to fluctuate significantly from quarter to quarter and year to year, which may reduce the usefulness of our financial statements.

Our success payment and contingent consideration obligations under our license and acquisition agreements are recorded as liabilities on our consolidated balance sheets. Under U.S. generally accepted accounting principles (GAAP), we are required to estimate the fair value of these liabilities as of each quarter end, with changes in the estimated fair value recorded in research and development expense. Factors that may lead to increases or decreases in the estimated fair value of the success payment liabilities include, among others, changes in the value of the our Series A convertible preferred stock, changes in our estimated future value implied by the per share value of our Series B convertible preferred stock at issuance, changes in volatility, the estimated number and timing of valuation measurement dates, the term of the success payments, and changes in the risk free interest rate.

Factors that may lead to increases or decreases in the estimated fair value of contingent consideration include, among others, the estimated likelihood and timing in which milestones may be achieved and the estimated discount rates. A small change in the inputs and related assumptions for success payment liabilities and contingent consideration may have a relatively large change in the estimated valuation and associated liabilities and resulting expense or gain. As a result, our operating results and financial condition as reported by GAAP may fluctuate significantly from quarter to quarter and year to year and may reduce the usefulness of our GAAP financial statements. The estimated fair value of the Cobalt Success Payment liability was $2.4 million and $37.6 million as of December 31, 2019 and September 30, 2020, respectively, and as of December 31, 2019 and September 30, 2020, the estimated fair value of the Harvard Success Payment liability was $1.9 million and $7.4 million, respectively. The estimated fair value of the Cobalt Contingent Consideration was $69.1 million and $85.8 million as of December 31, 2019 and September 30, 2020, respectively.

Our limited operating history may make it difficult for you to evaluate our prospects and likelihood of success.

We are a preclinical-stage biopharmaceutical company with a limited operating history upon which you can evaluate our business and prospects. Since our inception in July 2018, we have devoted substantially all of our resources and efforts to building our organization, developing our *in vivo* and *ex vivo* cell engineering platforms, identifying and developing potential product candidates, executing preclinical studies, acquiring technology, organizing and staffing the company, business planning, establishing and securing our intellectual property portfolio, raising capital, and providing general and administrative support for these operations. All of our product candidates are still in preclinical stage of development, we have not yet demonstrated our ability to successfully commence or complete any clinical trials (including Phase 3 or other pivotal clinical trials), obtain regulatory approvals, manufacture a commercial scale product or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization. Additionally, we expect our financial condition and operating results to continue to fluctuate significantly from period to period due to a variety of factors, many of which are beyond our control. Consequently, any predictions you may make about our future success or viability may not be as accurate as they could be if we had a longer operating history.

In addition, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors and risks frequently experienced by preclinical-stage biopharmaceutical companies in rapidly

evolving fields. We also may need to transition from a company with a research focus to a company capable of supporting commercial activities. If we do not adequately address these risks and difficulties or successfully make such a transition, it could have a material adverse impact on our business.

Risks Related to Our Business

Our in vivo and ex vivo platforms are based on novel technologies that are unproven and may not result in approvable or marketable products, which exposes us to unforeseen risks and makes it difficult for us to predict the time and cost of product development and potential for regulatory approval, and we may not be successful in our efforts to use and expand our technology platforms to build a pipeline of product candidates.

We are seeking to identify and develop a broad pipeline of product candidates using our *in vivo* and *ex vivo* cell engineering platforms. We have not commenced clinical trials for any product candidates developed with these platforms. The scientific research that forms the basis of our efforts to develop product candidates with our platforms is still ongoing. We are not aware of any FDA approved therapeutics utilizing fusogen technology or that are iPSC-derived cell products. Further, the scientific evidence to support the feasibility of developing therapeutic treatments based on our platforms is both preliminary and limited. As a result, we are exposed to a number of unforeseen risks and it is difficult to predict the types of challenges and risks that we may encounter during development of our product candidates. For example, we have not tested any of the product candidates being developed using our cell engineering platforms in humans, and our current data is limited to animal models and preclinical cell lines, the results of which may not translate into humans. Further, relevant animal models and assays may not accurately predict the safety and efficacy of our product candidates in humans, and we may encounter significant challenges creating appropriate models and assays for demonstrating the safety and purity of our product candidates. In addition, our fusogen and hypoimmune technologies have potential safety risks related to, but not limited to, genotoxicity associated with the delivery of genome modifying payloads. Furthermore, our hypoimmune technology has potential safety risks related to, but not limited to, the potential risk of a hypoimmune cell becoming infected with a virus or undergoing oncogenic transformation. As a result, it is possible that safety events or concerns could negatively affect the development of our product candidates, including adversely affecting patient enrollment among the patient populations that we intend to treat.

Given the novelty of our technologies, we intend to work closely with the FDA and comparable foreign regulatory authorities to perform the requisite scientific analyses and evaluation of our methods to obtain regulatory approval for our product candidates; however, due to a lack of comparable experiences, the regulatory pathway with the FDA and comparable regulatory authorities may be more complex and time-consuming relative to other more well-known therapeutics. Even if we obtain human data to support our product candidates, the FDA or comparable foreign regulatory agencies may lack experience in evaluating the safety and efficacy of our product candidates developed using our platforms, which could result in a longer than expected regulatory review process, increase our expected development costs, and delay or prevent commercialization of our product candidates. The validation process takes time and resources, may require independent third-party analyses, and may not be accepted or approved by the FDA and comparable foreign regulatory authorities. We cannot be certain that our approach will lead to the development of approvable or marketable products, alone or in combination with other therapies.

Additionally, a key element of our strategy is to use and expand our *in vivo* and *ex vivo* cell engineering platforms to build a pipeline of product candidates and progress those product candidates through clinical development for the treatment of a variety of different types of diseases. Although our research and development efforts to date have been focused on identifying a pipeline of product candidates directed at various disease types, we may not be able to develop product candidates that are safe and effective. Even if we are successful in building our pipeline, the potential product candidates that we identify may not be suitable for clinical development, including as a result of being shown to have harmful side effects or other characteristics that indicate that they are unlikely to be approvable or marketable products that will receive marketing approval and achieve market acceptance. If we do not continue to successfully develop, get approval for and begin to

commercialize any product candidates, we will face difficulty in obtaining product revenue in future periods, which could result in significant harm to our financial position and adversely affect our share price.

If we are unable to successfully identify, develop, and commercialize any product candidates, or experience significant delays in doing so, our business, financial condition, and results of operations will be materially adversely affected.

Our ability to generate revenue from sales of any of our approved product candidates, which we do not expect will occur for at least the next several years, if ever, will depend heavily on the successful identification, development, regulatory approval and eventual commercialization of any product candidates, which may never occur. We have never generated revenue from sales of any products, and we may never be able to develop, obtain regulatory approval for or commercialize a marketable product. We are in preclinical development and all of our product candidates will require significant clinical development; management of preclinical, clinical and manufacturing activities; regulatory approval in multiple jurisdictions; establishing manufacturing supply, including commercial manufacturing supply; and require us to build a commercial organization and make substantial investment and significant marketing efforts before we generate any revenue from product sales. We are not permitted to market or promote any of our product candidates before we receive regulatory approval from the FDA or comparable foreign regulatory authorities, and we may never receive such regulatory approval for any of our product candidates.

The successful development of our product candidates will depend on several factors, including the following:

- successful and timely completion of preclinical studies and clinical trials for which the FDA, or any comparable foreign regulatory authority, agree with the design, endpoints, or implementation;
- sufficiency of our financial and other resources to complete the necessary preclinical studies and clinical trials;
- receiving regulatory approvals or authorizations for conducting future clinical trials;
- initiation and successful patient enrollment in, and completion of, clinical trials on a timely basis;
- our ability to demonstrate to the satisfaction of the FDA or any comparable foreign regulatory authority that the applicable product candidate is safe and efficacious as a treatment for our targeted indications or, in the case of an applicable product candidate which is regulated as a biological product, that the applicable product has suitable purity and is safe and potent for our targeted indications;
- our ability to demonstrate to the satisfaction of the FDA or any comparable foreign regulatory authority that the applicable product candidate’s risk-benefit ratio for its proposed indication is acceptable;
- timely receipt of marketing approvals for our product candidates from applicable regulatory authorities;
- addressing any potential interruptions or delays resulting from factors related to the COVID-19 pandemic;
- the extent of any required post-marketing approval commitments to applicable regulatory authorities; and
- establishing, scaling up and scaling out, either alone or with third-party manufacturers, manufacturing capabilities of clinical supply for our clinical trials and commercial manufacturing (including licensure), if any of our product candidates are approved.

If we do not achieve one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully develop and commercialize our product candidates, which would materially adversely affect our business, financial condition, and results of operations.

Additionally, clinical or regulatory setbacks to other companies developing similar products or within adjacent fields, including those in gene editing and gene therapy and allogenic cell-based therapies, may impact the clinical development of and regulatory pathway for our current or future product candidates, or may negatively impact the perceptions of value or risk of our technologies.

We expect to continue to expand our development and regulatory capabilities, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.

We have experience rapid growth since our inception in July 2018. As of December 31, 2018, we had 37 full-time employees and, as of September 30, 2020, we grew to 240 full-time employees. We expect continued growth in the number of our employees and the scope of our operations, particularly to continue our IND-enabling studies, establish regulatory, quality, and clinical operations, and begin manufacturing supply chain logistics.

To manage our anticipated future growth, we will continue to implement and improve our managerial, operational, and financial systems, expand our facilities, and continue to recruit and train additional qualified personnel. Due to our limited financial resources and the complexity in managing a company with such anticipated growth, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. In addition, we have limited experience in managing the manufacturing processes necessary for making cell and gene therapies. The expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

In addition, future growth imposes significant added responsibilities on members of management, including: identifying, recruiting, integrating, maintaining, and motivating additional employees; managing our internal development efforts effectively, including the clinical and FDA review process for our product candidates, while complying with our contractual obligations to contractors and other third parties; and improving our operational, financial and management controls, reporting systems, and procedures.

We currently rely on certain independent organizations, advisors, and consultants to provide certain services, including strategic, financial, business development, and research and development services, as well as certain aspects of regulatory approval and manufacturing. There can be no assurance that the services of independent organizations, advisors, and consultants will continue to be available to us on a timely basis when needed, or that we can find qualified replacements. In addition, if we are unable to effectively manage our outsourced activities or if the quality or accuracy of the services provided by consultants or contract manufacturing organizations is compromised for any reason, our clinical trials may be extended, delayed, or terminated, and we may not be able to obtain regulatory approval of our product candidates or otherwise advance our business. There can be no assurance that we will be able to manage our existing consultants or find other competent outside contractors and consultants on reasonable terms, or at all.

The outbreak of the novel coronavirus disease, COVID-19, could materially and adversely affect our preclinical studies and development, any clinical trials we subsequently commence, and our business, financial condition, and results of operations.

In December 2019, the coronavirus disease, COVID-19, was identified in Wuhan, China. Since then, COVID-19 has spread globally. In March 2020, the World Health Organization declared COVID-19 a global pandemic and the United States declared a national emergency with respect to COVID-19. In response to the COVID-19 pandemic, “shelter in place” orders and other public health guidance measures have been implemented across much of the United States, including in the locations of our offices and those of key vendors and partners. As a result of the COVID-19 pandemic, or similar pandemics, and related “shelter in place” orders and other public health guidance measures, we have and may in the future experience disruptions that could materially and adversely impact our preclinical studies and development, any clinical trials we subsequently

commence, and our business, financial condition, and results of operations. In response to the spread of COVID-19, we have closed our executive offices with our administrative employees continuing their work outside of our offices and limited the number of staff in any given research and development laboratory and have taken other precautionary measures as well, including the periodic testing of our employees. We also established a cross-functional task force and implemented business continuity plans designed to address and mitigate the impact of the ongoing COVID-19 pandemic on our business. Potential disruptions to our preclinical development efforts include, but are not limited to:

- delays or disruptions in preclinical experiments and IND-enabling studies due to restrictions of on-site staff, limited or no access to animal facilities, and unforeseen circumstances at contract research organizations (CROs) and vendors;
- limitations on employee or other resources that would otherwise be focused on the conduct of our preclinical work and any clinical trials we subsequently commence, including because of sickness of employees or their families, the desire of employees to avoid travel or contact with large groups of people, an increased reliance on working from home, school closures, or mass transit disruptions;
- delays in necessary interactions with regulators, ethics committees, and other important agencies and contractors due to limitations in employee resources or forced furlough of government or contractor personnel; and
- limitations in maintaining our corporate culture that facilitates the transfer of institutional knowledge within our organization and fosters innovation, teamwork, and a focus on execution.

We have not yet commenced clinical trial activities for any of our product candidates. If we commence clinical trials for one or more of our product candidates, potential disruptions of those clinical activities as a result of COVID-19 or similar pandemics include, but are not limited to:

- interruption of key clinical trial activities, such as clinical trial site data monitoring and efficacy, safety and translational data collection, processing and analyses, due to limitations on travel imposed or recommended by federal, state, or local governments, employers and others or interruption of clinical trial subject visits, which may impact the collection and integrity of subject data and clinical study endpoints;
- delays or difficulties in initiating or expanding clinical trials, including delays or difficulties with clinical site initiation and recruiting clinical site investigators and clinical site staff;
- delays or difficulties in enrolling and retaining patients in our clinical trials;
- increased rates of patients withdrawing from our clinical trials following enrollment as a result of contracting COVID-19 or other health conditions or being forced to quarantine;
- interruption of, or delays in receiving, supplies of our product candidates from our contract manufacturing organizations due to staffing shortages, production slowdowns, or stoppages and disruptions in materials and reagents;
- diversion of healthcare resources away from the conduct of clinical trials, including the diversion of hospitals serving as our clinical trial sites and hospital staff supporting the conduct of our clinical trials;
- interruption or delays in the operations of the FDA and comparable foreign regulatory agencies;
- changes in regulations as part of a response to the COVID-19 pandemic which may require us to change the ways in which our clinical trials are conducted, which may result in unexpected costs, or to discontinue the clinical trials altogether;
- delays in receiving approval from local regulatory authorities to initiate our planned clinical trials;
- limitations on employee resources that would otherwise be focused on the conduct of our preclinical studies and clinical trials, including because of sickness of employees or their families or the desire of employees to avoid contact with large groups of people;

- interruption of, or delays in receiving, supplies of our product candidates from our contract manufacturing organizations due to staffing shortages, production slowdowns or stoppages and disruptions in delivery systems;
- refusal of the FDA or comparable regulatory authorities to accept data from clinical trials in affected geographies; and
- additional delays, difficulties or interruptions as a result of current or future shutdowns due to the COVID-19 pandemic in countries where we or our third-party service providers operate.

The COVID-19 global pandemic continues to rapidly evolve. Although many countries, including certain countries in Europe and the United States, have re-opened, rises in new cases have caused certain countries to re-initiate restrictions. The extent to which the outbreak may affect our preclinical studies, clinical trials, business, financial condition, and results of operations will depend on future developments, which are highly uncertain and cannot be predicted at this time, such as the ultimate geographic spread of the disease, the duration of the outbreak, travel restrictions, and actions to contain the outbreak or treat its impact, such as social distancing and quarantines or lock-downs in the United States and other countries, business closures, or business disruptions and the effectiveness of actions taken in the United States and other countries to contain and treat the disease. Additionally, we are unable to predict if a different pandemic could have similar or different impacts on our business, financial condition, or share price. Future developments in these and other areas present material uncertainty and risk with respect to our clinical trials, business, financial condition, and results of operations.

Our ability to develop our cell engineering platforms and products and our future growth depends on retaining our key personnel and recruiting additional qualified personnel.

Our success depends upon the continued contributions of our key management, scientific, and technical personnel, many of whom have been instrumental for us and have substantial experience with our cell engineering platforms, underlying technologies and related product candidates. Given the specialized nature of our *in vivo* and *ex vivo* cell engineering and the fact that these are novel and emerging fields, there is an inherent scarcity of experienced personnel in these fields. As we continue developing our product candidates in our pipeline, we will require personnel with medical, scientific, or technical qualifications specific to each program. The loss of key managers and senior scientists could delay our research and development activities. Despite our efforts to retain valuable employees, members of our management, scientific, and development teams may terminate their employment with us on short notice. Although we have employment agreements with certain of our key employees, these employment agreements provide for at-will employment, which means that any of our employees could leave our employment at any time, with or without notice. Further, certain of our key employees, including Drs. Fry, Goldman and Murry, retain partial employment at academic institutions; Dr. Goldman currently devotes approximately 60% of his time to the University of Rochester and the University of Copenhagen, Dr. Murry currently devotes approximately 25% to his time to the University of Washington, and Dr. Fry currently devotes approximately 25% of his time to the University of Colorado until August 2021 when Dr. Fry plans to devote 100% of his time to us. These arrangements may expose us to increased potential for these individuals to return to their academic positions full-time or devote less of their attention to us than is optimal, and, potentially, expose to claims that certain intellectual property may be co-owned by their respective academic institutions. The competition for qualified personnel in the biotechnology and pharmaceutical industries is intense, and our future success depends upon our ability to attract, retain, and motivate highly skilled scientific, technical, and managerial employees. We face competition for personnel from other companies, universities, public and private research institutions, and other organizations. If our recruitment and retention efforts are unsuccessful in the future, it may be difficult for us to implement our business strategy, which could have a material adverse effect on our business.

In addition, our research and development programs, clinical operations and sales and marketing efforts depend on our ability to attract and retain highly skilled scientists, engineers and sales professionals. Competition for skilled personnel in our market is intense, and we have from time to time experienced, and we expect to

continue to experience, difficulty in hiring and retaining employees with appropriate qualifications on acceptable terms, or at all. Many of the companies with which we compete for experienced personnel have greater resources than we do, and any of our employees may terminate their employment with us at any time. If we hire employees from competitors or other companies, their former employers may attempt to assert that these employees or we have breached legal obligations, resulting in a diversion of our time and resources and, potentially, damages. In addition, job candidates and existing employees often consider the value of the stock awards they receive in connection with their employment. If the perceived benefits of our stock awards decline, it may harm our ability to recruit and retain highly skilled employees. If we fail to attract new personnel or fail to retain and motivate our current personnel, our business and future growth prospects would be harmed.

While we believe our pipeline will yield multiple INDs, we may not be able to file INDs to commence clinical trials on the timelines we expect, and even if we are able to, the FDA may not permit us to proceed.

We expect our pipeline to yield multiple INDs beginning as early as , including INDs for our fususome CAR T product candidates from our *in vivo* cell engineering platform and our allogenic CAR T cell product candidates from our *ex vivo* cell engineering platform. We cannot be sure that submission of an IND will result in the FDA allowing testing and clinical trials to begin, or that, once begun, issues will not arise that suspend or terminate such clinical trials. The manufacturing of our product candidates, including our CAR T *ex vivo* cell engineering product candidates, remains an emerging and evolving field. Accordingly, we expect chemistry, manufacturing and control related topics, including product specifications, will be a focus of IND reviews, which may delay the clearance of INDs. Additionally, even if such regulatory authorities agree with the design and implementation of the clinical trials set forth in an IND or clinical trial application, we cannot guarantee that such regulatory authorities will not change their requirements in the future.

We may not realize the benefits of technologies that we have acquired, or will acquire in the future, or other strategic transactions that we have or will consummate.

Our *in vivo* and *ex vivo* cell engineering technology represents an aggregation of years of innovation and technology from multiple academic institutions and companies, including our fusogen technology acquired from Cobalt, our *ex vivo* cell engineering programs focused on replacing damaged cells in the heart and certain brain disorders acquired from Cytocardia Inc. (Cytocardia) and Oscine Corp. (Oscine), respectively, and hypoimmune technology licensed from Harvard and The Regents of the University of California (UCSF), amongst others. Further, a key component of our strategy is to acquire and in-license technologies to support our mission of using engineered cells as medicines. As such, we actively evaluate various strategic transactions on an ongoing basis. We may acquire other businesses, products or technologies, as well as pursue joint ventures or investments in complementary businesses. The success of our strategic transactions and any future strategic transactions depends on the risks and uncertainties involved including:

- unanticipated liabilities related to acquired companies or joint ventures;
- difficulties integrating acquired personnel, technologies, and operations into our existing business;
- retention of key employees;
- diversion of management time and focus from operating our business to management of acquisition and integration efforts, strategic alliances or joint ventures challenges;
- increases in our expenses and reductions in our cash available for operations and other uses;
- disruption in our relationships with collaborators or suppliers as a result of such a transaction;
- possible write-offs or impairment charges relating to acquired businesses or joint ventures; and
- challenges resulting from the COVD-19 pandemic making it more difficult to integrate acquisitions into our business.

If any of these risks or uncertainties occur, we may not realize the anticipated benefit of any acquisition or strategic transaction. Additionally, foreign acquisitions and joint ventures are subject to additional risks, including those related to integration of operations across different cultures and languages, currency risks, potentially adverse tax consequences of overseas operations, and the particular economic, political and regulatory risks associated with specific countries.

Future acquisitions or dispositions could result in potentially dilutive issuances of our equity securities, the incurrence of debt, contingent liabilities or amortization expenses or write-offs of goodwill, any of which could harm our financial condition.

We intend to build and operate our own manufacturing facility, which will require significant resources, and we may fail to successfully operate our facility, which could adversely affect our clinical trials and the commercial viability of our product candidates.

The manufacture of biopharmaceutical products is complex and requires significant expertise, including the development of advanced manufacturing techniques and process controls. Manufacturers of *ex vivo* cell engineering products often encounter difficulties in production, particularly in scaling up, scaling out, validating initial production, ensuring the absence of contamination, and ensuring process robustness after initial production. These problems include difficulties with production costs and yields, quality control, including stability of the product, quality assurance testing, operator error, shortages of qualified personnel, as well as compliance with strictly enforced federal, state, and foreign regulations. As a result of the complexities, the cost to manufacture biologics in general, and our cell-based product candidates in particular, is generally higher than traditional small molecule chemical compounds, and the manufacturing process is less reliable and is more difficult to reproduce. The application of new regulatory guidelines or parameters, such as those related to control strategy testing, may also adversely affect our ability to manufacture our product candidates.

A key to our strategy is operating our own manufacturing facility. We are investing early in building world class capabilities in key areas of manufacturing sciences and operations, including development of our *in vivo* and *ex vivo* cell engineering platforms, product characterization, and process analytics from the time candidates are in early research phases. Our investments also include scaled research solutions, scaled infrastructure, and novel technologies to improve efficiency, characterization, and scalability of manufacturing. However, we have limited experience in managing the manufacturing processes necessary for making cell and gene therapies. We cannot be sure that the manufacturing processes employed by us or the technologies that we incorporate for manufacturing will result in viable or scalable yields of *in vivo* and *ex vivo* cell engineering product candidates that will be safe, be effective, and meet market demand. Any commercial manufacturing facilities we build will also require FDA or comparable foreign regulatory authority approval, which we may never obtain. Even if approved, we would be subject to ongoing periodic unannounced inspection by the FDA, the Drug Enforcement Administration, corresponding state agencies, and comparable foreign regulatory authority to ensure strict compliance with current good manufacturing practices (cGMPs), current good tissue practices (cGTPs) and other government regulations. We also may make changes to our manufacturing process at various points during development, and even after commercialization, for various reasons, such as controlling costs, achieving scale, decreasing processing time, increasing manufacturing success rate, or other reasons. Such changes carry the risk that they will not achieve their intended objectives, and any of these changes could cause our product candidates to perform differently and affect the results of our ongoing clinical trials, future clinical trials, or the performance of the product, once commercialized. In some circumstances, changes in the manufacturing process may require us to perform comparability studies and to collect additional data from patients prior to undertaking more advanced clinical trials. For instance, changes in our process during the course of clinical development may require us to show the comparability of the product used in earlier clinical phases or at earlier portions of a trial to the product used in later clinical phases or later portions of the trial. We may also make further changes to our manufacturing process before or after commercialization, and such changes may require us to show the comparability of the resulting product to the product used in the clinical trials using earlier processes. We may be required to collect additional clinical data from any modified process prior to obtaining marketing approval for

the product candidate produced with such modified process. If clinical data are not ultimately comparable to that seen in the earlier trials in terms of safety or efficacy, we may be required to make further changes to our process and/or undertake additional clinical testing, either of which could significantly delay the clinical development or commercialization of the associated product candidate.

Furthermore, if contaminants are discovered in our supply of product candidates or in the manufacturing facilities, such supply may have to be discarded and our manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination. We cannot assure you that any stability or other issues relating to the manufacture of our product candidates will not occur in the future. We may not be able to manufacture our product candidates as a result of not meeting regulatory requirements and may not be able to scale up or scale out our manufacturing to meet market demand.

We may expend our limited resources to pursue a particular product candidate or indication and fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial and managerial resources, we focus on research programs, therapeutic platforms, and product candidates that we identify for specific indications. Additionally, we have contractual commitments under our collaboration agreements to use commercially reasonable efforts to develop certain programs and, thus, do not have unilateral discretion to vary from such agreed to efforts. In addition, we have contractual commitments to conduct certain development plans, and thus may not have discretion to modify such development plans, including clinical trial designs, without agreement from our collaboration partners. As a result, we may forego or delay pursuit of opportunities with other therapeutic platforms or product candidates or for other indications that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs, therapeutic platforms, and product candidates for specific indications may not yield any commercially viable products. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing, or other royalty arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights.

The use of human stem cells exposes us to a number of risks in the development of our human stem cell derived products, including restrictions on the use of human stem cells, as well as ethical, legal and social implications of research on the use of stem cells, any of which could prevent us from completing the development or gaining acceptance for commercially viable products derived from human stem cells.

We use human stem cells in our research and development, including embryonic stem cells, and one or more of our *ex vivo* cell engineering product candidates may be derived from human stem cells. The use of such cells in our research, or as starting cell lines in the manufacture one or more of our product candidates, exposes us to a number of risks. These risks include securing sufficient and viable stem cells as starting material, potential difficulties in recruiting patients for our trials, as well as managing a multitude of legal and regulatory restrictions on the sourcing and use of these cells. In particular, in some states, use of embryonic tissue as a source of stem cells is prohibited and, many research institutions have adopted policies regarding the ethical use of human embryonic tissue. If these policies or restrictions have the effect of limiting the scope of research conducted using our stem cells, our ability to develop our *ex vivo* cell engineering product candidates may be impaired and could have an adverse material effect on our business. Further, the use of stem cells, and particularly embryonic stem cells (ESCs), has social, legal and ethical implications. Certain political and religious groups continue to voice opposition to the use of human stem cells in drug research, development, and manufacture. Adverse publicity due to ethical and social controversies surrounding the use of stem cells could lead to negative public opinion, difficulties enrolling patients in our clinical trials, increased regulation and stricter policies regarding the use of such cells, which could harm our business and may limit market acceptance of our product candidates. In addition, clinical experience with stem cells, including induced pluripotent stem

cells (iPSCs) and ESCs, is limited. We are not aware of any products that utilize iPSCs or ESCs as a starting material that have received marketing approval from the FDA or a comparable foreign regulatory body. Therefore, we may experience unexpected side effects or unexpected regulatory delays during clinical trials, prior to approval, or after regulatory approval if an approval were to occur.

Negative public opinion and increased regulatory scrutiny of research and therapies involving gene editing may damage public perception of our product candidates or adversely affect our ability to conduct our business or obtain regulatory approvals for our product candidates.

Certain aspects of our cell engineering platforms rely on the ability to edit genes. Public perception may be influenced by claims that gene editing is unsafe, and products incorporating gene editing may not gain the acceptance of the public or the medical community. In particular, our success will depend upon physicians specializing in our targeted diseases prescribing our product candidates as treatments in lieu of, or in addition to, existing, more familiar, treatments for which greater clinical data may be available. Any increase in negative perceptions of gene editing may result in fewer physicians prescribing our treatments or may reduce the willingness of patients to utilize our treatments or participate in clinical trials for our product candidates. In addition, given the novel nature of *in vivo* and *ex vivo* cell engineering technologies, governments may place import, export or other restrictions in order to retain control or limit the use of the technologies. Increased negative public opinion or more restrictive government regulations either in the United States or internationally, would have a negative effect on our business or financial condition and may delay or impair the development and commercialization of our product candidates or demand for such product candidates.

Risks Related to the Development and Clinical Testing of Our Product Candidates

Results of preclinical studies of any product candidates may not be predictive of the results of future preclinical studies or clinical trials.

To obtain the requisite regulatory approvals to market and sell any of our product candidates, we or any collaborator for such product candidate must demonstrate through extensive preclinical studies and clinical trials that the product candidate is safe, pure, and potent in humans. Before an IND can be submitted to the FDA and become effective, which is a perquisite for conducting clinical trials on human subjects, a product candidate must successfully progress through extensive preclinical studies, which include preclinical laboratory testing, animal studies, and formulation studies in accordance with good laboratory practices (GLP).

Success in preclinical studies does not ensure that later preclinical studies or clinical trials will be successful. A number of companies in the biotechnology and pharmaceutical industries have suffered significant setbacks in clinical trials, even after positive results in earlier preclinical studies. These setbacks have been caused by, among other things, preclinical findings made while clinical trials were underway and safety or efficacy observations made in clinical trials, including previously unreported adverse events. The design of a clinical trial can determine whether its results will support approval of a product, and flaws in the design of a clinical trial may not become apparent until the clinical trial is well advanced. In addition, preclinical and clinical data are often susceptible to varying interpretations and analyses. Notwithstanding any potential promising results in earlier studies, we cannot be certain that we will not face similar setbacks. In addition, the results of our preclinical animal studies, including our non-human primate studies, may not be predictive of the results of outcomes in subsequent clinical trials on human subjects. Product candidates in clinical trials may fail to show the desired pharmacological properties or safety and efficacy traits despite having progressed through preclinical studies.

If we fail to receive positive results in preclinical studies or clinical trials of any product candidate, the development timeline and regulatory approval and commercialization prospects for that product candidate, and, correspondingly, our business and financial prospects, would be negatively impacted.

All of our product candidates are in preclinical development and have not commenced clinical development. Preclinical and clinical drug development is a lengthy and expensive process with uncertain timelines and uncertain outcomes. If preclinical studies or clinical trials of a product candidate are prolonged or delayed, we may be unable to obtain required regulatory approvals, and therefore be unable to commercialize our product candidates on a timely basis or at all.

Preclinical studies and clinical testing are expensive and can take many years to complete, and their outcomes are inherently uncertain. Failure can occur at any time during this process. Product candidates in later stages of clinical trials may fail to produce the same results or to show the desired safety and efficacy traits despite having progressed through preclinical studies and initial clinical trials. Our future clinical trial results may not be successful.

Additionally, some of our trials, may be open-label trials in which both the patient and investigator know whether the patient is receiving the investigational product candidate or an existing approved therapy. Open-label clinical trials are subject to various limitations that may exaggerate any therapeutic effect, as patients in open-label clinical trials are aware when they are receiving treatment. In addition, open-label clinical trials may be subject to an "investigator bias" where those assessing and reviewing the physiological outcomes of the clinical trials are aware of which patients have received treatment and may interpret the information of the treated group more favorably given this knowledge. Therefore, it is possible that positive results observed in open-label trials will not be replicated in later placebo-controlled trials.

To date, we have not commenced any clinical trials required for the approval of a product candidate. We do not know whether planned clinical trials will begin on time, need to be redesigned, enroll patients on time, or be completed on schedule, if at all. Clinical trials can be delayed, suspended, or terminated for a variety of reasons, including the following:

- delays in or failure to obtain regulatory authorization to commence a trial;
- delays in or failure to obtain institutional review board, or IRB, approval at each site;
- delays in or failure to reach agreement on acceptable terms with prospective CROs and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- difficulty in recruiting clinical trial investigators of appropriate competencies and experience;
- lack of sufficient availability of donor material suitable from eligible and qualified donors for certain of our product candidates for the manufacture of product candidates from our *ex vivo* cell engineering platform;
- delays in establishing the appropriate dosage levels in clinical trials;
- delays in or failure to recruit and enroll suitable patients to participate in a trial, particularly considering study inclusion and exclusion criteria and patients' prior lines of therapy and treatment;
- the difficulty in certain countries in identifying the sub-populations that we are trying to treat in a particular trial, which may delay enrollment and reduce the power of a clinical trial to detect statistically significant results;
- lower than anticipated retention rates of patients in clinical trials;
- failure to have patients complete a trial or return for post-treatment follow-up;
- clinical sites deviating from trial protocol or dropping out of a trial;
- delays adding new investigators or clinical trial sites;
- safety or tolerability concerns could cause us or governmental authorities, as applicable, to suspend or terminate a trial if it is found that the participants are being exposed to unacceptable health risks,

undesirable side effects, or other unfavorable characteristics of the product candidate, or if such undesirable effects or risks are found to be caused by a chemically or mechanistically similar therapeutic or therapeutic candidate;

- our third-party research contractors failing to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;
- changes in regulatory requirements, policies, and guidelines;
- manufacturing sufficient quantities of a product candidate for use in clinical trials;
- the quality or stability of a product candidate falling below acceptable standards;
- changes in the treatment landscape for our target indications that may make our product candidates no longer relevant;
- third-party actions claiming infringement by our product candidates in clinical trials outside the United States and obtaining injunctions interfering with our progress; and
- business interruptions resulting from geo-political actions, including war and terrorism, natural disasters including earthquakes, typhoons, floods, and fires, or disease, including the COVID-19 pandemic.

In addition, disruptions caused by the COVID-19 pandemic may increase the likelihood that we encounter such difficulties or delays in initiating, enrolling, conducting, or completing our planned clinical trials. Moreover, while we plan to submit INDs for our potential product candidates, we may not be able to file such INDs on the timeline we expect. For example, we may experience manufacturing delays or other delays with IND-enabling preclinical studies. Moreover, we cannot be sure that submission of an IND will result in the FDA allowing clinical trials to begin, or that, once begun, issues will not arise that suspend or terminate clinical trials. Additionally, even if such regulatory authorities agree with the design and implementation of the clinical trials set forth in an IND, we cannot guarantee that such regulatory authorities will not change their requirements in the future. These considerations also apply to new clinical trials we may submit as amendments to existing INDs.

Clinical trials must be conducted in accordance with the FDA and comparable foreign regulatory authorities' legal requirements, regulations or guidelines, and are subject to oversight by these governmental agencies and IRBs or Ethics Committees at the medical institutions where the clinical trials are conducted. We could encounter delays if a clinical trial is suspended or terminated by us, by the IRBs or Ethics Committees of the institutions in which such trials are being conducted, by the Data Review Committee or Data Safety Monitoring Board for such trial or by the FDA, or comparable foreign regulatory authorities. Such authorities may impose such a suspension or termination due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or comparable foreign regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a drug, changes in governmental regulations or administrative actions, or lack of adequate funding to continue the clinical trial. If we experience delays in the completion of, or termination of, any clinical trial of our product candidates, the commercial prospects of our product candidates will be harmed, and our ability to generate product revenues from any of these product candidates will be delayed. In addition, any delays in completing our clinical trials will increase our costs, slow down our product candidate development and approval process, and jeopardize our ability to commence product sales and generate revenues. Significant clinical trial delays could also allow our competitors to bring products to market before we do or shorten any periods during which we have the exclusive right to commercialize our product candidates and impair our ability to commercialize our product candidates and may harm our business and results of operations.

In addition, clinical trials must be conducted with supplies of our product candidates produced under cGMP and, if applicable, cGTP requirements and other regulations. Furthermore, we rely on CROs and clinical trial

sites to ensure the proper and timely conduct of our clinical trials and while we have agreements governing their committed activities, we have limited influence over their actual performance. We depend on medical institutions and CROs to conduct our clinical trials in compliance with good clinical practice (GCP) requirements. To the extent the CROs fail to enroll participants for our clinical trials, fail to conduct the study in accordance with GCP, or are delayed for a significant time in the execution of trials, including achieving full enrollment, we may be affected by increased costs, program delays, or both, which may harm our business. In addition, clinical trials that are conducted in countries outside the United States may subject us to further delays and expenses as a result of increased shipment and distribution costs, additional regulatory requirements, and the engagement of non-U.S. CROs, as well as expose us to risks associated with clinical investigators who are unknown to the FDA, and different standards of diagnosis, screening, and medical care.

Our clinical trials may fail to demonstrate substantial evidence of the safety and efficacy of our product candidates or any future product candidates, which would prevent or delay or limit the scope of regulatory approval and commercialization.

To obtain the requisite regulatory approvals to market and sell any of our product candidates and any other future product candidates, we must demonstrate through clinical trials that our product candidates are safe and effective for use in each targeted indication. Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical development process. Most product candidates that begin clinical trials are never approved by regulatory authorities for commercialization. We may be unable to establish clinical endpoints that applicable regulatory authorities would consider clinically meaningful, and a clinical trial can fail at any stage of testing.

Further, the process of obtaining regulatory approval is expensive, often takes many years following the commencement of clinical trials, and can vary substantially based upon the type, complexity, and novelty of the product candidates involved, as well as the target indications, patient population, and regulatory agency. Prior to obtaining approval to commercialize our product candidates and any future product candidates in the United States or abroad, we or our potential future collaborators must demonstrate with substantial evidence from adequate and well-controlled clinical trials, and to the satisfaction of the FDA or comparable foreign regulatory authorities, that such product candidates are safe and effective for their intended uses.

Clinical trials that we conduct may not demonstrate the efficacy and safety necessary to obtain regulatory approval to market our product candidates. In some instances, there can be significant variability in safety or efficacy results between different clinical trials of the same product candidate due to numerous factors, including changes in trial procedures set forth in protocols, differences in the size and type of the patient populations, changes in and adherence to the clinical trial protocols, and the rate of dropout among clinical trial participants. If the results of our ongoing or future clinical trials are inconclusive with respect to the efficacy of our product candidates, if we do not meet the clinical endpoints with statistical and clinically meaningful significance, or if there are safety concerns associated with our product candidates, we may be delayed in obtaining marketing approval, if at all. Additionally, any safety concerns observed in any one of our clinical trials in our targeted indications could limit the prospects for regulatory approval of our product candidates in those and other indications.

Even if the trials are successfully completed, clinical data are often susceptible to varying interpretations and analyses, and we cannot guarantee that the FDA or comparable foreign regulatory authorities will interpret the results as we do, and more trials could be required before we submit our product candidates for approval. We cannot guarantee that the FDA or comparable foreign regulatory authorities will view our product candidates as having efficacy even if positive results are observed in clinical trials. The FDA or comparable foreign regulatory authorities may not agree with our manufacturing strategy or find comparability between our clinical trial product candidates and proposed commercial product candidates even if positive results are observed in clinical trials, which may result in regulatory delays or a need to perform additional clinical studies. Moreover, results acceptable to support approval in one jurisdiction may be deemed inadequate by another regulatory authority to

support regulatory approval in that other jurisdiction. To the extent that the results of the trials are not satisfactory to the FDA or comparable foreign regulatory authorities for support of a marketing application, approval of our product candidates and any future product candidates may be significantly delayed, or we may be required to expend significant additional resources, which may not be available to us, to conduct additional trials in support of potential approval of our product candidates. Even if regulatory approval is secured for a product candidate, the terms of such approval may limit the scope and use of the specific product candidate, which may also limit its commercial potential.

Interim, topline, or preliminary data from our clinical trials that we announce or publish from time to time may change as more patient data becomes available or as we make changes to our manufacturing processes and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publicly disclose interim, topline, or preliminary data from our preclinical studies and clinical trials, which is based on a preliminary analysis of then-available data, and the results and related findings and conclusions are subject to change following a more comprehensive review of the data related to the particular study or trial. We also make assumptions, estimations, calculations, and conclusions as part of our analyses of data, and we may not have received or had the opportunity to fully and carefully evaluate all data. Further, modifications or improvements to our manufacturing processes for a therapy may result in changes to the characteristics or behavior of the product candidate that could cause our product candidates to perform differently and affect the results of our ongoing clinical trials. As a result, the topline results that we report may differ from future results of the same studies, or different conclusions or considerations may qualify such results, once additional data have been received and fully evaluated. Topline data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, topline data should be viewed with caution until the final data are available.

From time to time, we may also disclose preliminary or interim data from our preclinical studies and clinical trials. Preliminary or interim data from clinical trials are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. Adverse differences between preliminary or interim data and final data could significantly harm our business prospects. Additionally, disclosure of preliminary or interim data by us or by our competitors could result in volatility in the price of our common stock.

Further, others, including regulatory agencies, may not accept or agree with our assumptions, estimates, calculations, conclusions, or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular program, the approvability or commercialization of the particular product candidate, and our company in general. If the interim, topline, or preliminary data that we report differ from actual results, or if others, including regulatory authorities, disagree with the conclusions reached, our ability to obtain approval for, and commercialize, any of our potential product candidates may be harmed, which could harm our business, operating results, prospects, or financial condition.

Our product candidates may have serious adverse, undesirable, or unacceptable side effects or other properties that may delay or prevent marketing approval. If such side effects are identified following approval, if any, the commercial profile of any approved label may be limited, or we may be subject to other significant negative consequences following marketing approval, if any.

Undesirable side effects that may be caused by our product candidates could cause us or regulatory authorities to interrupt, delay, or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or comparable foreign authorities. We have not commenced clinical trials for any of our product candidates, and we do not have any clinical data to fully anticipate side effects. Accordingly, we may experience unexpected side effects and/or higher levels of known side effects in clinical trials, including adverse events known in the classes of therapeutics. These include the potential for, among others, infusion reaction, cytokine release syndrome (CRS), graft-versus-host disease (GvHD), neurotoxicities and certain cancers.

Results of our clinical trials could reveal a high and unacceptable severity and prevalence of these or other side effects. In such an event, our clinical trials could be suspended or terminated and the FDA or comparable foreign regulatory authorities could order us to cease further development of or deny approval of our product candidates for any or all targeted indications. The drug-related side effects could affect patient recruitment or the ability of enrolled patients to complete the clinical trial or result in potential product liability claims. Any of these occurrences may harm our business, financial condition, and prospects significantly.

Further, clinical trials by their nature utilize a sample of the potential patient population. With a limited number of patients and limited duration of exposure, rare and severe side effects of our product candidates may only be uncovered with a significantly larger number of patients exposed to the product candidate.

In the event that any of our product candidates receives marketing approval and we or others later identify undesirable or unacceptable side effects caused by such products, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw or limit approvals of such products and require us to take our approved product off the market;
- regulatory authorities may require the addition of labeling statements, specific warnings, a contraindication or field alerts to physicians and pharmacies, or issue other communications containing warnings or other safety information about the product;
- regulatory authorities may require a medication guide outlining the risks of such side effects for distribution to patients, or that we implement a risk evaluation and mitigation strategy, or REMS, plan to ensure that the benefits of the product outweigh its risks;
- we may be required to change the dose or the way the product is administered, conduct additional clinical trials, or change the labeling of the product;
- we may be subject to limitations on how we may promote or manufacture the product;
- sales of the product may decrease significantly;
- we may be subject to litigation or product liability claims; and
- our reputation may suffer.

Any of these events could prevent us or our potential future partners from achieving or maintaining market acceptance of the affected product or could substantially increase commercialization costs and expenses, which in turn could delay or prevent us from generating significant revenue from the sale of any products.

The manufacture of our product candidates is complex. Our third-party manufacturers may encounter difficulties in production, which could delay or entirely halt their ability to supply our product candidates for clinical trials or, if approved, for commercial sale.

Our product candidates are considered to be biologics and the process of manufacturing biologics is complex and requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. We do not yet own or operate any cGMP manufacturing facilities. We rely, and expect for some period of time to continue to rely, on third-party contract development and manufacturing organizations for the manufacture of our product candidates for preclinical and clinical testing. To date, we and our contract manufacturers have limited experience in the manufacturing of cGMP batches of our product candidates. Our contract manufacturers must comply with cGMPs, regulations, and guidelines for the manufacturing of biologics used in clinical trials and, if approved, marketed products. To date, we have not scaled the manufacturing process for later-stage clinical trials and commercialization. Larger scale manufacturing will require the development of new processes, including for the removal of impurities that are a normal byproduct of the manufacturing process. The nature of our product candidates requires the development

of novel manufacturing processes and analytical technologies, which could cause delays in the scaling of manufacturing, as well as greater costs that could negatively impact the financial viability of our product candidates. We cannot be sure that the manufacturing processes employed by our third-party manufacturers or the technologies that our third-party manufacturers incorporate for manufacturing will result in viable or scalable yields of *in vivo* and *ex vivo* cell engineering product candidates that will be safe, be effective, and meet market demand.

The process of manufacturing our biologic product candidates is extremely susceptible to product loss due to contamination, equipment failure, or improper installation or operation of equipment, vendor or operator error, inconsistency in yields, variability in product characteristics, and difficulties in scaling the production process. Even minor deviations from normal manufacturing processes could result in reduced production yields, product defects, and other supply disruptions. If microbial, viral, or other contaminations are discovered in our product candidates or in the manufacturing facilities in which our product candidates are made, this could lead to withdrawal of our products from clinical trials and the market, and such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination. Moreover, if the FDA or comparable foreign regulatory authorities determine that our third-party manufacturers are not in compliance with laws and regulations, including those governing cGMPs, the FDA or comparable foreign regulatory authority may not approve a Biologics License Application (BLA), marketing authorisation application (MAA), or comparable authorization until the deficiencies are corrected or we replace the manufacturer in our applications with a manufacturer that is in compliance. Third-party manufacturers may not be able to manufacture our product candidates as a result of not meeting regulatory requirements.

Any adverse developments affecting manufacturing operations for our product candidates, if any are approved, may result in shipment delays, inventory shortages, lot failures, product withdrawals or recalls, or other interruptions in the supply of our products. We may also have to take inventory write-offs and incur other charges and expenses for products that fail to meet specifications as a result of defects or storage over an extended period of time, undertake costly remediation efforts, or seek more costly manufacturing alternatives. As part of our process development efforts, we also may make changes to our manufacturing processes at various points during development, for various reasons, such as controlling costs, achieving scale, decreasing processing time, increasing manufacturing success rate, or other reasons. Such changes carry the risk that they will not achieve their intended objectives, and any of these changes could cause our product candidates to perform differently and affect the results of our ongoing clinical trials or future clinical trials. In some circumstances, changes in the manufacturing process may require us to perform comparability studies and to collect additional data from patients prior to undertaking more advanced clinical trials.

We are exposed to a number of risks related to our supply chain for the materials required to manufacture our product candidates.

Manufacturing our product candidates is highly complex and requires sourcing specialty materials. Many of the risks associated with the complexity of manufacturing our final products are applicable to the manufacture and supply of the raw materials. In particular, these starting materials are subject to inconsistency in yields, variability in characteristics, contamination, difficulties in scaling the production process and defects. Similar minor deviations in the manufacturing process for these starting materials could result in supply disruption and reduced production yields for our final product. In addition, we rely on third parties for the supply of these materials exposing us to similar risks of reliance on third parties.

Our manufacturing processes requires many reagents, which are drug substance intermediates used in our manufacturing processes to bring about chemical or biological reactions, and other specialty materials and equipment, some of which are manufactured or supplied by small companies with limited resources and experience to support commercial biologics production. We currently depend on a limited number of vendors for certain materials and equipment used in the manufacture of our product candidates. Some of these suppliers may not have the capacity to support commercial products manufactured under cGMP by biopharmaceutical firms or

may otherwise be ill-equipped to support our needs. Reagents and other key materials from these suppliers may have inconsistent attributes and introduce variability into our manufactured product candidates, which may contribute to variable patient outcomes and possible adverse events. We also do not have supply contracts with many of these suppliers and may not be able to obtain supply contracts with them on acceptable terms or at all. Accordingly, we may experience delays in receiving key materials and equipment to support clinical or commercial manufacturing.

For some of these reagents, equipment, and materials, we rely and may in the future rely on sole source vendors or a limited number of vendors. An inability to continue to source product from any of these suppliers, which could be due to regulatory actions or requirements affecting the supplier, adverse financial or other strategic developments experienced by a supplier, labor disputes or shortages, unexpected demands, or quality issues, could adversely affect our ability to satisfy demand for our product candidates, which could adversely and materially affect our product sales and operating results or our ability to conduct clinical trials, either of which could significantly harm our business.

As we continue to develop and scale our manufacturing process, we expect that we will need to obtain rights to and supplies of certain materials and equipment to be used as part of that process. We may not be able to obtain rights to such materials on commercially reasonable terms, or at all, and if we are unable to alter our process in a commercially viable manner to avoid the use of such materials or find a suitable substitute, it would have a material adverse effect on our business. Even if we are able to alter our process so as to use other materials or equipment, such a change may lead to a delay in our clinical development and/or commercialization plans. If such a change occurs for product candidate that is already in clinical testing, the change may require us to perform both comparability studies and to collect additional data from patients prior to undertaking more advanced clinical trials.

We will depend on enrollment and retention of patients in our clinical trials for our product candidates. If we experience delays or difficulties enrolling or retaining patients in our clinical trials, our research and development efforts and business, financial condition, and results of operations could be materially adversely affected.

Successful and timely completion of clinical trials will require that we enroll and retain a sufficient number of patient candidates. Any clinical trials we conduct may be subject to delays for a variety of reasons, including as a result of patient enrollment taking longer than anticipated, patient withdrawal, or adverse events. These types of developments could cause us to delay the trial or halt further development.

Our clinical trials will compete with other clinical trials that are in the same therapeutic areas as our product candidates, and this competition reduces the number and types of patients available to us, as some patients who might have opted to enroll in our trials may instead opt to enroll in a trial being conducted by one of our competitors. Moreover, enrolling patients in clinical trials for diseases in which there is an approved standard of care is challenging, as patients will first receive the applicable standard of care. Many patients who respond positively to the standard of care do not enroll in clinical trials. This may limit the number of eligible patients able to enroll in our clinical trials who have the potential to benefit from our product candidates and could extend development timelines or increase costs for these programs. Patients who fail to respond positively to the standard of care treatment will be eligible for clinical trials of unapproved drug candidates. However, these prior treatment regimens may render our therapies less effective in clinical trials.

Because the number of qualified clinical investigators and clinical trial sites is limited, we expect to conduct some of our clinical trials at the same clinical trial sites that some of our competitors use, which will reduce the number of patients who are available for our clinical trials at such clinical trial sites.

Patient enrollment depends on many factors, including:

- the size and nature of the patient population;

- the severity of the disease under investigation;
- eligibility criteria for the trial;
- the proximity of patients to clinical sites;
- the design of the clinical protocol;
- the ability to obtain and maintain patient consents;
- perceived risks and benefits of the product candidate under evaluation, including any perceived risks associated with iPSC-derived product candidates;
- the ability to recruit clinical trial investigators with the appropriate competencies and experience;
- the risk that patients enrolled in clinical trials will drop out of the trials before the administration of our product candidates or trial completion;
- the availability of competing clinical trials;
- the availability of such patients during the COVID-19 pandemic;
- the availability of new drugs approved for the indication the clinical trial is investigating; and
- clinicians' and patients' perceptions as to the potential advantages of the drug being studied in relation to other available therapies.

These factors may make it difficult for us to enroll enough patients to complete our clinical trials in a timely and cost-effective manner. Delays in the completion of any clinical trial of our product candidates will increase our costs, slow down our product candidate development and approval process, and delay or potentially jeopardize our ability to commence product sales and generate revenue. In addition, some of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates.

We may become exposed to costly and damaging liability claims, either when testing our product candidates in the clinic or at the commercial stage, and our product liability insurance may not cover all damages from such claims.

We are exposed to potential product liability and professional indemnity risks that are inherent in the research, development, manufacturing, marketing, and use of pharmaceutical products. While we currently have no products that have commenced clinical trials or been approved for commercial sale, the future use of product candidates by us in clinical trials, and the sale of any approved products in the future, may expose us to liability claims. These claims might be made by patients that use the product, healthcare providers, pharmaceutical companies, or others selling such products. Any claims against us, regardless of their merit, could be difficult and costly to defend and could materially adversely affect the market for our product candidates or any prospects for commercialization of our product candidates.

Although the clinical trial process is designed to identify and assess potential side effects, it is always possible that a drug, even after regulatory approval, may exhibit unforeseen side effects. If any of our product candidates were to cause adverse side effects during clinical trials or after approval of the product candidate, we may be exposed to substantial liabilities. Physicians and patients may not comply with any warnings that identify known potential adverse effects and patients who should not use our product candidates.

Even successful defense against product liability claims would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in: decreased demand for our product candidates; injury to our reputation; withdrawal of clinical trial participants; initiation of investigations by regulators; costs to defend the related litigation; a diversion of management's time and our resources;

substantial monetary awards to trial participants or patients; product recalls, withdrawals or labeling, marketing or promotional restrictions; loss of revenue; exhaustion of any available insurance and our capital resources; the inability to commercialize any product candidate; and a decline in our share price.

Although we maintain adequate product liability insurance for our product candidates, it is possible that our liabilities could exceed our insurance coverage. We intend to expand our insurance coverage to include the sale of commercial products if we obtain marketing approval for any of our product candidates. However, we may be unable to maintain insurance coverage at a reasonable cost or obtain insurance coverage that will be adequate to satisfy any liability that may arise. If a successful product liability claim or series of claims is brought against us for uninsured liabilities or in excess of insured liabilities, our assets may not be sufficient to cover such claims, and our business operations could be impaired.

Risks Related to Our Regulatory Environment

The development and commercialization of biopharmaceutical products is subject to extensive regulation, and the regulatory approval processes of the FDA and comparable foreign authorities are lengthy, time-consuming, and inherently unpredictable. If we are ultimately unable to obtain regulatory approval for our product candidates on a timely basis if at all, our business will be substantially harmed.

The clinical development, manufacturing, labeling, packaging, storage, recordkeeping, advertising, promotion, export, import, marketing, distribution, adverse event reporting, including the submission of safety and other post-marketing information and reports, and other possible activities relating to our product candidates are subject to extensive regulation. In the United States, marketing approval of biologics requires the submission of a BLA to the FDA, and we are not permitted to market any product candidate in the United States until we obtain approval from the FDA of the BLA for that product candidate. A BLA must be supported by extensive clinical and preclinical data, as well as extensive information regarding pharmacology, chemistry, manufacturing, and controls. Outside the United States, many comparable foreign regulatory authorities employ similar approval processes.

We have not previously submitted a BLA to the FDA or similar regulatory approval filings to comparable foreign authorities, for any product candidate, and we cannot be certain that any of our product candidates will receive regulatory approval. We are not permitted to market our product candidates in the United States or in other countries until we receive approval of a BLA from the FDA or marketing approval from applicable regulatory authorities outside the United States. Obtaining approval of a BLA can be a lengthy, expensive, and uncertain process, and as a company we have no experience with the preparation of a BLA submission or any other application for marketing approval. Further, the FDA has not yet granted approval for a therapeutics derived from stem cells, which we believe may increase the complexity, uncertainty and length of the regulatory approval process for certain of our product candidates derived from our *ex vivo* cell engineering platform. In addition, the FDA has the authority to require a risk evaluation and mitigation strategies, or REMS, plan as part of a BLA or after approval, which may impose further requirements or restrictions on the distribution or use of an approved biologic, such as limiting prescribing to certain physicians or medical centers that have undergone specialized training, limiting treatment to patients who meet certain safe-use criteria and requiring treated patients to enroll in a registry.

Our product candidates could fail to receive regulatory approval for many reasons, including the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our clinical trials;
- we may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a product candidate is safe and effective for its proposed indication;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;

- we may be unable to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- the FDA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials of our product candidates may not be sufficient to support the submission of a BLA or other submission or to obtain regulatory approval in the United States or elsewhere, or regulatory authorities may not accept a submission due to, among other reasons, the content or formatting of the submission;
- the FDA or comparable foreign regulatory authorities may fail to approve our manufacturing processes or facilities or those of third-party manufacturers with which we contract for clinical and commercial supplies; and
- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

This lengthy approval process, as well as the unpredictability of future clinical trial results, may result in our failing to obtain regulatory approval to market any of our product candidates, which would significantly harm our business, results of operations, and prospects. The FDA and comparable foreign regulatory authorities have substantial discretion in the approval process, and determining when or whether regulatory approval will be obtained for any of our product candidates. For example, regulatory authorities in various jurisdictions have in the past had, and may in the future have, differing requirements for, interpretations of and opinions on our preclinical and clinical data. As a result, we may be required to conduct additional preclinical studies, alter our proposed clinical trial designs, or conduct additional clinical trials to satisfy the regulatory authorities in each of the jurisdictions in which we hope to conduct clinical trials and develop and market our products, if approved. Further, even if we believe the data collected from clinical trials of our product candidates are promising, such data may not be sufficient to support approval by the FDA or any comparable foreign regulatory authority.

In addition, even if we were to obtain approval, regulatory authorities may approve any of our product candidates for fewer or more limited indications than we request, may not approve the price we intend to charge for our products, may grant approval contingent on the performance of costly post-marketing clinical trials, or may approve a product candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that product candidate. Notably, to date, the FDA has required that any patient receiving a gene therapy be followed for 15 years post-treatment. This post-treatment follow-up increases the cost and complexity of commercializing gene therapy products. Any of the foregoing scenarios could materially harm the commercial prospects for our product candidates.

Even if our product candidates obtain regulatory approval, we will be subject to ongoing obligations and continued regulatory review, which may result in significant additional expense. Additionally, our product candidates, if approved, could be subject to labeling and other restrictions and market withdrawal and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our products.

If the FDA or a comparable foreign regulatory authority approves any of our product candidates, the manufacturing processes, testing, labeling, packaging, distribution, import, export, adverse event reporting, storage, advertising, promotion, and recordkeeping for the product will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with cGMPs and GCPs for any clinical trials that we conduct post-approval, all of which may result in significant expense and limit our ability to commercialize such products. In addition, any regulatory approvals that we receive for our product candidates may also be subject to limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including Phase 4 clinical trials, and surveillance to monitor the safety and efficacy of the product candidate.

Manufacturers and manufacturers' facilities are required to comply with extensive FDA and comparable foreign regulatory authority requirements, including ensuring that quality control and manufacturing procedures conform to cGMP regulations, as well as, for the manufacture of certain of our product candidates, the FDA's cGTPs for the use of human cellular and tissue products to prevent the introduction, transmission or spread of communicable diseases. As such, we and our contract manufacturers will be subject to continual review and inspections to assess compliance with cGMP, cGTPs and adherence to commitments made in any approved marketing application. Accordingly, we and others with whom we work must continue to expend time, money, and effort in all areas of regulatory compliance, including manufacturing, quality control, and distribution.

If there are changes in the application of legislation or regulatory policies, or if problems are discovered with a product or our manufacture of a product, or if we or one of our distributors, licensees or co-marketers fails to comply with regulatory requirements, the regulators could take various actions. These include issuing warning letters or untitled letters, imposing fines on us, imposing restrictions on the product or its manufacture, and requiring us to recall or remove the product from the market. The regulators could also suspend or withdraw our marketing authorizations, requiring us to conduct additional clinical trials, change our product labeling, or submit additional applications for marketing authorization. If any of these events occurs, our ability to sell such product may be impaired, and we may incur substantial additional expense to comply with regulatory requirements, which could materially adversely affect our business, financial condition, and results of operations.

In addition, if we have any product candidate approved, our product labeling, advertising, and promotion will be subject to regulatory requirements and continuing regulatory review. In the United States, the FDA and the Federal Trade Commission, or FTC, strictly regulate the promotional claims that may be made about pharmaceutical products to ensure that any claims about such products are consistent with regulatory approvals, not misleading or false in any particular, and adequately substantiated by clinical data. The promotion of a drug product in a manner that is false, misleading, unsubstantiated, or for unapproved (or off-label) uses may result in enforcement letters, inquiries and investigations, and civil and criminal sanctions by the FDA or the FTC. In particular, a product may not be promoted for uses that are not approved by the FDA as reflected in the product's approved labeling. If we receive marketing approval for a product candidate, physicians may nevertheless prescribe it to their patients in a manner that is inconsistent with the approved label. If we are found to have promoted such off-label uses, we may become subject to significant liability. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant sanctions and may result in false claims litigation under federal and state statutes, which can lead to consent decrees, civil monetary penalties, restitution, criminal fines and imprisonment, and exclusion from participation in Medicare, Medicaid, and other federal and state healthcare programs. The federal government has levied large civil and criminal fines against companies for alleged improper promotion and has enjoined several companies from engaging in off-label promotion. The FDA has also requested that companies enter into consent decrees or permanent injunctions under which specified promotional conduct is changed or curtailed.

If a regulatory agency discovers previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, or disagrees with the promotion, marketing or labeling of a product, such regulatory agency may impose restrictions on that product or us, including requiring withdrawal of the product from the market. If we fail to comply with applicable regulatory requirements, a regulatory agency or enforcement authority may, among other things:

- issue warning letters;
- issue, or require us to issue, safety-related communications, such as safety alerts, field alerts, "Dear Doctor" letters to healthcare professionals, or import alerts;
- impose civil or criminal penalties;
- suspend, limit, or withdraw regulatory approval;
- suspend any of our preclinical studies and clinical trials;

- refuse to approve pending applications or supplements to approved applications submitted by us;
- impose restrictions on our operations, including closing our and our contract manufacturers' facilities; or
- seize or detain products, refuse to permit the import or export of products, or require us to conduct a product recall.

Any government investigation of alleged violations of law could require us to expend significant time and resources in response and could generate negative publicity. Any failure to comply with ongoing regulatory requirements may significantly and adversely affect our ability to commercialize and generate revenue from our products, if approved. If regulatory sanctions are applied or if regulatory approval is withdrawn, the value of our company and our operating results will be adversely affected.

Moreover, the policies of the FDA and of comparable foreign regulatory authorities may change and additional government regulations may be enacted that could prevent, limit, or delay regulatory approval of our product candidates. We cannot predict the likelihood, nature, or extent of government regulation that may arise from future legislation or administrative or executive action, either in the United States or abroad. For example, certain policies of the Trump administration may impact our business and industry. Namely, the Trump administration has taken several executive actions, including the issuance of a number of Executive Orders, that could impose significant burdens on, or otherwise materially delay, the FDA's ability to engage in routine oversight activities such as implementing statutes through rulemaking, issuance of guidance, and review and approval of marketing applications. It is difficult to predict how these orders will be implemented, and the extent to which they will impact the FDA's ability to exercise its regulatory authority. If these executive actions impose restrictions on the FDA's ability to engage in oversight and implementation activities in the normal course, our business may be negatively impacted. In addition, if we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability.

Disruptions at the FDA and other government agencies caused by funding shortages or global health concerns could hinder their ability to hire, retain, or deploy key leadership and other personnel, or otherwise prevent new or modified products from being developed, approved, or commercialized in a timely manner or at all, which could negatively impact our business.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels, statutory, regulatory, and policy changes, the FDA's ability to hire and retain key personnel and accept the payment of user fees, and other events that may otherwise affect the FDA's ability to perform routine functions. Average review times at the FDA have fluctuated in recent years as a result. In addition, government funding of other government agencies that fund research and development activities is subject to the political process, which is inherently fluid and unpredictable. Disruptions at the FDA and other agencies may also slow the time necessary for new biologics or modifications to licensed biologics to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years, including for 35 days beginning on December 22, 2018, the U.S. government has shut down several times and certain regulatory agencies, such as the FDA, have had to furlough critical FDA employees and stop critical activities.

Separately, in response to the COVID-19 pandemic, on March 10, 2020 the FDA announced its intention to postpone most inspections of foreign manufacturing facilities, and on March 18, 2020, the FDA temporarily postponed routine surveillance inspections of domestic manufacturing facilities. Subsequently, on July 10, 2020, the FDA announced its intention to resume certain on-site inspections of domestic manufacturing facilities subject to a risk-based prioritization system. The FDA intends to use this risk-based assessment system to identify the categories of regulatory activity that can occur within a given geographic area, ranging from mission

critical inspections to resumption of all regulatory activities. Regulatory authorities outside the United States may adopt similar restrictions or other policy measures in response to the COVID-19 pandemic. If a prolonged government shutdown occurs, or if global health concerns continue to prevent the FDA or comparable foreign regulatory authorities from conducting their regular inspections, reviews, or other regulatory activities, it could significantly impact the ability of the FDA or comparable foreign regulatory authorities to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

Our research and development activities could be affected or delayed as a result of possible restrictions on animal testing.

Certain laws and regulations require us to test our product candidates on animals before initiating clinical trials involving humans. Animal testing activities have been the subject of controversy and adverse publicity. Animal rights groups and other organizations and individuals have attempted to stop animal testing activities by pressing for legislation and regulation in these areas and by disrupting these activities through protests and other means. To the extent the activities of these groups are successful, our research and development activities may be interrupted, delayed, or become more expensive.

Our business operations and current and future relationships with healthcare professionals, principal investigators, consultants, vendors, customers, and third-party payors in the United States and elsewhere are subject to applicable anti-kickback, fraud and abuse, false claims, physician payment transparency, and other healthcare laws and regulations, which could expose us to substantial penalties, contractual damages, reputation harm, administrative burdens, and diminished profits.

Healthcare providers, healthcare facilities and institutions, physicians, and third-party payors in the United States and elsewhere will play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our current and future arrangements with healthcare professionals, healthcare facilities and institutions, principal investigators, consultants, customers, and third-party payors may expose us to broadly applicable fraud and abuse and other healthcare laws, including, without limitation, the federal Anti-Kickback Statute and the federal False Claims Act, that may constrain the business or financial arrangements and relationships through which we research, sell, market, and distribute any product candidates for which we obtain marketing approval. In addition, we may be subject to physician payment transparency laws and regulation by the federal government and by the states and foreign jurisdictions in which we conduct our business. The applicable federal, state, and foreign healthcare laws that affect our ability to operate include, but are not limited to, the following:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons or entities from knowingly and willfully soliciting, offering, receiving, or providing any remuneration (including any kickback, bribe, or certain rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, lease, order or recommendation of, any good, facility, item or service, for which payment may be made, in whole or in part, under any U.S. federal healthcare program, such as Medicare and Medicaid. The term “remuneration” has been broadly interpreted to include anything of value, including stock options. The federal Anti-Kickback Statute has also been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, purchasers and formulary managers on the other hand. There are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution, but the exceptions and safe harbors are drawn narrowly and require strict compliance in order to offer protection. Any arrangements with prescribers must be for *bona fide* services and compensated at fair market value. There are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution, but the exceptions and safe harbors are drawn narrowly and require strict compliance in order to offer protection. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;

- the U.S. federal civil and criminal false claims laws, including without limitation, the civil False Claims Act, which can be enforced by private citizens on behalf of the U.S. federal government through civil whistleblower or *qui tam* actions, and the federal civil monetary penalties law which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, to the U.S. federal government, claims for payment or approval that are false or fraudulent, knowingly making, using, or causing to be made or used, a false record or statement material to a false or fraudulent claim, or from knowingly making a false statement to avoid, decrease, or conceal an obligation to pay money to the U.S. federal government. Pharmaceutical manufacturers can cause false claims to be presented to the U.S. federal government by, among other things, engaging in impermissible marketing practices, such as the off-label promotion of a product for an indication for which it has not received FDA approval. Further, pharmaceutical manufacturers can be held liable under the civil False Claims Act even when they do not submit claims directly to government payors if they are deemed to "cause" the submission of false or fraudulent claims. In addition, the government may assert that a claim including items and services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act;
- the federal Health Insurance Portability and Accountability Act of 1996 (HIPAA), which imposes criminal and civil liability for, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, or knowingly and willfully falsifying, concealing, or covering up a material fact or making any materially false statement, in connection with the delivery of, or payment for, healthcare benefits, items, or services. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the healthcare fraud statute implemented under HIPAA or specific intent to violate it in order to have committed a violation;
- the U.S. Federal Food, Drug, and Cosmetic Act (the FDCA), which prohibits, among other things, the adulteration or misbranding of drugs, biologics, and medical devices;
- the U.S. Public Health Service Act, which prohibits, among other things, the introduction into interstate commerce of a biological product unless a biologics license is in effect for that product;
- the U.S. Physician Payments Sunshine Act and its implementing regulations, which requires, among other things, certain manufacturers of drugs, devices, biologics, and medical supplies that are reimbursable under Medicare, Medicaid, or the Children's Health Insurance Program, with specific exceptions, to report annually to the Centers for Medicare and Medicaid Services, or CMS, information related to certain payments and other transfers of value to physicians, as defined by statute, and teaching hospitals, as well as ownership and investment interests held by such physicians and their immediate family members. Beginning in 2022, such obligations will include the reporting of payments and other transfers of value provided in the previous year to certain other healthcare professionals, including physician assistants, nurse practitioners, clinical nurse specialists, certified nurse anesthetists, anesthesiologist assistants, and certified nurse-midwives;
- analogous U.S. state laws and regulations, including: state anti-kickback and false claims laws, which may apply to our business practices, including but not limited to, research, distribution, sales and marketing arrangements, and claims involving healthcare items or services reimbursed by any third-party payor, including private insurers; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the U.S. federal government, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources; state laws and regulations that require drug manufacturers to file reports relating to pricing and marketing information, which requires tracking gifts and other remuneration and items of value provided to healthcare professionals and entities; and state and local laws requiring the registration of pharmaceutical sales representatives; and
- similar healthcare laws and regulations in foreign jurisdictions, including reporting requirements detailing interactions with and payments to healthcare providers.

Ensuring that our internal operations and future business arrangements with third parties comply with applicable healthcare laws and regulations will involve substantial costs. It is not always possible to identify and deter employee misconduct or business noncompliance, and the precautions we take to detect and prevent inappropriate conduct may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. Efforts to ensure that our business arrangements will comply with applicable healthcare laws may involve substantial costs. We have entered into consulting and scientific advisory board arrangements with physicians and other healthcare providers, including some who could influence the use of our product candidates, if approved. Compensation under some of these arrangements includes the provision of stock or stock options in addition to cash consideration. Because of the complex and far-reaching nature of these laws, it is possible that governmental authorities could conclude that our payments to physicians may not be fair market value for *bona fide* services or that our business practices do not comply with current or future statutes, regulations, agency guidance or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of the laws described above or any other governmental laws and regulations that may apply to us, we may be subject to significant penalties, including civil, criminal, and administrative penalties, damages, fines, exclusion from government-funded healthcare programs, such as Medicare and Medicaid, or similar programs in other countries or jurisdictions, integrity oversight and reporting obligations to resolve allegations of noncompliance, disgorgement, imprisonment, contractual damages, reputational harm, diminished profits, and the curtailment or restructuring of our operations. If any of the physicians or other providers or entities with whom we expect to do business are found to not be in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs and imprisonment, which could affect our ability to operate our business. Further, defending against any such actions can be costly, time-consuming and may require significant personnel resources. Therefore, even if we are successful in defending against any such actions that may be brought against us, our business may be impaired.

Our employees, independent contractors, principal investigators, consultants, commercial partners, and vendors may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.

We are exposed to the risk of employee fraud or other misconduct. We cannot ensure that our compliance controls, policies, and procedures will in every instance protect us from acts committed by our employees, agents, contractors, or collaborators that would violate the laws or regulations of the jurisdictions in which we operate, including, without limitation, employment, foreign corrupt practices, trade restrictions and sanctions, environmental, competition, and patient privacy and other privacy laws and regulations. Misconduct by employees could include failures to comply with FDA regulations, provide accurate information to the FDA, comply with manufacturing standards we may establish, comply with federal and state healthcare fraud and abuse laws and regulations, report financial information or data accurately, or disclose unauthorized activities to us. In particular, sales, marketing, and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, kickbacks, self-dealing, and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, labeling, marketing and promotion, sales commission, customer incentive programs, and other business arrangements. Employee misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. It is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations.

If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a material and adverse effect on our business, financial condition, results of operations and prospects, including the imposition of significant civil, criminal and administrative penalties, damages, monetary fines, individual imprisonment, disgorgement of profits, possible exclusion from

participation in Medicare, Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, additional reporting or oversight obligations if we become subject to a corporate integrity agreement or other agreement to resolve allegations of noncompliance with the law, and curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and pursue our strategy.

Current and future legislation may increase the difficulty and cost for us and any future collaborators to obtain marketing approval of and commercialize our product candidates and affect the prices we, or they, may obtain.

In the United States and other jurisdictions, there have been, and we expect there will continue to be, a number of legislative and regulatory changes and proposed changes to the healthcare system that could affect our future results of operations. In particular, there have been and continue to be a number of initiatives at the U.S. federal and state levels that seek to reduce healthcare costs and improve the quality of healthcare. For example, in March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively the ACA, was enacted, which substantially changed the way healthcare is financed by both governmental and private payors. Among the provisions of the ACA of importance to the pharmaceutical and biotechnology industries, which includes biologics, are the following:

- manufacturers and importers of certain branded prescription drugs, including certain biologics, with annual sales of more than $5 million made to or covered by specified federal healthcare programs are required to pay an annual, nondeductible fee according to their market share of all such sales;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program, to 23.1% of the average manufacturer price for most branded drugs, biologics, and biosimilars and to 13.0% for generic drug, and cap of the total rebate amount for innovator drugs at 100% of the Average Manufacturer Price, or AMP;
- a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for certain drugs and biologics, including our product candidates, that are inhaled, infused, instilled, implanted, or injected;
- extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals and by adding new mandatory eligibility categories for individuals with income at or below 133% of the federal poverty level, thereby potentially increasing manufacturers' Medicaid rebate liability;
- expansion of the entities eligible for discounts under the Public Health program, commonly referred to as the "340B Program;"
- a new requirement to annually report drug samples that manufacturers and distributors provide to physicians, also known as the "Physician Payments Sunshine Act;"
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research;
- establishment of a Center for Medicare Innovation at CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending; and
- a licensure framework for follow-on biologic products.

Since its enactment, there have been judicial and Congressional challenges to certain aspects of the ACA, and we expect there will be additional challenges and amendments to the ACA in the future. For example,

legislation enacted in 2017 informally titled the Tax Cuts and Jobs Act of 2017, repealed the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage that is commonly referred to as the "individual mandate." In December 2019, a U.S. District Court upheld a ruling that the ACA is unconstitutional in its entirety because the "individual mandate" was repealed by Congress. In March 2020, the Supreme Court of the United States agreed to hear the appeal of this decision. It is unclear how this and other efforts to challenge, repeal, or replace the ACA will impact the ACA or our business.

In addition, other legislative changes have been proposed and adopted in the United States since the ACA was enacted which, among other things, have reduced Medicare payments to several types of providers, including hospitals and cancer treatment centers. These new laws or any other similar laws introduced in the future, as well as regulatory actions that may be taken by CMS, may result in additional reductions in Medicare and other healthcare funding, which could negatively affect our customers and accordingly, our financial operations. Moreover, payment methodologies may be subject to changes in healthcare legislation and regulatory initiatives. Additionally, individual states in the United States have passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing and costs. Similar developments have occurred outside of the United States, including in the European Union where healthcare budgetary constraints have resulted in restrictions on the pricing and reimbursement of medicines by relevant health service providers. To obtain reimbursement or pricing approval in some European Union member states, we may be required to conduct studies that compare the cost-effectiveness of our product candidates to other therapies that are considered the local standard of care.

It is also possible that additional governmental action is taken in response to address the COVID-19 pandemic. We cannot predict the likelihood, nature, or extent of government regulation that may arise from future legislation or administrative action in the United States, particularly as a result of the recent presidential election, or any other jurisdiction. If we or any third parties we may engage are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we or such third parties are not able to maintain regulatory compliance, our product candidates may lose any regulatory approval that may have been obtained and we may not achieve or sustain profitability.

Even if we are able to commercialize any product candidate, coverage and adequate reimbursement may not be available or such product candidate may become subject to unfavorable pricing regulations or third-party coverage and reimbursement policies, which would harm our business.

The regulations that govern regulatory approvals, pricing, and reimbursement for drug products vary widely from country to country. Some countries require approval of the sale price of a drug product before it can be marketed. In many countries, the pricing review period begins after marketing approval is granted. In some foreign markets, prescription drug product pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we might obtain regulatory approval for a product in a particular country, but then be subject to price regulations that delay our commercial launch of the product, possibly for lengthy time periods, and negatively impact the revenues we are able to generate from the sale of the product in that country. Adverse pricing limitations may hinder our ability to recoup our investment in one or more product candidates, even if our product candidates obtain regulatory approval.

Our ability to commercialize any products successfully also will depend in part on the extent to which coverage and adequate reimbursement for these products and related treatments will be available from third-party payors, such as government authorities, private health insurers, and other organizations. Even if we succeed in bringing one or more products to the market, these products may not be considered cost-effective, and the amount reimbursed for any products may be insufficient to allow us to sell our products on a competitive basis. Because our programs are in the early stages of development, we are unable at this time to determine their cost effectiveness or the likely level or method of coverage and reimbursement. Increasingly, the third-party payors who reimburse patients or healthcare providers are requiring that drug companies provide them with predetermined discounts from list prices, and are seeking to reduce the prices charged or the amounts reimbursed

for drug products. If the price we are able to charge for any products we develop, or the coverage and reimbursement provided for such products, is inadequate in light of our development and other costs, our return on investment could be affected adversely.

There may be significant delays in obtaining reimbursement for newly-approved drug products, and coverage may be more limited than the purposes for which the drug product is approved by the FDA or comparable foreign regulatory authorities. Moreover, eligibility for reimbursement does not imply that any drugs product will be reimbursed in all cases or at a rate that covers our costs, including research, development, manufacture, sale, and distribution.

Interim reimbursement levels for new drug products, if applicable, may also be insufficient to cover our costs and may not be made permanent. Reimbursement rates may be based on payments allowed for lower cost drug products that are already reimbursed, may be incorporated into existing payments for other services and may reflect budgetary constraints or imperfections in Medicare data. Net prices for drug products may be reduced by mandatory discounts or rebates required by third-party payors and by any future relaxation of laws that presently restrict imports of drug products from countries where they may be sold at lower prices than in the United States. Obtaining coverage and adequate reimbursement for our product candidates may be particularly difficult because of the higher prices often associated with drugs administered under the supervision of a physician. Similarly, because our product candidates are physician-administered injectables, separate reimbursement for the product itself may or may not be available. Instead, the administering physician may or may not be reimbursed for providing the treatment or procedure in which our product is used.

Further, no uniform policy for coverage and reimbursement exists in the United States, and coverage and reimbursement can differ significantly from payor to payor. Third-party payors often follow Medicare coverage policy and payment limitations in setting their own reimbursement rates, but also have their own methods and approval process apart from Medicare determinations. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our product candidates to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance. Decisions regarding the extent of coverage and amount of reimbursement to be provided for any product candidates that we develop will be made on a payor-by-payor basis. One payor's determination to provide coverage for a drug does not assure that other payors will also provide coverage and adequate reimbursement for the drug. Additionally, a third-party payor's decision to provide coverage for a therapy does not imply that an adequate reimbursement rate will be approved.

There have been, and likely will continue to be, legislative and regulatory proposals at the foreign, federal, and state levels directed at broadening the availability of healthcare and containing or lowering the cost of healthcare. We cannot predict the initiatives that may be adopted in the future, including repeal, replacement, or significant revisions to the Affordable Care Act. The continuing efforts of the government, insurance companies, managed care organizations, and other payors of healthcare services to contain or reduce costs of healthcare and/or impose price controls may adversely affect:

- the demand for our product candidates, if we obtain regulatory approval;
- our ability to set a price that we believe is fair for our products;
- our ability to obtain coverage and reimbursement approval for a product;
- our ability to generate revenue and achieve or maintain profitability;
- the level of taxes that we are required to pay; and
- the availability of capital.

Our inability to promptly obtain coverage and adequate reimbursement from both third-party payors for the product candidates that we may develop and for which we obtain regulatory approval could have a material and adverse effect on our business, financial condition, results of operations, and prospects.

We face potential liability related to the privacy of health information we utilize in the development of products developed from our ex vivo cell engineering platform, as well as information we obtain from clinical trials sponsored by us from research institutions and directly from individuals.

We and our partners and vendors are subject to various federal, state, and foreign data protection laws and regulations. If we fail to comply with these laws and regulations we may be subject to litigation, regulatory investigations, enforcement notices, enforcement actions, fines, and criminal or civil penalties, as well as negative publicity and a potential loss of business.

In the United States, numerous federal and state laws and regulations, including state data breach notification laws, state health information privacy laws, and federal and state consumer protection laws and regulations that govern the collection, use, disclosure, and protection of health-related and other personal information could apply to our operations or the operations of our partners. For example, most healthcare providers, including research institutions from which we obtain patient health information, are subject to privacy and security regulations promulgated under HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 (HITECH). Depending on the facts and circumstances, we could be subject to significant penalties if we violate HIPAA. For example, under HIPAA, we could potentially face substantial criminal or civil penalties if we knowingly receive individually identifiable health information from a HIPAA-covered healthcare provider or research institution that has not satisfied HIPAA's requirements for disclosure of individually identifiable health information, or otherwise violate applicable HIPAA requirements related to the protection of such information. Even when HIPAA does not apply, failing to take appropriate steps to keep consumers' personal information secure may constitute a violation of the Federal Trade Commission Act.

Certain of the research materials we use in our therapeutic research and development efforts, as well as stem cell lines used as starting material in our *ex vivo* cell engineering product candidates are derived from human sources, which potentially contain sensitive identifiable information regarding the donor. In addition, once we commence clinical trials, we may maintain sensitive personally identifiable information, including health information, that we receive throughout the clinical trial process, in the course of our research collaborations, and directly from individuals (or their healthcare providers) who enroll in our patient assistance programs. As such, we may be subject to state laws requiring notification of affected individuals and state regulators in the event of a breach of personal information. These state laws include the recently enacted California Consumer Privacy Act, and California Privacy Rights Act which establishes additional data privacy rights for residents of the State of California. Similar laws have been proposed in other states and at the federal level, and if passed, such laws may have potentially conflicting requirements that would make compliance challenging.

Any clinical trial programs and research collaborations that we engage in outside the United States may implicate international data protection laws, including, in Europe, the General Data Protection Regulation (GDPR), which became effective in 2018. The GDPR imposes stringent operational requirements for processors and controllers of personal data. Among other things, the GDPR requires detailed notices for clinical trial subjects and investigators, as well as requirements regarding the security of personal data and notification of data processing obligations or security incidents to appropriate data protection authorities or data subjects. If our privacy or data security measures fail to comply with the GDPR requirements, we may be subject to litigation, regulatory investigations, enforcement notices, and/or enforcement actions requiring us to change the way we use personal data and/or fines. In addition to statutory enforcement, a personal data breach can lead to negative publicity and a potential loss of business. Further, following the United Kingdom's withdrawal from the E.U. effective as of December 31, 2020, we will have to comply with the GDPR and the GDPR as incorporated into United Kingdom national law, which may have differing requirements. If we fail to comply with United Kingdom data protection laws, we may be subject to litigation, regulatory investigations, enforcement notices, and/or enforcement actions, as well as negative publicity and a potential loss of business.

We will also be subject to evolving EEA laws on data export, as we may transfer personal data from the EEA to other jurisdictions. Recent legal developments in Europe have created complexity and uncertainty

regarding transfers of personal data from the EEA to the United States. For example, on July 16, 2020, the Court of Justice of the European Union, or CJEU, invalidated the EU-US Privacy Shield Framework, or Privacy Shield, under which personal data could be transferred from the EEA to United States entities who had self-certified under the Privacy Shield scheme. Moreover, it is uncertain whether the standard contractual clauses will also be invalidated by the European courts or legislature. As government authorities issue further guidance on personal data export mechanisms and/or start taking enforcement action, we could suffer additional costs, complaints, and/or regulatory investigations or fines, and/or if we are otherwise unable to transfer personal data between and among countries and regions in which we operate, it could affect the manner in which we provide our services, the geographical location or segregation of our relevant systems and operations, and could adversely affect our financial results. These laws and regulations may apply, not only to us, but also to vendors that store or otherwise process data on our behalf, such as information technology vendors. If such a vendor misuses data we have provided to it, or fails to safeguard such data, we may be subject to litigation, regulatory investigations, enforcement notices, and/or enforcement actions, as well as negative publicity and a potential loss of business.

We are likely to be required to expend significant capital and other resources to ensure ongoing compliance with applicable privacy and data security laws. Claims that we have violated individuals' privacy rights or breached our contractual obligations, even if we are not found liable, could be expensive and time-consuming to defend, and could result in adverse publicity that could harm our business. Moreover, even if we take all necessary action to comply with regulatory requirements, we could be subject to a hack or data breach, which could subject us to fines and penalties, as well as litigation and reputational damage.

If we fail to comply with applicable federal, state, or local regulatory requirements, we could be subject to a range of regulatory actions that could affect our or any collaborators' ability to seek to commercialize our clinical candidates. Any threatened or actual government enforcement action could also generate adverse publicity and require that we devote substantial resources that could otherwise be used in other aspects of our business.

Risks Related to Commercialization of Our Product Candidates

We operate in highly competitive and rapidly changing industries, which may result in others discovering, developing or commercializing competing products before or more successfully than we do.

The biotechnology and pharmaceutical industries are highly competitive and subject to significant and rapid technological change. Our success is highly dependent on our ability to discover, develop and obtain marketing approval for new and innovative products on a cost-effective basis and to market them successfully. In doing so, we face and will continue to face intense competition from a variety of businesses, including large pharmaceutical and biotechnology companies, academic institutions, government agencies and other public and private research organizations. These organizations may have significantly greater resources than we do and conduct similar research, seek patent protection and establish collaborative arrangements for research, development, manufacturing, and marketing of products that compete with our product candidates. Mergers and acquisitions in the biotechnology and pharmaceutical industries may result in even more resources being concentrated in our competitors. Competition may increase further as a result of advances in the commercial applicability of technologies and greater availability of capital for investment in these industries.

With the proliferation of new drugs and therapies for our target indications, we expect to face increasingly intense competition as new technologies become available. If we fail to stay at the forefront of technological change, we may be unable to compete effectively. Any product candidates that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future. The highly competitive nature of and rapid technological changes in the biotechnology and pharmaceutical industries could render our product candidates or our technology obsolete, less competitive or uneconomical. Our competitors may, among other things:

- have significantly greater financial, manufacturing, marketing, drug development, technical, and human resources than we do;

- develop and commercialize products that are safer, more effective, less expensive, more convenient or easier to administer, or have fewer or less severe side effects;
- obtain quicker regulatory approval;
- establish superior proprietary positions covering our products and technologies;
- implement more effective approaches to sales and marketing; or
- form more advantageous strategic alliances.

Should any of these factors occur, our business, financial condition, and results of operations could be materially adversely affected.

In addition, any collaborators may decide to market and sell products that compete with the product candidates that we have agreed to license to them, and any competition by our collaborators could also have a material adverse effect on our future business, financial condition, and results of operations.

Smaller and other early stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These third parties compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs. See the subsection titled “Business—Competition.”

The estimates of market opportunity and forecasts of market growth included in this prospectus may prove to be smaller than we believe, and even if the markets in which we compete achieve the forecasted growth, our business may not grow at similar rates, or at all.

We intend to initially focus our product candidate development on treatments for various diseases caused by missing or damaged cells. Our projections of addressable patient populations within any particular disease state that may benefit from treatment with our product candidates are based on our estimates. Market opportunity estimates and growth forecasts included in this prospectus are subject to significant uncertainty and are based on assumptions and estimates. These estimates, which have been derived from a variety of sources, including scientific literature, surveys of clinics, patient foundations, and market research, may prove to be incorrect. Further, new studies may change the estimated incidence or prevalence of these diseases. Additionally, the potentially addressable patient population for our product candidates may not ultimately be amenable to treatment with our product candidates. Our market opportunity may also be limited by future competitor treatments that enter the market. If any of our estimates prove to be inaccurate, the market opportunity for any product candidate that we or our strategic partners develop could be significantly diminished and have an adverse material impact on our business.

In particular, certain of our product candidates are intended to address cancer, and, in particular, B cell malignancies. Cancer therapies are sometimes characterized as first line, second line, or third line, and the FDA often approves new therapies initially only for a particular line of use. When cancer is detected early enough, first line therapy is sometimes adequate to cure the cancer or prolong life without a cure. Whenever first line therapy, usually chemotherapy, antibody drugs, tumor-targeted small molecules, hormone therapy, radiation therapy, surgery, or a combination of these, proves unsuccessful, second line therapy may be administered. Second line therapies often consist of more chemotherapy, radiation, antibody drugs, tumor-targeted small molecules, or a combination of these. Third line therapies can include chemotherapy, antibody drugs and small molecule tumor-targeted therapies, more invasive forms of surgery and new technologies. The use of CAR T therapies has been limited to the relapsed/refractory patient subset. Our projections of both the number of people who have the cancers we are targeting, as well as the subset of people with these cancers in a position to receive a particular line of therapy and who have the potential to benefit from treatment with our product candidates, are based on our beliefs and estimates. Consequently, even if our product candidates are approved for a later line of therapy,

the number of patients that may be eligible for treatment with our product candidates may turn out to be much lower than expected.

We currently have no marketing, sales, or distribution infrastructure and we intend to either establish a sales and marketing infrastructure or outsource this function to a third party. Either of these commercialization strategies carries substantial risks to us.

We currently have no marketing, sales, and distribution capabilities because all of our product candidates are still in preclinical development. If any of our product candidates complete clinical development and are approved, we intend to either establish a sales and marketing organization with technical expertise and supporting distribution capabilities to commercialize our product candidates in a legally compliant manner, or to outsource this function to a third party. There are risks involved if we decide to establish our own sales and marketing capabilities or enter into arrangements with third parties to perform these services. To the extent that we enter into collaboration agreements with respect to marketing, sales or distribution, our product revenue may be lower than if we directly marketed or sold any approved products. Such collaborative arrangements with partners may place the commercialization of our products outside of our control and would make us subject to a number of risks including that we may not be able to control the amount or timing of resources that our collaborative partner devotes to our products or that our collaborator's willingness or ability to complete its obligations, and our obligations under our arrangements may be adversely affected by business combinations or significant changes in our collaborator's business strategy.

If we are unable to enter into these arrangements on acceptable terms or at all, we may not be able to successfully commercialize any approved products. If we are not successful in commercializing any approved products, either on our own or through collaborations with one or more third parties, our future product revenue will suffer and we may incur significant additional losses, which would have a material adverse effect on our business, financial condition, and results of operations.

Our product candidates for which we intend to seek approval as biologic products may face competition sooner than anticipated.

The ACA includes a subtitle called the Biologics Price Competition and Innovation Act of 2009 (BPCIA), which created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA-licensed reference biological product. Under the BPCIA, an application for a highly similar or "biosimilar" product may not be submitted to the FDA until four years following the date that the reference product was first approved by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first approved. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a full BLA for the competing product containing the sponsor's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity, and potency of their product. The law is complex and is still being interpreted and implemented by the FDA. As a result, its ultimate impact, implementation, and meaning are subject to uncertainty.

We believe that any of our product candidates approved as a biological product under a BLA should qualify for the 12-year period of exclusivity. However, there is a risk that this exclusivity could be shortened due to congressional action or otherwise, or that the FDA will not consider our product candidates to be reference products for competing products, potentially creating the opportunity for competition sooner than anticipated. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of recent litigation. Moreover, the extent to which a biosimilar, once approved, will be substituted for any one of our reference products in a way that is similar to traditional generic substitution for non-biological products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing.

Jurisdictions in addition to the United States have established abbreviated pathways for regulatory approval of biological products that are biosimilar to earlier approved reference products. For example, the European Union has had an established regulatory pathway for biosimilars since 2004. However, biosimilars can only be authorized once the period of data exclusivity on the reference biological medicine has expired.

The increased likelihood of biosimilar competition has increased the risk of loss of innovators' market exclusivity. Due to this risk, and uncertainties regarding patent protection, if our clinical candidates are approved for marketing, it is not possible to predict the length of market exclusivity for any particular product with certainty based solely on the expiration of the relevant patent(s) or the current forms of regulatory exclusivity. It is also not possible to predict changes in United States regulatory law that might reduce biological product regulatory exclusivity. The loss of market exclusivity for a product would likely materially and negatively affect revenues and we may not generate adequate or sufficient revenues from them or be able to reach or sustain profitability.

Risks Related to Our Dependence on Third Parties

We rely on third-parties to manufacture our product candidates. Any failure by a third-party manufacturer to produce acceptable raw materials or product candidates for us or to obtain authorization from the FDA or comparable foreign regulatory authorities may delay or impair our ability to initiate or complete our clinical trials, obtain regulatory approvals or commercialize approved products.

We do not currently own or operate any GMP manufacturing facilities nor do we have any in-house GMP manufacturing capabilities. We rely on multiple third-party contract manufacturers to produce sufficient quantities of materials required for the manufacture of our product candidates for preclinical testing and clinical trials, in compliance with applicable regulatory and quality standards, and intend to do so for the commercial manufacture of our products, if approved. If we are unable to arrange for such third-party manufacturing sources, or fail to do so on commercially reasonable terms, we may not be able to successfully produce sufficient supply of product candidate or we may be delayed in doing so. Such failure or substantial delay could materially harm our business.

We rely on third parties for biological materials that are used in our discovery and development programs. These materials can be difficult to produce and occasionally have variability from the product specifications. Any disruption in the supply of these biological materials consistent with our product specifications could materially adversely affect our business. Although we have control processes and screening procedures, biological materials are susceptible to damage and contamination and may contain active pathogens. We may also have lower yields in manufacturing batches, which can increase our costs and slow our development timelines. Improper storage of these materials, by us or any third-party suppliers, may require us to destroy some of our biological raw materials or product candidates.

Reliance on third-party manufacturers entails risks to which we would not be subject if we manufactured product candidates ourselves, including reliance on the third party for regulatory compliance and quality control and assurance, volume production, the possibility of breach of the manufacturing agreement by the third party because of factors beyond our control (including a failure to synthesize and manufacture our product candidates in accordance with our product specifications) and the possibility of termination or nonrenewal of the agreement by the third party at a time that is costly or damaging to us.

In addition, the FDA and comparable foreign regulatory authorities require that our product candidates be manufactured according to cGMPs and similar foreign standards relating to methods, facilities, and controls used in the manufacturing, processing, and packing of the product, which are intended to ensure that biological products are safe and that they consistently meet applicable requirements and specifications.

Pharmaceutical manufacturers are required to register their facilities and products manufactured at the time of submission of the marketing application and then annually thereafter with the FDA and certain state and

foreign agencies. If the FDA or a comparable foreign regulatory authority does not approve our proposed contract manufacturer's facilities for the manufacture of our product candidates or if it withdraws any such approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for, or market our product candidates, if approved. Any discovery of problems with a product, or a manufacturing or laboratory facility used by us or our strategic partners, may result in restrictions on the product or on the manufacturing or laboratory facility, including marketed product recall, suspension of manufacturing, product seizure, or a voluntary withdrawal of the drug from the market. We may have little to no control regarding the occurrence of third-party manufacturer incidents.

If we were unable to find an adequate replacement or another acceptable solution in time, our clinical trials could be delayed, or our commercial activities could be harmed. In addition, the fact that we are dependent on our collaborators, our suppliers, and other third parties for the manufacture, filling, storage, and distribution of our product candidates means that we are subject to the risk that the products may have manufacturing defects that we have limited ability to prevent or control. The sale of products containing such defects could adversely affect our business, financial condition, and results of operations. Any failure by our third-party manufacturers to comply with cGMP or failure to scale up manufacturing processes, including any failure to deliver sufficient quantities of product candidates in a timely manner, could lead to a delay in, or failure to obtain, regulatory approval of any of our product candidates.

Pharmaceutical manufacturers are also subject to extensive post-marketing oversight by the FDA and comparable regulatory authorities in the jurisdictions where the product is marketed, which include periodic unannounced and announced inspections by the FDA to assess compliance with cGMP requirements. If an FDA inspection of a manufacturer's facilities reveals conditions that the FDA determines not to comply with applicable regulatory requirements, the FDA may issue observations through a Notice of Inspectional Observations, commonly referred to as a "Form FDA 483" report. If observations in the Form FDA 483 report are not addressed in a timely manner and to the FDA's satisfaction, the FDA may issue a Warning Letter or proceed directly to other forms of enforcement action. Any failure by one of our contract manufacturers to comply with cGMP or to provide adequate and timely corrective actions in response to deficiencies identified in a regulatory inspection could result in further enforcement action that could lead to a shortage of products and harm our business, including withdrawal of approvals previously granted, seizure, injunction or other civil or criminal penalties. The failure of a manufacturer to address any concerns raised by the FDA or foreign regulators could also lead to plant shutdown or the delay or withholding of product approval by the FDA in additional indications, or by foreign regulators in any indication. Certain countries may impose additional requirements on the manufacturing of drug products or drug substances, and on manufacturers, as part of the regulatory approval process for products in such countries. The failure by our third-party manufacturers to satisfy such requirements could impact our ability to obtain or maintain approval of our products in such countries.

If we are unable to obtain sufficient raw and intermediate materials on a timely basis or if we experience other manufacturing or supply difficulties, our business may be adversely affected.

The manufacture of certain of our product candidates requires the timely delivery of sufficient amounts of raw and intermediate materials. We work closely with our suppliers to ensure the continuity of supply but cannot guarantee these efforts will always be successful. Further, while efforts are made to diversify our sources of raw and intermediate materials, in certain instances we acquire raw and intermediate materials from a sole supplier. While we believe that alternative sources of supply exist where we rely on sole supplier relationships, there can be no assurance that we will be able to quickly establish additional or replacement sources for some materials. A reduction or interruption in supply, and an inability to develop alternative sources for such supply, could adversely affect our ability to manufacture our product candidates in a timely or cost-effective manner.

Supply sources could be interrupted from time to time and, if interrupted, there is no guarantee that supplies could be resumed within a reasonable time frame and at an acceptable cost or at all.

We rely on our manufacturers to purchase from third-party suppliers the materials necessary to produce our product candidates for our preclinical studies and intend to continue to rely on these third parties for any clinical trials that we undertake. There are a limited number of suppliers for raw materials that we use to manufacture our drugs and there may be a need to assess alternate suppliers to prevent a possible disruption of the manufacture of the materials necessary to produce our product candidates for our preclinical studies, clinical trials, and if approved, ultimately for commercial sale. We do not have any control over the process or timing of the acquisition of these raw materials by our manufacturers. Moreover, we currently do not have any agreements for the commercial production of these raw materials. We cannot be sure that these suppliers will remain in business, or that they will not be purchased by one of our competitors or another company that is not interested in continuing to produce these materials for our intended purpose. In addition, the lead time needed to establish a relationship with a new supplier can be lengthy, and we may experience delays in meeting demand in the event a new supplier must be used. The time and effort to qualify a new supplier could result in additional costs, diversion of resources, or reduced manufacturing yields, any of which would negatively impact our operating results. Although we generally do not begin a clinical trial unless we believe we have a sufficient supply of a product candidate to complete the clinical trial, any significant delay in the supply of a product candidate, or the raw material components thereof, for an ongoing clinical trial due to the need to replace a third-party manufacturer could considerably delay completion of our clinical trials, product testing, and potential regulatory approval of our product candidates. If our manufacturers or we are unable to purchase these raw materials after regulatory approval has been obtained for our product candidates, the commercial launch of our product candidates would be delayed or there would be a shortage in supply, which would impair our ability to generate revenues from the sale of our product candidates.

We rely, and expect to continue to rely, on third parties, including independent clinical investigators and CROs, to conduct our preclinical studies and clinical trials. If these third parties do not successfully carry out their contractual duties, comply with applicable regulatory requirements, or meet expected deadlines, we may not be able to obtain regulatory approval for or commercialize our product candidates and our business could be substantially harmed.

We have relied upon and plan to continue to rely upon third parties, including independent clinical investigators and third-party CROs, to conduct our preclinical studies and clinical trials and to monitor and manage data for our ongoing preclinical and clinical programs. We rely on these parties for execution of our preclinical studies and clinical trials, and control only certain aspects of their activities. Nevertheless, we are responsible for ensuring that each of our studies and trials is conducted in accordance with the applicable protocol, legal, regulatory, and scientific standards, and our reliance on these third parties does not relieve us of our regulatory responsibilities. We and our third-party contractors and CROs are required to comply with GCP requirements, which are regulations and guidelines enforced by the FDA and comparable foreign regulatory authorities for all of our products candidates in clinical development. Regulatory authorities enforce these GCPs through periodic inspections of trial sponsors, principal investigators, and trial sites. If we or any of our CROs fail to comply with applicable GCPs, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our clinical trials comply with GCP regulations. In addition, our clinical trials must be conducted with product produced under cGMP regulations. Our failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process.

Further, these investigators and CROs are not our employees and we will not be able to control, other than by contract, the amount of resources, including time, which they devote to our product candidates and clinical trials. If independent investigators or CROs fail to devote sufficient resources to the development of our product

candidates, or if their performance is substandard, it may delay or compromise the prospects for approval and commercialization of any product candidates that we develop. In addition, the use of third-party service providers may require us to disclose our proprietary information to these parties, which could increase the risk that this information will be misappropriated. Additionally, disruptions caused by the COVID-19 pandemic may increase the likelihood that our CROs encounter difficulties or delays in initiating, enrolling, conducting, or completing our planned clinical trials. In particular, as a result of the pandemic, we have experienced difficulty in accessing animal models, specifically non-human primate models, for the preclinical evaluation of our product candidates. Delays caused by the inability to access these models may cause our development timeline to be extended beyond what we anticipate.

Our CROs have the right to terminate their agreements with us in the event of an uncured material breach. In addition, some of our CROs have an ability to terminate their respective agreements with us if it can be reasonably demonstrated that the safety of the subjects participating in our clinical trials warrants such termination, if we make a general assignment for the benefit of our creditors, or if we are liquidated.

There is a limited number of third-party service providers that specialize or have the expertise required to achieve our business objectives. If any of our relationships with these third-party laboratories, CROs or clinical investigators terminate, we may not be able to enter into arrangements with alternative laboratories, CROs, or investigators or to do so in a timely manner or on commercially reasonable terms. If laboratories, CROs, or clinical investigators do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our preclinical or clinical protocols, regulatory requirements or for other reasons, our preclinical or clinical trials may be extended, delayed, or terminated and we may not be able to obtain regulatory approval for or successfully commercialize our product candidates. As a result, our results of operations and the commercial prospects for our product candidates would be harmed, our costs could increase, and our ability to generate revenues could be delayed. Switching or adding additional laboratories or CROs (or investigators) involves additional cost and requires management time and focus. In addition, there is a natural transition period when a new laboratory or CRO commences work. As a result, delays occur, which can materially impact our ability to meet our desired clinical development timelines. Additionally, CROs may lack the capacity to absorb higher workloads or take on additional capacity to support our needs. Though we carefully manage our relationships with our contracted laboratories and CROs, there can be no assurance that we will not encounter similar challenges or delays in the future or that these delays or challenges will not have a material adverse impact on our business, financial condition, and prospects.

In addition, clinical investigators may serve as scientific advisors or consultants to us from time to time and may receive cash or equity compensation in connection with such services. If these relationships and any related compensation result in perceived or actual conflicts of interest, or the FDA concludes that the financial relationship may have affected the interpretation of the preclinical study or clinical trial, the integrity of the data generated at the applicable preclinical study or clinical trial site may be questioned and the utility of the preclinical study or clinical trial itself may be jeopardized, which could result in the delay or rejection by the FDA. Any such delay or rejection could prevent us from commercializing our clinical-stage product candidate or any future product candidates.

We may not realize the benefits of any collaborative or licensing arrangement, and if we fail to enter into new strategic relationships our business, financial condition, commercialization prospects, and results of operations may be materially adversely affected.

Our product development programs and the potential commercialization of our product candidates will require substantial additional cash to fund expenses. Therefore, for some of our product candidates, we may decide to enter into collaborations with pharmaceutical or biopharmaceutical companies for the development and potential commercialization of those product candidates.

We face significant competition in seeking appropriate collaborators. Collaborations are complex and time-consuming to negotiate and document. We may also be restricted under existing and future collaboration agreements from entering into agreements on certain terms with other potential collaborators. We may not be able to negotiate collaborations on acceptable terms, or at all. If our strategic collaborations do not result in the successful development and commercialization of product candidates, or if one of our collaborators terminates its agreement with us, we may not receive any future research funding or milestone or royalty payments under the collaboration. Moreover, our estimates of the potential revenue we are eligible to receive under our strategic collaborations may include potential payments related to therapeutic programs for which our collaborators have discontinued development or may discontinue development in the future. If that were to occur, we may have to curtail the development of a particular product candidate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or reduce the scope of our sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to increase our expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we will not be able to bring our product candidates to market and generate product revenue.

In instances where we do enter into collaborations, we could be subject to the following risks, each of which may materially harm our business, commercialization prospects, and financial condition:

- we may not be able to control the amount and timing of resources that is required of us to complete our development obligations or that the collaboration partner devotes to the product development or marketing programs;
- the collaboration partner may experience financial difficulties;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials, or require a new formulation of a product candidate for clinical testing;
- we may be required to relinquish important rights such as marketing, distribution, and intellectual property rights;
- collaborators may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to litigation or potential liability;
- collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability;
- a collaborator could move forward with a competing product developed either independently or in collaboration with third parties, including our competitors;
- we and our collaboration partner may disagree regarding the development plan for product candidates on which we are collaborating (for example, we may disagree with a collaboration partner regarding target indications, inclusion or exclusion criteria for a clinical trial, or the decision to seek front line therapy approval versus second, third, or fourth line therapy approval);
- disputes may arise between the collaborators and us that result in the delay or termination of the research, development or commercialization of our product candidates or that result in costly litigation or arbitration that diverts management attention and resources;
- business combinations or significant changes in a collaborator’s business strategy may adversely affect our willingness to complete our obligations under any arrangement; or
- collaborations may be terminated and, if terminated, may result in a need for additional capital to pursue further development or commercialization of the applicable product candidates.

If we license products or businesses, we may not be able to realize the benefit of such transactions if we are unable to successfully integrate them with our existing operations and company culture. We cannot be certain that, following a strategic transaction or license, we will achieve the results, revenue, or specific net income that justifies such transaction.

Risks Related to Intellectual Property and Information Technology

We depend on intellectual property licensed from third parties and if we breach our obligations under these agreements or if any of these agreements is terminated, we may be required to pay damages, lose our rights to such intellectual property and technology, or both, which would harm our business.

We are dependent on patents, know-how, and proprietary technology, both our own and licensed from others. We are a party to a number of intellectual property license agreements and acquisition agreements pursuant to which we have acquired our core intellectual property rights. In the future, we expect to enter into additional license agreements. For example, with respect to our *ex vivo* cell engineering platform relying on hypoimmune technology, we have licensed certain intellectual property from Harvard, UCSF, and Washington University. Additionally, we acquired our *in vivo* cell engineering platform, which is based on fusogen technology, from Cobalt, which included several license agreements and options-to-license, as well as our glial progenitor cell and cardiomyocyte programs from Oscine and Cytocardia, respectively, both of which came with in-licenses. These license and acquisition agreements impose, and we expect that future license and acquisition agreements will impose, various diligence, milestone payment, royalty and other obligations on us. If we fail to comply with our obligations under these agreements, we may be required to pay damages and the licensor may have the right to terminate the license. Any termination of these licenses could result in the loss of significant rights and could harm our ability to develop or advance one of our cell engineering platforms, or develop, manufacture and/or commercialize one of our product candidates. See the section titled “Business – Key Intellectual Property Agreements” elsewhere in this prospectus for additional information regarding these key agreements.

In addition, the agreements under which we license intellectual property or technology to or from third parties are complex, and certain provisions in such agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could narrow what we believe to be the scope of our rights to the relevant intellectual property or technology or increase what we believe to be our financial or other obligations under the relevant agreement, either of which could have a material adverse effect on our business, financial condition, results of operations and prospects. Moreover, if disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on commercially acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates. Our business also would suffer if any current or future licensors fail to abide by the terms of the license, if the licensors fail to enforce licensed patents against infringing third parties, if the licensed patents or other rights are found to be invalid or unenforceable, or if we are unable to enter into necessary licenses on acceptable terms. Moreover, our licensors may own or control intellectual property that has not been licensed to us and, as a result, we may be subject to claims, regardless of their merit, that we are infringing or otherwise violating the licensor’s rights.

In addition, while we cannot currently determine the amount of the royalty obligations we would be required to pay on sales of future products, if any, the amounts may be significant. The amount of our future royalty obligations will depend on the technology and intellectual property we use in products that we successfully develop and commercialize, if any. Therefore, even if we successfully develop and commercialize products, we may be unable to achieve or maintain profitability.

If we are unable to successfully obtain rights to required third-party intellectual property rights or maintain the existing intellectual property rights we have, we may have to abandon development of the relevant research programs or product candidates and our business, financial condition, results of operations and prospects could suffer.

Licensing of intellectual property is of critical importance to our business and involves complex legal, business and scientific issues and is complicated by the rapid pace of scientific discovery in our industry. Disputes may also arise between us and our licensors regarding intellectual property subject to a license agreement, including those relating to:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- whether and the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the license agreement;
- our right to sublicense patent and other rights to third parties under collaborative development relationships;
- whether we are complying with our diligence obligations with respect to the use of the licensed technology in relation to our development and commercialization of our product candidates, and what activities satisfy those diligence obligations;
- the priority of invention of patented technology;
- the amount and timing of payments owed under license agreements; and
- the allocation of ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and by us and our partners.

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates. We are generally also subject to all of the same risks with respect to protection of intellectual property that we license as we are for intellectual property that we own, which are described below. If we or our licensors fail to adequately protect this intellectual property, our ability to commercialize our products could suffer.

We depend, in part, on our licensors to file, prosecute, maintain, defend, and enforce certain patents and patent applications that are material to our business.

Certain patents relating to our product candidates are owned or controlled by certain of our licensors. Each of our licensors generally has rights to file, prosecute, maintain, and defend the patents we have licensed from such licensor in their name, generally with our right to comment on such filing, prosecution, maintenance, and defense, with some obligation for the licensor to consider or incorporate our comments, for our exclusively licensed patents. We generally have the first right to enforce our exclusively licensed patent rights against third parties, although our ability to settle such claims often requires the consent of the licensor. If our licensors or any future licensees having rights to file, prosecute, maintain, and defend our patent rights fail to conduct these activities for patents or patent applications covering any of our product candidates, including due to the impact of the COVID-19 pandemic on our licensors' business operations, our ability to develop and commercialize those product candidates may be adversely affected and we may not be able to prevent competitors from making, using, or selling competing products. We cannot be certain that such activities by our licensors have been or will be conducted in compliance with applicable laws and regulations or will result in valid and enforceable patents or other intellectual property rights. Pursuant to the terms of the license agreements with some of our licensors, the licensors may have the right to control enforcement of our licensed patents or defense of any claims asserting the invalidity of these patents and, even if we are permitted to pursue such enforcement or defense, we cannot ensure the cooperation of our licensors. We cannot be certain that our licensors will allocate sufficient resources or prioritize their or our enforcement of such patents or defense of such claims to protect our interests in the licensed patents. Even if we are not a party to these legal actions, an adverse outcome could harm our business because it might prevent us from continuing to license intellectual property that we may need to operate our business. In addition, even when we have the right to control patent prosecution of licensed patents and patent applications, enforcement of licensed patents, or defense of claims asserting the invalidity of those patents, we

may still be adversely affected or prejudiced by actions or inactions of our licensors and their counsel that took place prior to or after our assuming control. In the event we breach any of our obligations related to such prosecution, we may incur significant liability to our licensing partners.

Given the breadth of the application of our cell engineering platforms, in order to increase our ability to exploit our technologies, we may enter into collaborations and/or strategic partnerships in the future, and we may not realize the anticipated benefits of such collaborations or partnerships.

Research and development collaborations and strategic partnerships are prevalent in the biotechnology industry. The breadth of the application of our *in vivo* and *ex vivo* cell engineering platforms are attractive technologies for potential collaborations. These transactions are subject to numerous risks, which may include the following:

- collaborators have significant discretion in determining the efforts and resources that they will apply to a collaboration, and may not commit sufficient efforts and resources, or may misapply those efforts and resources;
- collaborators may not pursue development and commercialization of collaboration product candidates or may elect not to continue or renew development or commercialization programs based on clinical trial results or changes in their strategic focus;
- collaborators may delay, provide insufficient resources to, or modify or stop clinical trials for collaboration product candidates;
- collaborators could develop or acquire products outside of the collaboration that compete directly or indirectly with our products or product candidates;
- collaborators may not properly maintain or defend our intellectual property rights or may use our intellectual property or proprietary information in a way that gives rise to actual or threatened litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential liability;
- disputes may arise between us and a collaborator that cause the delay or termination of the research, development or commercialization of our product candidates, or that result in costly litigation or arbitration that diverts management attention and resources;
- collaborations may be terminated and, if terminated, may result in a need for additional capital and personnel to pursue further development or commercialization of the applicable product candidates; and
- collaborators may own or co-own intellectual property covering our products that results from our collaborating with them, and in such cases, we may not have the exclusive right to commercialize such intellectual property.

The development and potential commercialization of our product candidates will require substantial additional capital to fund expenses. We may form or seek further strategic alliances, create joint ventures or collaborations, or enter into additional licensing arrangements with third parties that we believe will complement or augment our development and commercialization efforts with respect to our product candidates and any future product candidates that we may develop, including in territories outside the United States or for certain indications. These transactions can entail numerous operational and financial risks, including exposure to unknown liabilities, disruption of our business and diversion of our management's time and attention in order to manage a collaboration or develop acquired products, product candidates or technologies, incurrence of substantial debt or dilutive issuances of equity securities to pay transaction consideration or costs, higher than expected collaboration, acquisition or integration costs, write-downs of assets or goodwill or impairment charges, increased amortization expenses, difficulty and cost in facilitating the collaboration or combining the operations and personnel of any acquired business, impairment of relationships with key suppliers, manufacturers or

customers of any acquired business due to changes in management and ownership and the inability to retain key employees of any acquired business. As a result, if we enter into acquisition or in-license agreements or strategic collaborations, we may not be able to realize the benefit of such transactions if we are unable to successfully integrate them with our existing operations and company culture, or if there are materially adverse impacts on our or the counterparty's operations resulting from COVID-19, which could delay our timelines or otherwise adversely affect our business. We also cannot be certain that, following a strategic transaction or license, we will achieve the revenue or specific net income that justifies such transaction or such other benefits that led us to enter into the arrangement.

In addition, we face significant competition in seeking appropriate strategic partners and the negotiation process is time-consuming and complex. We may not be successful in our efforts to establish a strategic partnership or other alternative arrangements for our product candidates because they may be deemed to be at too early of a stage of development for collaborative effort and third parties may not view our product candidates as having the requisite potential to demonstrate safety and efficacy. If and when we collaborate with a third-party for development and commercialization of a product candidate, we can expect to relinquish some or all of the control over the future success of that product candidate to the third-party. Our ability to reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of our technologies, product candidates and market opportunities. The collaborator may also consider alternative product candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us for our product candidate. We may also be restricted under any license agreements from entering into agreements on certain terms or at all with potential collaborators.

As a result of these risks, we may not be able to realize the benefit of our existing collaborations or any future collaborations or licensing agreements we may enter into. In addition, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future collaborators and changes to the strategies of the combined company. As a result, we may not be able to negotiate collaborations on a timely basis, on acceptable terms, or at all. If we are unable to do so, we may have to curtail the development of such product candidate, reduce or delay one or more of our other development programs, delay the potential commercialization or reduce the scope of any planned sales or marketing activities for such product candidate, or increase our expenditures and undertake development, manufacturing or commercialization activities at our own expense. If we elect to increase our expenditures to fund development, manufacturing or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we may not be able to further develop our product candidates or bring them to market and generate product revenue.

Our product candidates may also require specific components to work effectively and efficiently, and rights to those components may be held by others. We may be unable to in-license any compositions, methods of use, processes or other third party intellectual property rights from third parties that we identify. We may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, which would harm our business. Even if we are able to obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. In that event, we may be required to expend significant time and resources to develop or license replacement technology. Any delays in entering into new collaborations or strategic partnership agreements related to our product candidates could delay the development and commercialization of our product candidates in certain geographies, which could harm our business prospects, financial condition, and results of operations.

Moreover, some of our owned and in-licensed patents or patent applications or future patents are or may be co-owned with third parties. If we are unable to obtain an exclusive license to any such third-party co-owners' interest in such patents or patent applications, such co-owners may be able to license their rights to other third parties, including our competitors, and our competitors could market competing products and technology. In

addition, we may need the cooperation of any such co-owners of our patents in order to enforce such patents against third parties, and such cooperation may not be provided to us. Furthermore, our owned and in-licensed patents may be subject to a reservation of rights by one or more third parties. Any of the foregoing could have a material adverse effect on our competitive position, business, financial conditions, results of operations and prospects.

We may not be successful in obtaining or maintaining necessary rights to product components and processes for our product development pipeline which may cause us to operate our business in a more costly or otherwise adverse manner that was not anticipated.

We own or license from third parties certain intellectual property rights necessary to develop our product candidates. The growth of our business will likely depend in part on our ability to acquire or in-license additional proprietary rights, including to advance our research or allow commercialization of our product candidates. In that event, we may be required to expend considerable time and resources to develop or license replacement technology. For example, our programs may involve additional technologies or product candidates that may require the use of additional proprietary rights held by third parties. Furthermore, other pharmaceutical companies and academic institutions may also have filed or are planning to file patent applications potentially relevant to our business. Our product candidates may also require specific formulations or other technology to work effectively and efficiently. These formulations or technology may be covered by intellectual property rights held by others. From time to time, in order to avoid infringing these third-party patents, we may be required to license technology from additional third parties to further develop or commercialize our product candidates. We may be unable to acquire or in-license any relevant third-party intellectual property rights, including any such intellectual property rights required to manufacture, use or sell our product candidates, that we identify as necessary or important to our business operations. We may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, if at all, and as a result we may be unable to develop or commercialize the affected product candidates, which would harm our business. We may need to cease use of the compositions or methods covered by such third-party intellectual property rights, and may need to seek to develop alternative approaches that do not infringe on such intellectual property rights which may entail additional costs and development delays, even if we were able to develop such alternatives, which may not be feasible. Even if we are able to obtain a license under such intellectual property rights, any such license may be non-exclusive, which may allow our competitors' access to the same technologies licensed to us.

Additionally, we sometimes collaborate with academic institutions to accelerate our preclinical research or development under written agreements with these institutions. Typically, these institutions provide us with an option to negotiate a license to any of the institution's rights in technology resulting from the collaboration. Regardless of such option, we may be unable to negotiate a license within the specified timeframe or under terms that are acceptable to us. If we are unable to do so, the institution may offer the intellectual property rights to other parties, potentially blocking our ability to pursue our program. If we are unable to successfully obtain rights to required third-party intellectual property or to maintain the existing intellectual property rights we have, we may have to abandon development of such program and our business and financial condition could suffer.

The licensing and acquisition of third-party intellectual property rights is a competitive practice, and companies that may be more established, or have greater resources than we do, may also be pursuing strategies to license or acquire third-party intellectual property rights that we may consider necessary or attractive in order to commercialize our product candidates. More established companies may have a competitive advantage over us due to their larger size and cash resources or greater clinical development and commercialization capabilities. There can be no assurance that we will be able to successfully complete such negotiations and ultimately acquire the rights to the intellectual property surrounding the additional product candidates that we may seek to acquire.

We may be dependent on intellectual property licensed or sublicensed to us from, or for which development was funded or otherwise assisted by, government agencies, such as the National Institutes of Health, for development of our technology and product candidates.

Government agencies have provided and may in the future provide funding, facilities, personnel or other assistance in connection with the development of the intellectual property rights owned by or licensed to us. Such government agencies may have retained rights in such intellectual property, including the right to grant or require us to grant mandatory licenses or sublicenses to such intellectual property to third parties under certain specified circumstances, including if it is necessary to meet health and safety needs that we are not reasonably satisfying or if it is necessary to meet requirements for public use specified by federal regulations, or to manufacture products in the United States. Any exercise of such rights, including with respect to any such required sublicense of these licenses could result in the loss of significant rights and could harm our ability to commercialize or continue commercializing licensed products. For example, at least one of our in-licensed patent cases related to each of our ex vivo cell engineering and in vivo cell engineering platforms has been funded at least in part by the U.S. government. As a result, these patent cases are subject to certain federal regulations pursuant to the Bayh-Dole Act of 1980 (Bayh-Dole Act). In particular, the federal government retains a "nonexclusive, nontransferable, irrevocable, paid-up license" for its own benefit to inventions produced with its financial assistance. The Bayh-Dole Act also provides federal agencies with "march-in rights." March-in rights allow the government, in specified circumstances, to require the contractor or successors in title to the patent to grant a "nonexclusive, partially exclusive, or exclusive license" to a "responsible applicant or applicants." If the patent owner refuses to do so, the government may grant the license itself. Intellectual property discovered under government-funded programs are also subject to certain reporting requirements, compliance with which may require us or our licensors to expend substantial resources and failure to comply may lead to loss of rights. Such intellectual property is also subject to a preference for U.S. industry, which may limit our ability to contract with foreign product manufacturers for products covered by such intellectual property. Moreover, we sometimes collaborate with academic institutions to accelerate our preclinical research or development, and we cannot be sure that any co-developed intellectual property will be free from government rights pursuant to the Bayh-Dole Act. If, in the future, we co-own or license in technology which is critical to our business that is developed in whole or in part with federal funds subject to the Bayh-Dole Act, our ability to enforce or otherwise exploit patents covering such technology may be adversely affected.

If we are unable to obtain and maintain sufficient intellectual property protection for our platform technologies and product candidates, or if the scope of the intellectual property protection is not sufficiently broad, our competitors could develop and commercialize products similar or identical to ours, and our ability to successfully commercialize our products may be adversely affected.

We anticipate that we will file additional patent applications both in the United States and in other countries, as appropriate. However, we cannot predict:

- if and when any patents will issue;
- the degree and range of protection any issued patents will afford us against competitors, including whether third parties will find ways to invalidate or otherwise circumvent our patents;
- whether others will apply for or obtain patents claiming aspects similar to those covered by our patents and patent applications;
- whether we will need to initiate litigation or administrative proceedings to defend our patent rights, which may be costly whether we win or lose; or
- whether the patent applications that we own, or in-license will result in issued patents with claims that cover our product candidates or uses thereof in the United States or in other foreign countries.

Our success depends in large part on our ability to obtain and maintain patent protection in the United States and other countries with respect to our platform technologies and product candidates. We seek to protect our

proprietary position by filing patent applications in the United States and abroad related to our novel discoveries and technologies that are important to our business.

Obtaining and enforcing patents is expensive and time-consuming, and we may not be able to file and prosecute all necessary or desirable patent applications or maintain and/or enforce patents that may issue based on our patent applications, at a reasonable cost or in a timely manner, including as a result of the COVID-19 pandemic impacting our or our licensors' operations. It is also possible that we will fail to identify patentable aspects of our research and development results before it is too late to obtain patent protection. Although we enter into non-disclosure and confidentiality agreements with parties who have access to patentable aspects of our research and development output, such as our employees, corporate collaborators, outside scientific collaborators, contract research organizations, contract manufacturers, consultants, advisors and other third parties, any of these parties may breach these agreements and disclose such results before a patent application is filed, thereby jeopardizing our ability to seek patent protection.

Composition of matter patents for biological and pharmaceutical products such as *in vivo* and *ex vivo* cell engineering product candidates often provide a strong form of intellectual property protection for those types of products, as such patents provide protection without regard to any method of use. We cannot be certain, however, that the claims in our pending patent applications covering the composition of matter of our product candidates will be considered patentable by the USPTO, or by patent offices in foreign countries, or that the claims in any of our issued patents will be considered valid and enforceable by courts in the United States or foreign countries. Method of use patents protect the use of a product for the specified method. This type of patent does not prevent a competitor from making and marketing a product that is identical to our product for an indication that is outside the scope of the patented method. Moreover, even if competitors do not actively promote their product for our targeted indications, physicians may prescribe these products "off-label" for those uses that are covered by our method of use patents. Although off-label prescriptions may infringe or contribute to the infringement of method of use patents, the practice is common and such infringement is difficult to prevent or prosecute.

The strength of patents in the biotechnology and pharmaceutical field can be uncertain, and evaluating the scope of such patents involves complex legal, factual and scientific analyses and has in recent years been the subject of much litigation, resulting in court decisions, including Supreme Court decisions, which have increased uncertainties as to the ability to enforce patent rights in the future. The patent applications that we own or in-license may fail to result in issued patents with claims that cover our product candidates or uses thereof in the United States or in other foreign countries. Even if the patents do successfully issue, third parties may challenge the validity, enforceability, or scope thereof, which may result in such patents being narrowed, invalidated, or held unenforceable. In the event of litigation or administrative proceedings, we cannot be certain that the claims in any of our issued patents will be considered valid by courts in the United States or foreign countries. Furthermore, even if they are unchallenged, our patents and patent applications may not adequately protect our intellectual property or prevent others from designing their products to avoid being covered by our claims. If the breadth or strength of protection provided by the patent applications we hold with respect to our product candidates is threatened, this could dissuade companies from collaborating with us to develop, and could threaten our ability to commercialize, our product candidates. In addition, the laws of foreign countries may not protect our rights to the same extent as the laws of the United States, or vice versa. Further, if we encounter delays in our clinical trials, the period of time during which we could market our product candidates under patent protection would be reduced.

We may not identify relevant third-party patents or may incorrectly interpret the relevance, scope or expiration of a third-party patent, which might adversely affect our ability to develop and market our products.

We cannot guarantee that any of our patent searches or analyses, including the identification of relevant patents, the scope of patent claims or the expiration of relevant patents, are complete or thorough, nor can we be certain that we have identified each and every third-party patent and pending application in the United States and abroad that is relevant to or necessary for the commercialization of our product candidates in any jurisdiction.

The scope of a patent claim is determined by an interpretation of the law, the written disclosure in a patent and the patent's prosecution history. Our interpretation of the relevance or the scope of a patent or a pending application may be incorrect, which may negatively impact our ability to market our products. We may incorrectly determine that our products are not covered by a third-party patent or may incorrectly predict whether a third-party's pending application will issue with claims of relevant scope. Our determination of the expiration date of any patent in the United States or abroad that we consider relevant may be incorrect, which may negatively impact our ability to develop and market our product candidates. Our failure to identify and correctly interpret relevant patents may negatively impact our ability to develop and market our products.

One aspect of the determination of patentability of our inventions depends on the scope and content of the "prior art," information that was or is deemed available to a person of skill in the relevant art prior to the priority date of the claimed invention. There may be prior art of which we are not aware that may affect the patentability of our patent claims or, if issued, affect the validity or enforceability of a patent claim. Further, we may not be aware of all third-party intellectual property rights potentially relating to our product candidates or their intended uses, and as a result the impact of such third-party intellectual property rights upon the patentability of our own patents and patent applications, as well as the impact of such third-party intellectual property upon our freedom to operate, is highly uncertain. Because patent applications in the United States and most other countries are confidential for typically a period of 18 months after filing, or may not be published at all, we cannot be certain that we were the first to file any patent application related to our product candidates. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain. Furthermore, for U.S. applications in which all claims are entitled to a priority date before March 16, 2013, an interference proceeding can be provoked by a third party or instituted by the USPTO to determine who was the first to invent any of the subject matter covered by the patent claims of our applications. For U.S. applications containing a claim not entitled to priority before March 16, 2013, there is a greater level of uncertainty in the patent law in view of the passage of the America Invents Act, which brought into effect significant changes to the U.S. patent laws, including new procedures for challenging pending patent applications and issued patents.

Our patents or pending patent applications may be challenged in the courts or patent offices in the United States and abroad. For example, we may be subject to a third-party pre-issuance submission of prior art to the USPTO or become involved in post-grant review procedures, oppositions, derivations, reexaminations, or *inter partes* review proceedings, in the United States or elsewhere, challenging our patent rights or the patent rights of others. An adverse determination in any such challenges may result in loss of exclusivity or in patent claims being narrowed, invalidated, or held unenforceable, in whole or in part, which could limit our ability to stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our technology and products. In addition, given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. Any failure to obtain or maintain patent protection with respect to our product candidates could have a material adverse effect on our business, financial condition, results of operations and prospects.

Intellectual property rights do not necessarily address all potential threats to our competitive advantage.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations and may not adequately protect our business or permit us to maintain our competitive advantage. For example:

- others may be able to make product candidates that are similar to ours but that are not covered by the claims of the patents that we own or have exclusively licensed;
- we or our licensors or future collaborators might not have been the first to make the inventions covered by the issued patent or pending patent application that we own or have exclusively licensed;
- we or our licensors or future collaborators might not have been the first to file patent applications covering certain of our inventions;

- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights;
- it is possible that our pending patent applications will not lead to issued patents;
- issued patents that we own or have exclusively licensed may be held invalid or unenforceable, as a result of legal challenges by our competitors;
- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we may not develop additional proprietary technologies that are patentable;
- we cannot predict the scope of protection of any patent issuing based on our patent applications, including whether the patent applications that we own or in-license will result in issued patents with claims that cover our product candidates or uses thereof in the United States or in other foreign countries;
- the claims of any patent issuing based on our patent applications may not provide protection against competitors or any competitive advantages, or may be challenged by third parties;
- if enforced, a court may not hold that our patents are valid, enforceable and infringed;
- we may need to initiate litigation or administrative proceedings to enforce and/or defend our patent rights which will be costly whether we win or lose;
- we may choose not to file a patent in order to maintain certain trade secrets or know-how, and a third party may subsequently file a patent covering such intellectual property;
- we may fail to adequately protect and police our trademarks and trade secrets; and
- the patents of others may have an adverse effect on our business, including if others obtain patents claiming subject matter similar to or improving that covered by our patents and patent applications.

Should any of these events occur, they could significantly harm our business, results of operations and prospects.

Confidentiality agreements with employees and third parties may not prevent unauthorized disclosure of trade secrets and other proprietary information.

In addition to the protection afforded by patents, we seek to rely on trade secret protection and confidentiality agreements to protect proprietary know-how that is not patentable or that we elect not to patent, processes for which patents are difficult to enforce, and any other elements of our product candidates, technology and product discovery and development processes that involve proprietary know-how, information, or technology that is not covered by patents. Any disclosure, either intentional or unintentional, by our employees, the employees of third parties with whom we share our facilities or third-party consultants and vendors that we engage to perform research, clinical trials or manufacturing activities, or misappropriation by third parties (such as through a cybersecurity breach) of our trade secrets or proprietary information could enable competitors to duplicate or surpass our technological achievements, thus eroding our competitive position in our market. Because we expect to rely on third parties in the development and manufacture of our product candidates, we must, at times, share trade secrets with them. Our reliance on third parties requires us to share our trade secrets, which increases the possibility that a competitor will discover them or that our trade secrets will be misappropriated or disclosed.

Trade secrets and confidential information, however, may be difficult to protect. We seek to protect our trade secrets, know-how and confidential information, including our proprietary processes, in part, by entering

into confidentiality agreements with our employees, consultants, outside scientific advisors, contractors, and collaborators. We require our employees to enter into written employment agreements containing provisions of confidentiality and obligations to assign to us any inventions generated in the course of their employment. With our consultants, contractors, and outside scientific collaborators, these agreements typically include invention assignment obligations. We cannot guarantee that we have entered into such agreements with each party that may have or has had access to our trade secrets or proprietary technology and processes. Although we use reasonable efforts to protect our trade secrets, our employees, consultants, outside scientific advisors, contractors, and collaborators might intentionally or inadvertently disclose our trade secret information to competitors. In addition, competitors may otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor or other third-party, we would have no right to prevent them from using that technology or information to compete with us. Furthermore, the laws of some foreign countries do not protect proprietary rights to the same extent or in the same manner as the laws of the United States. As a result, we may encounter significant problems in protecting and defending our intellectual property both in the United States and abroad. If we are unable to prevent unauthorized material disclosure of our intellectual property to third parties, or misappropriation of our intellectual property by third parties, we will not be able to establish or maintain a competitive advantage in our market, which could materially adversely affect our business, operating results, and financial condition.

Third-party claims of intellectual property infringement against us or our collaborators may prevent or delay our product discovery and development efforts.

Our commercial success depends in part on our avoiding infringement of the patents and proprietary rights of third parties. There is a substantial amount of litigation involving patents and other intellectual property rights in the biotechnology and pharmaceutical industries, as well as administrative proceedings for challenging patents, including interference, derivation, *inter partes* review, post-grant review and reexamination proceedings before the USPTO or oppositions and other comparable proceedings in foreign jurisdictions. Furthermore, patent reform and changes to patent laws add uncertainty to the possibility of challenge to our patents in the future. We cannot assure you that our product candidates and other proprietary technologies we may develop will not infringe existing or future patents owned by third parties. Litigation or other legal proceedings relating to intellectual property claims, with or without merit, is unpredictable and generally expensive and time consuming and, even if resolved in our favor, is likely to divert significant resources from our core business, including distracting our technical and management personnel from their normal responsibilities. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing or distribution activities. We may not have sufficient financial or other resources to adequately conduct such litigation or proceedings. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace.

Numerous U.S. and foreign issued patents and pending patent applications owned by third parties exist in the fields in which we are developing our product candidates. We cannot provide any assurances that third-party patents do not exist which might be enforced against our current product candidates or future products, resulting in either an injunction prohibiting our sales, or, with respect to our sales, an obligation on our part to pay royalties and/or other forms of compensation to third parties. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our product candidates may give rise to claims of infringement of the patent rights of others. Third parties may assert that we infringe their patents or other intellectual property, or that we are otherwise employing their proprietary technology without authorization, and

may sue us. There may be third-party patents of which we are currently unaware with claims to compositions, formulations, methods of manufacture, or methods of use or treatment that cover our product candidates. It is also possible that patents owned by third parties of which we are aware, but which we do not believe are relevant to our product candidates and other proprietary technologies we may develop, could be found to be infringed by our product candidate. Because patent applications can take many years to issue, there may be currently pending patent applications that may later result in issued patents that our product candidates may infringe. In addition, third parties, our competitors in both the United States and abroad, many of which have substantially greater resources and have made substantial investments in patent portfolios and competing technologies, may obtain patents in the future that may prevent, limit or otherwise interfere with our ability to make, use and sell our product candidates, and may claim that use of our technologies or the manufacture, use, or sale of our product candidates infringes upon these patents. If any such third-party patents were held by a court of competent jurisdiction to cover our technologies or product candidates, or if we are found to otherwise infringe a third-party's intellectual property rights, the holders of any such patents may be able to block, including by court order, our ability to develop, manufacture or commercialize the applicable product candidate unless we obtain a license under the applicable patents or other intellectual property, or until such patents expire or are finally determined to be held invalid or unenforceable. Such a license may not be available on commercially reasonable terms or at all. Even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. If we are unable to obtain a necessary license to a third-party patent on commercially reasonable terms, our ability to commercialize our product candidates may be impaired or delayed, which could in turn significantly harm our business.

The pharmaceutical and biotechnology industries have produced a considerable number of patents, and it may not always be clear to industry participants, including us, which patents cover various types of products or methods of use. The coverage of patents is subject to interpretation by the courts, and the interpretation is not always uniform. If we were sued for patent infringement, we would need to demonstrate that our product candidates, products or methods either do not infringe the patent claims of the relevant patent or that the patent claims are invalid or unenforceable, and we may not be able to do this. Proving invalidity may be difficult. For example, in the United States, proving invalidity in court requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents, and there is no assurance that a court of competent jurisdiction would invalidate the claims of any such U.S. patent. Even if we are successful in these proceedings, we may incur substantial costs and the time and attention of our management and scientific personnel could be diverted in pursuing these proceedings, which could have a material adverse effect on our business and operations. In addition, we may not have sufficient resources to bring these actions to a successful conclusion.

Third parties asserting their patent or other intellectual property rights against us may seek and obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize our product candidates or force us to cease some of our business operations. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of management and other employee resources from our business, cause development delays, and may impact our reputation. In the event of a successful claim of infringement against us, we may have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, obtain one or more licenses from third parties, pay royalties, or redesign our infringing products, which may be impossible on a cost-effective basis or require substantial time and monetary expenditure. In that event, we would be unable to further develop and commercialize our product candidates, which could harm our business significantly. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar negative impact on our business.

Issued patents covering our product candidates could be found invalid or unenforceable if challenged in court or before the USPTO or comparable foreign authority.

If we or one of our licensing partners initiate legal proceedings against a third party to enforce a patent covering one of our product candidates, the defendant could counterclaim we infringe their patents or that the

patent covering our product candidate is invalid or unenforceable, or both. In patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace, and there are numerous grounds upon which a third party can assert invalidity or unenforceability of a patent, including lack of novelty, obviousness, non-enablement or insufficient written description or that that someone connected with prosecution of the patent withheld relevant information from the USPTO or made a misleading statement during prosecution. Third parties may also raise similar claims before administrative bodies in the United States or abroad, even outside the context of litigation. Such mechanisms include re-examination, *inter partes* review, post-grant review, and equivalent proceedings in foreign jurisdictions, such as opposition or derivation proceedings. Such proceedings could result in revocation or amendment to our patents in such a way that they no longer cover and protect our product candidates. The outcome following legal assertions of invalidity and unenforceability is unpredictable. In any patent infringement proceeding, there is a risk that a court will decide that a patent of ours is invalid or unenforceable, in whole or in part, and that we do not have the right to stop the other party from using the invention at issue. There is also a risk that, even if the validity of such patents is upheld, the court will construe the patent's claims narrowly or decide that we do not have the right to stop the other party from using the invention at issue on the grounds that our patent claims do not cover the invention, or decide that the other party's use of our patented technology falls under the safe harbor to patent infringement under 35 U.S.C. §271(e)(1). With respect to the validity of our patents, for example, we cannot be certain that there is no invalidating prior art of which we, our patent counsel, and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on our product candidates and such an outcome may limit our ability to assert our patents against those parties or other competitors and may curtail or preclude our ability to exclude third parties from making and selling similar or competitive products. Such a loss of patent protection could have a material adverse impact on our business. Similarly, if we assert trademark infringement claims, a court may determine that the marks we have asserted are invalid or unenforceable, or that the party against whom we have asserted trademark infringement has superior rights to the marks in question. In this case, we could ultimately be forced to cease use of such trademarks.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment, and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees on any issued patent are due to be paid to the USPTO and foreign patent agencies in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment, and other similar provisions during the patent application process. Although an inadvertent lapse, including due to the effect of the COVID-19 pandemic on us or our patent maintenance vendors, can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Noncompliance events that could result in abandonment or lapse of a patent or patent application include failure to respond to official actions within prescribed time limits, non-payment of fees, and failure to properly legalize and submit formal documents. In any such event, our competitors might be able to enter the market, which would have a material adverse effect on our business.

The lives of our patents may not be sufficient to effectively protect our products and business.

Patents have a limited lifespan. In the United States, if all maintenance fees are paid timely, the natural expiration of a patent is generally 20 years after its first effective nonprovisional filing date. Although various extensions may be available, the life of a patent, and the protection it affords, is limited. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such product candidates are commercialized. Even if patents covering our product candidates are obtained, once the patent life has expired for a product, we may be open to competition from biosimilar or generic medications. As a result, our patent portfolio may not provide us with

sufficient rights to exclude others from commercializing product candidates similar or identical to ours. Our patents issued as of October 30, 2020 will expire on dates ranging from 2023 to 2037, subject to any patent extensions that may be available for such patents. If patents are issued on our patent applications pending as of October 30, 2020, the resulting patents are projected to expire on dates ranging from 2023 to 2041. In addition, although upon issuance in the United States a patent's life can be increased based on certain delays caused by the USPTO, this increase can be reduced or eliminated based on certain delays caused by the patent applicant during patent prosecution. A patent term extension based on regulatory delay may be available in the United States. However, only a single patent can be extended for each marketing approval, and any patent can be extended only once, for a single product. Moreover, the scope of protection during the period of the patent term extension does not extend to the full scope of the claim, but instead only to the scope of the product as approved. Laws governing analogous patent term extensions in foreign jurisdictions vary widely, as do laws governing the ability to obtain multiple patents from a single patent family. Additionally, we may not receive an extension if we fail to exercise due diligence during the testing phase or regulatory review process, apply within applicable deadlines, fail to apply prior to expiration of relevant patents or otherwise fail to satisfy applicable requirements. If we are unable to obtain patent term extension or restoration, or the term of any such extension is less than we request, the period during which we will have the right to exclusively market our product will be shortened and our competitors may obtain approval of competing products following our patent expiration and may take advantage of our investment in development and clinical trials by referencing our clinical and preclinical data to launch their product earlier than might otherwise be the case, and our revenue could be reduced, possibly materially. If we do not have sufficient patent life to protect our products, our business and results of operations will be adversely affected.

We may be subject to claims challenging the inventorship or ownership of our patents and other intellectual property.

We may be subject to claims that former employees, collaborators, or other third parties have an interest in our patents or other intellectual property as an inventor or co-inventor. The failure to name the proper inventors on a patent application can result in the patents issuing thereon being unenforceable. Inventorship disputes may arise from conflicting views regarding the contributions of different individuals named as inventors, the effects of foreign laws where foreign nationals are involved in the development of the subject matter of the patent, conflicting obligations of third parties involved in developing our product candidates or as a result of questions regarding co-ownership of potential joint inventions. For example, we may have inventorship disputes arise from conflicting obligations of consultants or others who are involved in developing our product candidates. Alternatively, or additionally, we may enter into agreements to clarify the scope of our rights in such intellectual property. Litigation may be necessary to defend against these and other claims challenging inventorship. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, valuable intellectual property. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

We or our licensors may have relied on third-party consultants or collaborators or on funds from third parties, such as the U.S. government, such that we or our licensors are not the sole and exclusive owners of the patents we in-licensed. If other third parties have ownership rights or other rights to our patents, including in-licensed patents, they may be able to license such patents to our competitors, and our competitors could market competing products and technology. This could have a material adverse effect on our competitive position, business, financial conditions, results of operations, and prospects.

In addition, while it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who, in fact, conceives or develops intellectual property that we regard as our own. The assignment of intellectual property rights may not be self-executing, or the assignment agreements may be breached, and we may be forced to bring claims against third

parties, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property. Such claims could have a material adverse effect on our business, financial condition, results of operations, and prospects.

If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be adversely affected.

Our current or future trademarks or trade names may be challenged, infringed, circumvented or declared generic or descriptive determined to be infringing on other marks. We may not be able to protect our rights to these trademarks and trade names or may be forced to stop using these names, which we need for name recognition by potential partners or customers in our markets of interest. During trademark registration proceedings, we may receive rejections of our applications by the USPTO or in other foreign jurisdictions. Although we would be given an opportunity to respond to those rejections, we may be unable to overcome such rejections. In addition, in the USPTO and in comparable agencies in many foreign jurisdictions, third parties are given an opportunity to oppose pending trademark applications and to seek to cancel registered trademarks. Opposition or cancellation proceedings may be filed against our trademarks, and our trademarks may not survive such proceedings. If we are unable to establish name recognition based on our trademarks and trade names, we may not be able to compete effectively and our business may be adversely affected. We may license our trademarks and trade names to third parties, such as distributors. Though these license agreements may provide guidelines for how our trademarks and trade names may be used, a breach of these agreements or misuse of our trademarks and tradenames by our licensees may jeopardize our rights in or diminish the goodwill associated with our trademarks and trade names.

Moreover, any name we have proposed to use with our product candidate in the United States must be approved by the FDA, regardless of whether we have registered it, or applied to register it, as a trademark. Similar requirements exist in Europe. The FDA typically conducts a review of proposed product names, including an evaluation of potential for confusion with other product names. If the FDA (or an equivalent administrative body in a foreign jurisdiction) objects to any of our proposed proprietary product names, it may be required to expend significant additional resources in an effort to identify a suitable substitute name that would qualify under applicable trademark laws, not infringe the existing rights of third parties and be acceptable to the FDA. Furthermore, in many countries, owning and maintaining a trademark registration may not provide an adequate defense against a subsequent infringement claim asserted by the owner of a senior trademark. At times, competitors or other third parties may adopt trade names or trademarks similar to ours, thereby impeding our ability to build brand identity and possibly leading to market confusion. In addition, there could be potential trade name or trademark infringement claims brought by owners of other registered trademarks or trademarks that incorporate variations of our registered or unregistered trademarks or trade names. If we assert trademark infringement claims, a court may determine that the marks we have asserted are invalid or unenforceable, or that the party against whom we have asserted trademark infringement has superior rights to the marks in question. In this case, we could ultimately be forced to cease use of such trademarks.

Our internal computer systems, or those used by our third-party research institution collaborators, CROs, CDMOs, or other contractors or consultants, may fail or suffer security breaches.

We are increasingly dependent upon information technology systems, infrastructure and data to operate our business. In the ordinary course of business, we collect, store and transmit confidential information (including but not limited to intellectual property, proprietary business information and personal information). It is critical that we do so in a secure manner to maintain the confidentiality and integrity of such confidential information. We also have outsourced elements of our operations to third parties, and as a result we manage a number of third-party contractors who have access to our confidential information.

Despite the implementation of security measures, our internal computer systems and those of our future CROs and CDMOs, and other contractors and consultants are vulnerable to damage from computer viruses and

unauthorized access. Although to our knowledge we have not experienced any such material system failure or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our development programs and our business operations. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Likewise, we rely on our third-party research institution collaborators for research and development of our product candidates and other third parties for the manufacture of our product candidates and to conduct clinical trials, and similar events relating to their computer systems could also have a material adverse effect on our business. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information or patient information, we could incur liability and the further development and commercialization of our product candidates could be delayed.

While we have not experienced any material system failure, accident or security breach to date, we cannot assure you that our data protection efforts and our investment in information technology will prevent significant breakdowns, data leakages, breaches in our systems or other cyber incidents that could have a material adverse effect upon our reputation, business, operations or financial condition. For example, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our programs and the development of our product candidates could be delayed. In addition, the loss of clinical trial data for our product candidates could result in delays in our marketing approval efforts and significantly increase our costs to recover or reproduce the data. Furthermore, significant disruptions of our internal information technology systems or security breaches could result in the loss, misappropriation, and/or unauthorized access, use, or disclosure of, or the prevention of access to, confidential information (including trade secrets or other intellectual property, proprietary business information, and personal information), which could result in financial, legal, business, and reputational harm to us. For example, any such event that leads to unauthorized access, use, or disclosure of personal information, including personal information regarding our clinical trial subjects or employees, could harm our reputation directly, compel us to comply with federal and/or state breach notification laws and foreign law equivalents, subject us to mandatory corrective action, and otherwise subject us to liability under laws and regulations that protect the privacy and security of personal information, which could result in significant legal and financial exposure and reputational damages that could potentially have an adverse effect on our business.

We have and will enter into collaboration, license, contract research and/or manufacturing relationships with contract organizations that operate in certain countries that are at heightened risk of theft of technology, data and intellectual property through direct intrusion by private parties or foreign actors, including those affiliated with or controlled by state actors. Accordingly, our efforts to protect and enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license, and we may be at heightened risk of losing our proprietary intellectual property rights around the world, including outside of such countries, to the extent such theft or intrusion destroy the proprietary nature of our intellectual property.

Risks Related to Ownership of Our Common Stock

Our principal stockholders and management own a significant percentage of our stock and will be able to exert significant control over matters subject to stockholder approval.

Prior to this offering, as of September 30, 2020, our executive officers, directors, holders of 5% or more of our capital stock and their respective affiliates owned approximately % of our outstanding voting stock and, upon the closing of this offering, that same group will own approximately % of our outstanding voting stock (assuming no exercise of the underwriters' option to purchase additional shares). Therefore, even after this offering these stockholders will have the ability to influence us through this ownership position. These stockholders may be able to determine all matters requiring stockholder approval. For example, these stockholders may be able to control elections of directors, amendments of our organizational documents, or approval of any merger, sale of assets, or other major corporate transaction. In addition, certain of our principal

stockholders, including ARCH Venture Partners and Flagship Pioneering, have designated certain of our directors for election to the Board. This may prevent or discourage unsolicited acquisition proposals or offers for our common stock that you may feel are in your best interest as one of our stockholders.

Future sales of our common stock in the public market could cause our common stock price to fall.

Our common stock price could decline as a result of sales of a large number of shares of common stock after this offering or the perception that these sales could occur. These sales, or the possibility that these sales may occur, might also make it more difficult for us to sell equity securities in the future at a time and price that we deem appropriate.

Upon the completion of this offering, shares of common stock will be outstanding (or shares if the underwriters exercise their over-allotment option to purchase additional shares from us in full), based on the number of shares outstanding as of September 30, 2020.

All shares of common stock expected to be sold in this offering will be freely tradable without restriction or further registration under the Securities Act unless held by our "affiliates" as defined in Rule 144 under the Securities Act. The resale of the remaining shares, or % of our outstanding shares of common stock following this offering, is currently prohibited or otherwise restricted as a result of securities law provisions, market standoff agreements entered into by certain of our stockholders with us or lock-up agreements entered into by our stockholders with the underwriters in connection with this offering. However, subject to applicable securities law restrictions, these shares will be able to be sold in the public market beginning 181 days after the date of this prospectus. Shares issued upon the exercise of stock options outstanding under our equity incentive plans or pursuant to future awards granted under those plans will become available for sale in the public market to the extent permitted by the provisions of applicable vesting schedules, market stand-off agreements and/or lock-up agreements, as well as Rules 144 and 701 under the Securities Act. For more information, see the section titled "Shares Eligible for Future Sale."

Upon the completion of this offering, the holders of approximately shares, or % of our outstanding shares following this offering, of our common stock will have rights, subject to some conditions, to require us to file registration statements covering the sale of their shares or to include their shares in registration statements that we may file for ourselves or our other stockholders. We also intend to register the offer and sale of all shares of common stock that we may issue under our equity compensation plans. Once we register the offer and sale of shares for the holders of registration rights and shares that may be issued under our equity incentive plans, these shares will be able to be sold in the public market upon issuance, subject to the lock-up agreements described under "Underwriting."

In addition, in the future, we may issue additional shares of common stock, or other equity or debt securities convertible into common stock, in connection with a financing, acquisition, employee arrangement, or otherwise. Any such issuance could result in substantial dilution to our existing stockholders and could cause the price of our common stock to decline.

There has been no prior public market for our common stock, and an active trading market may not develop or be sustained.

There has been no public market for our common stock prior to this offering. The IPO price for our common stock was determined through negotiations among the underwriters and us and may vary from the market price of our common stock following this offering. An active or liquid market in our common stock may not develop upon closing of this offering or, if it does develop, it may not be sustainable. The lack of an active market may impair the value of your shares, your ability to sell your shares at the time you wish to sell them and the prices that you may obtain for your shares. An inactive market may also impair our ability to raise capital by selling our common stock and our ability to acquire other companies, products, or technologies by using our common stock as consideration.

If you purchase shares of our common stock in our initial public offering, you will experience substantial and immediate dilution.

The assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, is substantially higher than the net tangible book value per share of our outstanding common stock immediately following the completion of this offering. If you purchase shares of common stock in this offering, you will experience substantial and immediate dilution in the pro forma net tangible book value per share of $ as of September 30, 2020. That is because the price that you pay will be substantially greater than the pro forma net tangible book value per share of the common stock that you acquire. This dilution is due in large part to the fact that our earlier investors paid substantially less than the assumed initial public offering price when they purchased their shares of our capital stock. You will experience additional dilution when those holding stock options exercise their right to purchase common stock under our equity incentive plans or when we otherwise issue additional shares of common stock. For additional details see the section titled “Dilution.”

We do not currently intend to pay dividends on our common stock and, consequently, our stockholders’ ability to achieve a return on their investment will depend on appreciation of the value of our common stock.

We have never declared or paid cash dividends on our common stock. We currently intend to retain all available funds and any future earnings to support operations and to finance the growth and development of our business. We do not intend to declare or pay any cash dividends on our capital stock in the foreseeable future. As a result, any investment return on our common stock will depend upon increases in the value for our common stock, which is not certain.

Participation in this offering by our existing stockholders and their affiliated entities may reduce the public float for our common stock.

To the extent certain of our existing stockholders and their affiliated entities participate in this offering, such purchases would reduce the non-affiliate public float of our shares, meaning the number of shares of our common stock that are not held by officers, directors and controlling stockholders. A reduction in the public float could reduce the number of shares that are available to be traded at any given time, thereby adversely impacting the liquidity of our common stock and depressing the price at which you may be able to sell shares of common stock purchased in this offering.

Provisions in our amended and restated certificate of incorporation and our amended and restated bylaws and Delaware law might discourage, delay or prevent a change in control of our company or changes in our management and, therefore, depress the market price of our common stock.

Our amended and restated certificate of incorporation and amended and restated bylaws, each to be in effect immediately prior to the completion of this offering, will contain provisions that could depress the market price of our common stock by acting to discourage, delay, or prevent a change in control of our company or changes in our management that the stockholders of our company may deem advantageous. These provisions, among other things:

- establish a staggered Board divided into three classes serving staggered three-year terms, such that not all members of the Board will be elected at one time;
- authorize our Board to issue new series of preferred stock without stockholder approval and create, subject to applicable law, a series of preferred stock with preferential rights to dividends or our assets upon liquidation, or with superior voting rights to our existing common stock;
- eliminate the ability of our stockholders to call special meetings of stockholders;
- eliminate the ability of our stockholders to fill vacancies on our Board;

- establish advance notice requirements for nominations for election to our Board or for proposing matters that can be acted upon by stockholders at our annual stockholder meetings;
- permit our Board to establish the number of directors;
- provide that our Board is expressly authorized to make, alter or repeal our amended bylaws;
- provide that stockholders can remove directors only for cause and only upon the approval of not less than 662/3 of all outstanding shares of our voting stock;
- require the approval of not less than 662/3 of all outstanding shares of our voting stock to amend our bylaws and specific provisions of our certificate of incorporation; and
- the jurisdictions in which certain stockholder litigation may be brought.

As a Delaware corporation, we will be subject to the anti-takeover provisions of Section 203 of the Delaware General Corporation Law, which prohibits a Delaware corporation from engaging in a business combination specified in the statute with an interested stockholder (as defined in the statute) for a period of three years after the date of the transaction in which the person first becomes an interested stockholder, unless the business combination is approved in advance by a majority of the independent directors or by the holders of at least two-thirds of the outstanding disinterested shares. The application of Section 203 of the Delaware General Corporation Law could also have the effect of delaying or preventing a change of control of our company.

Our amended and restated certificate of incorporation will provide that the Court of Chancery of the State of Delaware will be the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation to be in effect upon the completion of this offering will provide that, unless we consent in writing to the selection of an alternative forum, the sole and exclusive forum, to the fullest extent permitted by law, for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a breach of a fiduciary duty owed by any director, officer or other employee to us or our stockholders, (iii) any action asserting a claim against us or any director, officer, or other employee arising pursuant to the Delaware General Corporation Law, (iv) any action to interpret, apply, enforce, or determine the validity of our second amended and restated certificate of incorporation or amended and restated bylaws, or (v) any other action asserting a claim that is governed by the internal affairs doctrine, shall be the Court of Chancery of the State of Delaware (or another state court or the federal court located within the State of Delaware if the Court of Chancery does not have or declines to accept jurisdiction), in all cases subject to the court's having jurisdiction over indispensable parties named as defendants. In addition, our amended and restated certificate of incorporation will provide that the federal district courts of the United States will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act but that the forum selection provision will not apply to claims brought to enforce a duty or liability created by the Exchange Act.

Although we believe these provisions benefit us by providing increased consistency in the application of Delaware law for the specified types of actions and proceedings, the provisions may have the effect of discouraging lawsuits against us or our directors and officers. Alternatively, if a court were to find the choice of forum provision contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, financial condition, and operating results. For example, under the Securities Act, federal courts have concurrent jurisdiction over all suits brought to enforce any duty or liability created by the Securities Act, and investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder. Any person or entity purchasing or otherwise acquiring any interest in our shares of capital stock shall be deemed to have notice of and consented to this exclusive forum provision, but will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder.

Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited.

Under the Tax Cuts and Jobs Act of 2017, as modified by the Coronavirus Aid, Relief, and Economic Stability Act, or CARES Act, our federal net operating losses, or NOLs, generated in tax years beginning after December 31, 2017, may be carried forward indefinitely, but the deductibility of such federal NOLs in tax years beginning after December 31, 2020, is limited to 80% of taxable income. It is uncertain if and to what extent various states will conform to the Tax Cuts and Jobs Act of 2017, or the CARES Act. In addition. under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, if a corporation undergoes an "ownership change," generally defined as a greater than 50 percentage point change (by value) in its equity ownership by certain stockholders over a three-year period, the corporation's ability to use its pre-change net operating loss carryforwards, or NOLs, and other pre-change tax attributes (such as research and development tax credits) to offset its post-change income or taxes may be limited. We may have experienced ownership changes in the past and may experience ownership changes as a result of this offering and/or subsequent shifts in our stock ownership (some of which are outside our control). As a result, our ability to use our pre-change NOLs and tax credits to offset post-change taxable income, if any, could be subject to limitations. Similar provisions of state tax law may also apply. In addition, at the state level, there may be periods during which the use of NOLs is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed. For example, California recently imposed limits on the usability of California state NOLs and tax credits to offset California taxable income in tax years beginning after 2019 and before 2023. As a result, even if we attain profitability, we may be unable to use a material portion of our NOLs and tax credits.

General Risk Factors

Raising additional capital may cause dilution to our stockholders, restrict our operations, or require us to relinquish rights to our technologies or product candidates.

Until such time, if ever, as we can generate substantial product revenue, we expect to finance our operations with our existing cash, cash equivalents, and marketable securities, the net proceeds from this offering, any future equity or debt financings, and upfront, milestone, and royalties payments, if any, received under any future licenses or collaborations. If we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a holder of our common stock. In addition, the possibility of such issuance may cause the market price of our common stock to decline. Debt financing, if available, may result in increased fixed payment obligations and involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures, declaring dividends, or acquiring, selling, or licensing intellectual property rights or assets, which could adversely impact our ability to conduct our business.

If we raise additional funds through collaborations, strategic alliances or marketing, distribution, or licensing arrangements with third parties, we may have to relinquish valuable rights to our intellectual property, technologies, future revenue streams, or product candidates or grant licenses on terms that may not be favorable to us. We could also be required to seek funds through arrangements with collaborators or others at an earlier stage than otherwise would be desirable. Any of these occurrences may have a material adverse effect on our business, operating results, and prospects.

We or the third parties upon whom we depend may be adversely affected by earthquakes or other natural disasters, and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.

Our corporate headquarters and other facilities are located in areas that have experienced significant natural disasters, including the San Francisco Bay Area and Seattle, Washington, which has experienced severe effects from wildfires and, in the case of San Francisco, severe earthquakes. We do not carry earthquake insurance. Earthquakes, wildfires or other natural disasters could severely disrupt our operations, and could materially and adversely affect our business, financial condition, results of operations and prospects.

If a natural disaster, power outage or other event occurred that prevented us from using all or a significant portion of our headquarters, that damaged critical infrastructure or that otherwise disrupted operations, it may be difficult or, in certain cases, impossible, for us to continue our business for a substantial period of time. The disaster recovery and business continuity plans we have in place currently are limited and are unlikely to prove adequate in the event of a serious disaster or similar event. We may incur substantial expenses as a result of the limited nature of our disaster recovery and business continuity plans, which, particularly when taken together with our lack of earthquake insurance, could have a material adverse effect on our business.

Furthermore, integral parties in our supply chain are similarly vulnerable to natural disasters or other sudden, unforeseen and severe adverse events. If such an event were to affect our supply chain, it could have a material adverse effect on our business.

We are subject to U.S. and certain foreign export and import controls, sanctions, embargoes, anti-corruption laws, and anti-money laundering laws and regulations. Compliance with these legal standards could impair our ability to compete in domestic and international markets. We can face criminal liability and other serious consequences for violations, which can harm our business.

We are subject to export control and import laws and regulations, including the U.S. Export Administration Regulations, U.S. Customs regulations, various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Controls, the U.S. Foreign Corrupt Practices Act of 1977, as amended (FCPA), the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, and other state and national anti-bribery and anti-money laundering laws in the countries in which we conduct activities. Anti-corruption laws are interpreted broadly and prohibit companies and their employees, agents, contractors, and other collaborators from authorizing, promising, offering, or providing, directly or indirectly, improper payments or anything else of value to recipients in the public or private sector. We may engage third parties to sell our products outside the United States, to conduct clinical trials, and/or to obtain necessary permits, licenses, patent registrations, and other regulatory approvals. We have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities, and other organizations. We can be held liable for the corrupt or other illegal activities of our employees, agents, contractors, and other collaborators, even if we do not explicitly authorize or have actual knowledge of such activities. Any violations of the laws and regulations described above may result in substantial civil and criminal fines and penalties, imprisonment, the loss of export or import privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm, and other consequences.

The withdrawal of the United Kingdom from the European Union, commonly referred to as "Brexit," may adversely impact our ability to obtain regulatory approvals of our product candidates in the European Union, result in restrictions or imposition of taxes and duties for importing our product candidates into the European Union, and may require us to incur additional expenses in order to develop, manufacture and commercialize our product candidates in the European Union.

Following the result of a referendum in 2016, the United Kingdom left the European Union on January 31, 2020, commonly referred to as "Brexit." Pursuant to the formal withdrawal arrangements agreed between the United Kingdom and the European Union, the United Kingdom will be subject to a transition period until December 31, 2020 (the Transition Period), during which EU rules will continue to apply. Negotiations between the United Kingdom and the European Union are expected to continue in relation to the customs and trading relationship between the United Kingdom and the European Union following the expiry of the Transition Period.

Since a significant proportion of the regulatory framework in the United Kingdom applicable to our business and our product candidates is derived from EU directives and regulations, Brexit, following the Transition Period, could materially impact the regulatory regime with respect to the development, manufacture, importation, approval and commercialization of our product candidates in the United Kingdom or the European Union. For example, as a result of the uncertainty surrounding Brexit, the EMA relocated to Amsterdam from London.

Following the Transition Period, the United Kingdom will no longer be covered by the centralized procedures for obtaining EU-wide marketing authorization from the EMA and, unless a specific agreement is entered into, a separate process for authorization of drug products, including our product candidates, will be required in the United Kingdom, the potential process for which is currently unclear. Any delay in obtaining, or an inability to obtain, any marketing approvals, as a result of Brexit or otherwise, would prevent us from commercializing our product candidates in the United Kingdom or the European Union and restrict our ability to generate revenue and achieve and sustain profitability. In addition, we may be required to pay taxes or duties or be subjected to other hurdles in connection with the importation of our product candidates into the European Union, or we may incur expenses in establishing a manufacturing facility in the European Union in order to circumvent such hurdles. If any of these outcomes occur, we may be forced to restrict or delay efforts to seek regulatory approval in the United Kingdom or the European Union for our product candidates, or incur significant additional expenses to operate our business, which could significantly and materially harm or delay our ability to generate revenues or achieve profitability of our business. Any further changes in international trade, tariff and import/export regulations as a result of Brexit or otherwise may impose unexpected duty costs or other non-tariff barriers on us. These developments, or the perception that any of them could occur, may significantly reduce global trade and, in particular, trade between the impacted nations and the United Kingdom.

Even if approved, our products may not gain market acceptance, in which case we may not be able to generate product revenues, which will materially adversely affect our business, financial condition, and results of operations.

Even if the FDA or any comparable foreign regulatory authority approves the marketing of any product candidates that we develop, physicians, healthcare providers, patients, or the medical community may not accept or use them. Additionally, the product candidates that we are developing are based on our proprietary platforms, which are new technologies. If these products do not achieve an adequate level of acceptance, we may not generate significant product revenues or any profits from operations. The degree of market acceptance of any of our product candidates will depend on a variety of factors, including:

- the timing of market introduction;
- the terms of any approvals and the countries in which approvals are obtained;
- the number and clinical profile of competing products;
- our ability to provide acceptable evidence of safety and efficacy;
- the prevalence and severity of any side effects;
- relative convenience and ease of administration;
- cost-effectiveness;
- patient diagnostics and screening infrastructure in each market;
- marketing and distribution support;
- adverse publicity about our product candidates;
- availability of coverage, adequate reimbursement and sufficient payment from health maintenance organizations and other insurers, both public and private, for our product candidates, or the procedures utilizing our product candidates, if approved;
- the willingness of patients to pay out-of-pocket in the absence of coverage by third-party payors and government authorities; and
- other potential advantages over alternative treatment methods.

In addition, although we are not utilizing replication competent vectors, adverse publicity due to the ethical and social controversies surrounding the therapeutic use of such technology, and reported side effects from any

clinical trials using these technologies or the failure of such trials to demonstrate that these therapies are safe and effective may limit market acceptance of our product candidates. If our product candidates are approved but fail to achieve market acceptance among physicians, patients, hospitals, cancer treatment centers or others in the medical community, we will not be able to generate significant revenue.

If our product candidates fail to gain market acceptance, this will have a material adverse impact on our ability to generate revenues to provide a satisfactory, or any, return on our investments. Even if some products achieve market acceptance, the market may prove not to be large enough to allow us to generate significant revenues.

We may not be able to protect our intellectual property rights throughout the world.

Patents are of national or regional effect, and filing, prosecuting, maintaining and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can have a different scope and strength than do those in the United States. In addition, the laws of some foreign countries, particularly certain developing countries, do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and further, may export otherwise infringing products to territories where we have patent protection, but enforcement rights are not as strong as those in the United States. These products may compete with our products and our patents or other intellectual property rights may not be effective or adequate to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property, particularly those relating to biopharmaceutical products, which could make it difficult in those jurisdictions for us to stop the infringement or misappropriation of our patents or other intellectual property rights, or the marketing of competing products in violation of our proprietary rights. Proceedings to enforce our patent and other intellectual property rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business. Furthermore, such proceedings could put our patents at risk of being invalidated, held unenforceable, or interpreted narrowly, could put our patent applications at risk of not issuing, and could provoke third parties to assert claims of infringement or misappropriation against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Similarly, if our trade secrets are disclosed in a foreign jurisdiction, competitors worldwide could have access to our proprietary information and we may be without satisfactory recourse. Such disclosure could have a material adverse effect on our business. Moreover, our ability to protect and enforce our intellectual property rights may be adversely affected by unforeseen changes in foreign intellectual property laws. In addition, certain developing countries, including China and India, have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In those countries, we and our licensors may have limited remedies if patents are infringed or if we or our licensors are compelled to grant a license to a third-party, which could materially diminish the value of those patents. In addition, many countries limit the enforceability of patents against government agencies or government contractors. This could limit our potential revenue opportunities. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Because of the expense and uncertainty of litigation, we may conclude that even if a third-party is infringing our issued patents, any patents that may be issued as a result of our pending or future patent applications or other intellectual property rights, the risk-adjusted cost of bringing and enforcing such a claim or action, which typically last for years before they are concluded, may be too high or not in the best interest of our company or

our stockholders, or it may be otherwise impractical or undesirable to enforce our intellectual property against some third parties. Our competitors or other third parties may be able to sustain the costs of complex patent litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. In such cases, we may decide that the monetary cost of such litigation and the diversion of the attention of our management and scientific personnel could outweigh any benefit we receive as a result of the proceedings and that the more prudent course of action is to simply monitor the situation or initiate or seek some other non-litigious action or solution. In addition, the uncertainties associated with litigation could compromise our ability to raise the funds necessary to continue our clinical trials, continue our internal research programs, in-license needed technology or other product candidates, or enter into development partnerships that would help us bring our product candidates to market.

We may be involved in lawsuits to protect or enforce our patents or other intellectual property or the intellectual property of our licensors, which could be expensive, time-consuming, and unsuccessful.

Competitors may infringe our patents or other intellectual property or the intellectual property of our licensors. To cease such infringement or unauthorized use, we may be required to file patent infringement claims, which can be expensive and time-consuming and divert the time and attention of our management and scientific personnel. Our pending patent applications cannot be enforced against third parties practicing the technology claimed in such applications unless and until a patent issues from such applications. In addition, in an infringement proceeding or a declaratory judgment action, a court may decide that one or more of our patents is not valid or is unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation or defense proceeding could put one or more of our patents at risk of being invalidated, held unenforceable, or interpreted narrowly and could put our patent applications at risk of not issuing. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business.

Interference or derivation proceedings provoked by third parties or brought by the USPTO may be necessary to determine the priority of inventions with respect to, or the correct inventorship of, our patents or patent applications or those of our licensors. An unfavorable outcome could result in a loss of our current patent rights and could require us to cease using the related technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms. Litigation, interference, derivation or other proceedings may result in a decision adverse to our interests and, even if we are successful, may result in substantial costs and distract our management and other employees.

Even if we establish infringement, the court may decide not to grant an injunction against further infringing activity and instead award only monetary damages, which may or may not be an adequate remedy. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock.

Changes in U.S. patent law could diminish the value of patents in general, thereby impairing our ability to protect our products.

As is the case with other biopharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biopharmaceutical industry involves, both technological and legal complexity, and is therefore costly, time-consuming, and inherently uncertain. Changes in either the patent laws or interpretation of the patent laws in the United States could increase the uncertainties and costs, and may diminish our ability to protect our inventions, obtain, maintain, and enforce our intellectual

property rights and, more generally, could affect the value of our intellectual property or narrow the scope of our owned and licensed patents. Recent patent reform legislation in the United States and other countries, including the Leahy-Smith America Invents Act, or the Leahy-Smith Act, signed into law on September 16, 2011, could increase those uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents. The Leahy-Smith Act includes a number of significant changes to U.S. patent law. These include provisions that affect the way patent applications are prosecuted, redefine prior art and provide more efficient and cost-effective avenues for competitors to challenge the validity of patents. These include allowing third-party submission of prior art to the USPTO during patent prosecution and additional procedures to attack the validity of a patent by USPTO administered post-grant proceedings, including post-grant review, *inter partes* review, and derivation proceedings. After March 2013, under the Leahy-Smith Act, the United States transitioned to a first inventor to file system in which, assuming that the other statutory requirements are met, the first inventor to file a patent application will be entitled to the patent on an invention regardless of whether a third-party was the first to invent the claimed invention. A third party that files a patent application in the USPTO after March 2013, but before we file an application covering the same invention, could therefore be awarded a patent covering an invention of ours even if we had made the invention before it was made by such third party. This will require us to be cognizant going forward of the time from invention to filing of a patent application. Since patent applications in the United States and most other countries are confidential for a period of time after filing or until issuance, we cannot be certain that we or our licensors were the first to either (i) file any patent application related to our product candidates and other proprietary technologies we may develop or (ii) invent any of the inventions claimed in our or our licensor's patents or patent applications. Even where we have a valid and enforceable patent, we may not be able to exclude others from practicing the claimed invention where the other party can show that they used the invention in commerce before our filing date or the other party benefits from a compulsory license. However, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

Recent U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents once obtained. Depending on decisions by Congress, the federal courts, the USPTO and the relevant law-making bodies in other countries, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future. For example, in the 2013 case *Assoc. for Molecular Pathology v. Myriad Genetics, Inc.*, the U.S. Supreme Court held that certain claims to naturally-occurring substances are not patentable. Although we do not believe that any of the patents owned or licensed by us will be found invalid based on this decision, we cannot predict how future decisions by Congress, the federal courts or the USPTO may impact the value of our patents.

We may be subject to claims that our employees, consultants, or independent contractors have wrongfully used or disclosed confidential information of third parties.

We have received confidential and proprietary information from third parties. In addition, we employ individuals who were previously employed at other biotechnology or pharmaceutical companies. We may be subject to claims that we or our employees, consultants, or independent contractors have inadvertently or otherwise used or disclosed confidential information of these third parties or our employees' former employers, or that we caused an employee to breach the terms of his or her non-competition or non-solicitation agreement. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial cost and be a distraction to our management and employees. If our defenses to these claims fail, in addition to requiring us to pay monetary damages, a court could prohibit us from using technologies or features that are essential to our product candidates, if such technologies or features are found to incorporate or be derived from the trade secrets or other proprietary information of the former

employers. Moreover, any such litigation or the threat thereof may adversely affect our reputation, our ability to form strategic alliances or sublicense our rights to collaborators, engage with scientific advisors or hire employees or consultants, each of which would have an adverse effect on our business, results of operations and financial condition. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management.

Our stock price may be volatile or may decline regardless of our operating performance, resulting in substantial losses for investors.

The market price of our common stock may be highly volatile and may fluctuate substantially as a result of a variety of factors, some of which are related in complex ways. The market price of our common stock may fluctuate significantly in response to numerous factors, many of which are beyond our control, including the factors listed below and other factors describe in this "Risk Factors" section:

- the commencement, enrollment, or results of current and future preclinical studies and clinical trials and trials we may conduct, or changes in the development status of our product candidates;
- any delay in our regulatory filings for our product candidates and any adverse development or perceived adverse development with respect to the applicable regulatory authority's review of such filings, including, without limitation, the issuance by the FDA of a "refusal to file" letter or a request for additional information;
- adverse results or delays in clinical trials;
- our decision to initiate a preclinical study or clinical trial, not to initiate a preclinical study or clinical trial or to terminate an existing preclinical study or clinical trial;
- adverse actions taken by regulatory agencies with respect to our preclinical studies or clinical trials, manufacturing supply chain or sales and marketing activities, including failure to receive regulatory approval of our product candidates;
- changes in laws or regulations, including, but not limited to, preclinical study or clinical trial requirements for approvals;
- any adverse changes to our relationship with manufacturers or suppliers;
- manufacturing, supply or distribution shortages;
- our failure to commercialize our product candidates;
- changes in the structure of healthcare payment systems;
- additions or departures of key scientific or management personnel;
- unanticipated serious safety concerns related to the use of our product candidates;
- disputes or other developments relating to proprietary rights, including patents, litigation matters, and our ability to obtain patent protection for our technologies;
- variations in our results of operations;
- our cash position;
- our failure to meet the estimates and projections of the investment community or that we may otherwise provide to the public;
- publication of research reports about us or our industry, or *in vivo* and *ex vivo* cell engineering products in particular, or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- announcements made by us or our competitors of new product and service offerings, acquisitions, strategic relationships, joint ventures, or capital commitments;

- our inability to establish collaborations, if needed;
- our ability to effectively manage our growth;
- the size and growth of our initial target markets;
- changes in the market valuations of similar companies;
- press reports, whether or not true, about our business;
- sales or perceived potential sales of our common stock by us or our stockholders in the future;
- overall fluctuations in the equity markets;
- ineffectiveness of our internal controls;
- changes in accounting practices or principles;
- changes or developments in the global regulatory environment;
- litigation involving us, our industry or both, or investigations by regulators into our operations or those of our competitors;
- general political and economic conditions; and
- other events or factors, many of which are beyond our control.

In addition, the stock market in general and biopharmaceutical companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may negatively affect the market price of our common stock, regardless of our actual operating performance. If the market price of our common stock after this offering does not exceed the initial public offering price, you may not realize any return on, and may lose some or all of, your investment.

Our quarterly operating results may fluctuate significantly or may fall below the expectations of investors or securities analysts, each of which may cause our stock price to fluctuate or decline.

We expect our operating results to be subject to quarterly fluctuations. Our net loss and other operating results will be affected by numerous factors, including:

- timing and variations in the level of expense related to the current or future development of our programs;
- timing and status of enrollment for our clinical trials;
- impacts from the COVID-19 pandemic on us or third parties with which we engage;
- results of clinical trials, or the addition or termination of clinical trials or funding support by us or potential future partners;
- our execution of any collaboration, licensing or similar arrangements, and the timing of payments we may make or receive under potential future arrangements or the termination or modification of any such potential future arrangements;
- any intellectual property infringement, misappropriation or violation lawsuit or opposition, interference or cancellation proceeding in which we may become involved;
- additions and departures of key personnel;
- strategic decisions by us or our competitors, such as acquisitions, divestitures, spin-offs, joint ventures, strategic investments or changes in business strategy;

- if any product candidate we may develop receive regulatory approval, the timing and terms of such approval and market acceptance and demand for such product candidates;
- the timing and cost to establish a sales, marketing and distribution infrastructure to commercialize any products for which we may obtain marketing approval and intend to commercialize on our own or jointly with current or future collaborators;
- regulatory developments affecting current or future product candidates or those of our competitors;
- the amount of expense or gain associated with the change in value of the success payments and contingent consideration; and
- changes in general market and economic conditions.

If our quarterly operating results fall below the expectations of investors or securities analysts, the price of our common stock could decline substantially. Furthermore, any quarterly fluctuations in our operating results may, in turn, cause the price of our stock to fluctuate substantially. We believe that quarterly comparisons of our financial results are not necessarily meaningful and should not be relied upon as an indication of our future performance.

We could be subject to securities class action litigation.

In the past, securities class action litigation has often been instituted against companies following periods of volatility in the market price of a company's securities. This type of litigation, if instituted, could result in substantial costs and a diversion of management's attention and resources, which would harm our business, operating results, or financial condition. Additionally, the dramatic increase in the cost of directors' and officers' liability insurance may cause us to opt for lower overall policy limits or to forgo insurance that we may otherwise rely on to cover significant defense costs, settlements, and damages awarded to plaintiffs.

Our management team has broad discretion to use the net proceeds from this offering and its investment of these proceeds may not yield a favorable return. They may invest the net proceeds from this offering in ways with which investors disagree.

Our management will have broad discretion over the use of net proceeds from this offering, and could spend the net proceeds in ways our stockholders may not agree with or that do not yield a favorable return, if at all. If we do not invest or apply the net proceeds from this offering in ways that improve our operating results, we may fail to achieve expected financial results, which could cause our stock price to decline. For additional details see the section titled "Use of Proceeds."

If securities or industry analysts either do not publish research about us or publish inaccurate or unfavorable research about us, our business or our market, or if they change their recommendations regarding our common stock adversely, the trading price or trading volume of our common stock could decline.

The trading market for our common stock will be influenced in part by the research and reports that securities or industry analysts may publish about us, our business, our market, or our competitors. If one or more of these analysts initiate research with an unfavorable rating or downgrade our common stock, provide a more favorable recommendation about our competitors or publish inaccurate or unfavorable research about our business, our common stock price would likely decline. If any analyst who may cover us were to cease coverage of us or fail to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause the trading price or trading volume of our common stock to decline.

We are an emerging growth company, and any decision on our part to comply only with certain reduced reporting and disclosure requirements applicable to emerging growth companies could make our common stock less attractive to investors.

We are an "emerging growth company" as defined in the JOBS Act and, for as long as we continue to be an emerging growth company, we may choose to take advantage of exemptions from various reporting requirements applicable to other public companies but not to emerging growth companies, including:

- not being required to have our independent registered public accounting firm audit our internal control over financial reporting under Section 404 of the Sarbanes-Oxley Act;
- reduced disclosure obligations regarding executive compensation in our periodic reports and annual report on Form 10-K; and
- exemptions from the requirements of holding non-binding advisory votes on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We could be an emerging growth company for up to five years following the completion of our initial public offering. Our status as an emerging growth company will end as soon as any of the following takes place:

- the last day of the fiscal year in which we have more than $1.07 billion in annual revenue;
- the date we qualify as a "large accelerated filer," with at least $700 million of equity securities held by non-affiliates;
- the date on which we have issued, in any three-year period, more than $1.0 billion in non-convertible debt securities; or
- the last day of the fiscal year ending after the fifth anniversary of the completion of our initial public offering.

We cannot predict if investors will find our common stock less attractive if we choose to rely on any of the exemptions afforded to emerging growth companies. If some investors find our common stock less attractive because we rely on any of these exemptions, there may be a less active trading market for our common stock and the market price of our common stock may be more volatile.

Under the JOBS Act, emerging growth companies can also delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have elected to use this extended transition period for any new or revised accounting standards during the period in which we remain an emerging growth company (or we affirmatively and irrevocably opt out of the extended transition period); however, we may adopt certain new or revised accounting standards early. As a result, these financial statements may not be comparable to companies that comply with the new or revised accounting pronouncements as of public company effective dates.

The requirements of being a public company may strain our resources, result in more litigation, and divert management's attention.

As a public company, we will be subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, the listing requirements of Nasdaq, and other applicable securities rules and regulations. Complying with these rules and regulations has increased and will increase our legal and financial compliance costs, make some activities more difficult, time consuming or costly, and increase demand on our systems and resources. The Exchange Act requires, among other things, that we file annual, quarterly, and current reports with respect to our business and operating results. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. We are required to disclose changes made in our internal control and procedures on a quarterly basis. In order to maintain and, if required, improve our

disclosure controls and procedures and internal control over financial reporting to meet this standard, significant resources and management oversight may be required. As a result, management's attention may be diverted from other business concerns, which could adversely affect our business and operating results. We may also need to hire additional employees or engage outside consultants to comply with these requirements, which will increase our costs and expenses.

In addition, changing laws, regulations, and standards relating to corporate governance and public disclosure are creating uncertainty for public companies, increasing legal and financial compliance costs, and making some activities more time consuming. These laws, regulations, and standards are subject to varying interpretations, in many cases due to their lack of specificity and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. We intend to invest resources to comply with evolving laws, regulations, and standards, and this investment may result in increased general and administrative expenses and a diversion of management's time and attention from revenue-generating activities to compliance activities. If our efforts to comply with new laws, regulations, and standards differ from the activities intended by regulatory or governing bodies due to ambiguities related to their application and practice, regulatory authorities may initiate legal proceedings against us and our business may be adversely affected.

These new rules and regulations may make it more expensive for us to obtain director and officer liability insurance and, in the future, we may be required to accept reduced coverage or incur substantially higher costs to obtain coverage. These factors could also make it more difficult for us to attract and retain qualified members of our Board, particularly to serve on our audit committee and compensation committee, and qualified executive officers.

By disclosing information in this prospectus and in future filings required of a public company, our business and financial condition will become more visible, which we believe may result in threatened or actual litigation, including by competitors and other third parties. If those claims are successful, our business could be seriously harmed. Even if the claims do not result in litigation or are resolved in our favor, the time and resources needed to resolve them could divert our management's resources and seriously harm our business.

If we fail to maintain proper and effective internal controls over financial reporting our ability to produce accurate and timely financial statements could be impaired.

Pursuant to Section 404 of the Sarbanes-Oxley Act, our management will be required to report upon the effectiveness of our internal control over financial reporting beginning with the annual report for our fiscal year ending December 31, 2021. When we lose our status as an "emerging growth company" and become an "accelerated filer" or a "large accelerated filer," our independent registered public accounting firm will be required to attest to the effectiveness of our internal control over financial reporting. The rules governing the standards that must be met for management to assess our internal control over financial reporting are complex and require significant documentation, testing, and possible remediation. To comply with the requirements of being a reporting company under the Securities Exchange Act of 1934, as amended (the Exchange Act), we will need to implement additional financial and management controls, reporting systems, procedures, and hire additional accounting and finance staff.

We cannot assure you that there will not be material weaknesses or significant deficiencies in our internal control over financial reporting in the future. Any failure to maintain internal control over financial reporting could severely inhibit our ability to accurately report our financial condition, results of operations, or cash flows. If we are unable to conclude that our internal control over financial reporting is effective, or if our independent registered public accounting firm determines we have a material weakness or significant deficiency in our internal control over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports, the market price of our common stock could decline, and we could be subject to sanctions or

investigations by Nasdaq, the SEC, or other regulatory authorities. Failure to remedy any material weakness in our internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict our future access to the capital markets.

Our disclosure controls and procedures may not prevent or detect all errors or acts of fraud.

Upon the completion of this offering, we will become subject to the periodic reporting requirements of the Exchange Act. We must design our disclosure controls and procedures to reasonably assure that information we must disclose in reports we file or submit under the Exchange Act is accumulated and communicated to management, and recorded, processed, summarized, and reported within the time periods specified in the rules and forms of the SEC. We believe that any disclosure controls and procedures or internal controls and procedures, no matter how well-conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. For example, our directors or executive officers could inadvertently fail to disclose a new relationship or arrangement causing us to fail to make a required related party transaction disclosure. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur and not be detected.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements, particularly in the sections titled "Prospectus Summary," "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations," and "Business." In some cases, you can identify these statements by forward-looking words such as "aim," "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "might," "plan," "potential," "predict," "should," "would," or "will," the negative of these terms, and other comparable terminology. These forward-looking statements, which are subject to risks, include, but are not limited to, statements about:

- our expectations regarding the potential market size and size of the potential patient populations for our product candidates and any future product candidates, if approved for commercial use;
- our clinical and regulatory development plans;
- our expectations with regard to the results of our clinical studies, preclinical studies and research and development programs, including the timing and availability of data from such studies;
- the timing of commencement of future nonclinical studies and clinical trials and research and development programs;
- our ability to acquire, discover, develop and advance product candidates into, and successfully complete, clinical trials;
- our intentions and our ability to establish collaborations and/or partnerships;
- the timing or likelihood of regulatory filings and approvals for our product candidates;
- our commercialization, marketing and manufacturing, including the buildout of our own manufacturing facility, capabilities and expectations;
- impact from future regulatory, judicial, and legislative changes or developments in the United States and foreign countries;
- our intentions with respect to the commercialization of our product candidates;
- the pricing and reimbursement of our product candidates, if approved;
- the potential effects of public health crises, such as the COVID-19 pandemic, on our preclinical and clinical programs and business;
- our expectations regarding the impact of the COVID-19 pandemic on our business;
- the implementation of our business model and strategic plans for our business and product candidates, including additional indications for which we may pursue;
- our ability to effectively manage our growth, including our ability to retain and recruit personnel, and maintain our culture;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our product candidates, including the projected terms of patent protection;
- estimates of our expenses, future revenue, capital requirements, our needs for additional financing and our ability to obtain additional capital;
- our expected use of proceeds from this offering;
- the performance of our third-party suppliers and manufacturers;
- our future financial performance;
- our expectations regarding the time during which we will be an emerging growth company under the JOBS Act; and
- developments and projections relating to our competitors and our industry, including competing products.

We have based these forward-looking statements largely on our current expectations, estimates, forecasts and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. In light of the significant uncertainties in these forward-looking statements, you should not rely upon forward-looking statements as predictions of future events. Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur at all. You should refer to the section titled “Risk Factors” for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. Except as required by law, we undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise. The Private Securities Litigation Reform Act of 1995 and Section 27A of the Securities Act do not protect any forward-looking statements that we make in connection with this offering.

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in this prospectus by these cautionary statements.

INDUSTRY AND MARKET DATA

Unless otherwise indicated, information contained in this prospectus concerning our industry and the markets in which we operate, including our general expectations and market position, market opportunity, and market size, is based on information from various sources on assumptions that we have made that are based on such information and other, similar sources and on our knowledge of, and expectations about, the markets for our products. In some cases, we do not expressly refer to the sources from which this data is derived. This information involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. While we believe the market position, market opportunity, and market size information included in this prospectus is generally reliable, such information is inherently imprecise. In addition, projections, assumptions, and estimates of our future performance and the future performance of the industry in which we operate is necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in “Risk Factors” and elsewhere in this prospectus. These and other factors could cause results to differ materially from those expressed in the estimates made by independent third parties and by us.

USE OF PROCEEDS

We estimate that the net proceeds from this offering will be approximately $ million, (or approximately $ million if the underwriters exercise their over-allotment option to purchase additional shares in full), assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Each $1.00 increase or decrease in the initial public offering price per share would increase or decrease, as applicable, our net proceeds, after deducting estimated underwriting discounts and commissions, by $ million (assuming no exercise of the underwriters' option to purchase additional shares). Each increase or decrease of 1.0 million shares in the number of shares offered by us would increase or decrease , as applicable, our net proceeds by $ million, assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The principal purposes of this offering are to obtain additional capital to fund our operations, create a public market for our common stock, facilitate our future access to the public equity markets, and increase awareness of our company among potential partners.

We currently intend to use the net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities, as follows:

- approximately $ million to fund the ongoing development of our *in vivo* cell engineering platform and product candidates, which we anticipate will allow us to advance at least *in vivo* product candidates to potential IND filings;
- approximately $ million to fund the ongoing development of our *ex vivo* cell engineering platform and product candidates, which we anticipate will allow us to advance at least ex *vivo* product candidates to potential IND filings;
- approximately $ million to continue developing manufacturing capabilities for our product candidates;
- approximately $ million to fund research and development efforts focused on advancing and broadening the scope of our *ex vivo* and *in vivo* cell engineering platforms; and
- the remainder for working capital and other general corporate purposes.

We may also use a portion of the net proceeds to in-license, acquire, or invest in, complementary technologies, assets, or intellectual property. We periodically evaluate strategic opportunities; however, we have no current commitments to enter into any such acquisitions or make any such investments.

Based on our current operating plan, we believe that our existing cash, cash equivalents and marketable securities, together with the net proceeds from this offering, will be sufficient to meet our working capital and capital expenditure needs for at least the next months. Our expected use of net proceeds from this offering represents our current intentions based upon present plans and business conditions. The net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities, will not be sufficient to fund any of our product candidates through regulatory approval, and we anticipate needing to raise additional capital to complete the development of and commercialize our product candidates. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering, or the amounts that we will actually spend on the uses set forth above. The amounts and timing of any expenditures will vary depending on numerous factors, including the progress of our ongoing and planned clinical studies, the amount of cash used by our operations, competitive and scientific developments, the rate of

growth, if any, of our business, and other factors described in the section titled “Risk Factors.” Accordingly, our management will have significant discretion and flexibility in applying the net proceeds from this offering, and investors will be relying on the judgment of our management regarding the application of these net proceeds. Due to the many inherent uncertainties in the development of our product candidates, the amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress of our research and development, our ability to obtain additional financing, the cost and results of our preclinical activities, the timing of clinical studies we may commence in the future, the timing of regulatory submissions, any collaborations that we may enter into with third parties for our product candidates or strategic opportunities that become available to us, and any unforeseen cash needs.

Pending the uses described above, we intend to invest the net proceeds from this offering in interest-bearing obligations, investment-grade instruments, certificates of deposit, or direct or guaranteed obligations of the U.S. government.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock and do not anticipate paying any cash dividends in the foreseeable future. We currently anticipate that we will retain all available funds for use in the operation and expansion of our business. Any future determination to pay dividends on our common stock will be made at the discretion of our board of directors and will depend upon, among other factors, our financial condition, results from operations, current and anticipated cash needs, plans for expansion, and other factors that our board of directors may deem relevant.

CAPITALIZATION

The following table sets forth our cash, cash equivalents, and marketable securities, and total capitalization as of September 30, 2020:

- on an actual basis;
- on a pro forma basis to reflect the following immediately prior to the completion of this offering: (i) the filing and effectiveness of our amended and restated certificate of incorporation, which will be in effect immediately prior to the completion of this offering, and (ii) the automatic conversion of all of our outstanding convertible preferred stock into and aggregate of 536,450,939 shares of our common stock immediately prior to the completion of the offering; and
- on a pro forma as adjusted basis to reflect: (i) the pro forma adjustments set forth above, and (ii) the issuance and sale of shares of common stock by us in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

This table should be read in conjunction with the sections titled "Selected Consolidated Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," and our unaudited condensed consolidated financial statements and related notes included elsewhere in this prospectus.

	September 30, 2020		
	Actual	Pro Forma	Pro Forma as Adjusted(1)
	(in thousands, except share and per share amounts)		
Cash, cash equivalents, and marketable securities	$ 459,070	$ 459,070	$
Convertible preferred stock, $0.0001 par value per share; 537,786,206 shares authorized, 536,450,939 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	$ 852,897	$ —	$ —
Stockholders' (deficit) equity:			
Preferred stock, $0.0001 par value per share; no shares authorized, issued or outstanding, actual; shares, authorized, no shares issued and outstanding pro forma and pro forma as adjusted	—	—	—
Common stock, $0.0001 par value per share; 700,000,000 shares authorized(2), 57,001,580 shares issued and outstanding, actual(3); 700,000,000 shares authorized and 593,452,519 shares issued and outstanding, pro forma; 700,000,000 shares authorized and shares issued and outstanding, pro forma as adjusted	6	59	
Additional paid-in capital	5,026	857,870	
Accumulated other comprehensive income	55	55	
Accumulated deficit	(316,262)	(316,262)	
Total stockholders' (deficit) equity	(311,175)	541,722	
Total capitalization	$ 541,722	$ 541,722	$

(1) The pro forma as adjusted information discussed above is illustrative only and will depend on the actual initial offering price and other terms of this offering determined at pricing.
(2) In December 2020, we amended and restated our certificate of incorporation to increase our authorized capital stock to 707,000,000 shares.
(3) Does not include 47,806,730 shares of our unvested restricted shares of common stock.

Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, each of pro forma as adjusted cash, cash equivalents, and marketable securities, additional paid-in capital, total stockholders' equity and total capitalization by approximately $ million, assuming that the number of shares of common stock offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase or decrease of 1.0 million shares of common stock offered by us would increase or decrease, as applicable, each of pro forma as adjusted cash, cash equivalents, and marketable securities, additional paid-in capital, total stockholders'equity, and total capitalization by approximately $ million, assuming that the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters' exercise their over-allotment option to purchase additional shares of our common stock in full, our pro forma as adjusted cash, cash equivalents, and marketable securities, additional paid-in capital, total stockholders' equity, total capitalization, and shares of common stock outstanding as of September 30, 2020 would be $ million, $ million, $ million, $ million, and shares, respectively.

The number of shares of our common stock to be outstanding after this offering on a pro forma and pro forma as adjusted basis is based on 593,452,519 shares of common stock outstanding as of September 30, 2020 (after giving effect to the automatic conversion of all of our shares of convertible preferred stock outstanding as of September 30, 2020 into an aggregate of 536,450,939 shares of our common stock immediately prior to the completion of this offering) and excludes:

- 47,806,730 shares of our unvested common stock as of September 30, 2020;
- 38,709,333 shares of common stock issuable upon exercise of stock options outstanding as of September 30, 2020, with a weighted-average exercise price of $0.58 per share;
- 23,410,081 shares of common stock issuable upon exercise of stock options granted subsequent to September 30, 2020, with a weighted-average exercise price of $1.95 per share;
- 1,302,718 restricted stock units subject to vesting conditions and, as of September 30, 2020, (of which 585,039 shares have satisfied the vesting conditions), and will become outstanding six months after the effective date of the completion of this offering;
- 1,426,521 shares reserved for future issuance under our 2018 Equity Incentive Plan, as of September 30, 2020;
- 1,783,974 shares reserved for future issuance under our 2018 Equity Incentive Plan, which was increased subsequent to September 30, 2020;
- shares of our common stock reserved for future issuance under our 2021 Incentive Award Plan (the 2021 Plan), which will become effective on the date immediately prior to the date our registration statement relating to this offering becomes effective, as well as any future increases in the number of shares of common stock reserved for issuance under the 2021 Plan; and
- shares of our common stock reserved for future issuance under our Employee Stock Purchase Plan (the ESPP), which will become effective on the date immediately prior to the date our registration statement relating to this offering becomes effective, as well as any future increases in the number of shares of common stock reserved for issuance under the ESPP.

DILUTION

If you purchase shares of our common stock in this offering, your ownership interest will be diluted to the extent of the difference between the initial public offering price per share of our common stock in this offering and the pro forma as adjusted net tangible book value per share of our common stock immediately after this offering.

As of September 30, 2020, our historical net tangible book value (deficit) was ($311.2) million, or ($2.97) per share of our common stock, based on 104,808,310 shares of common stock issued and outstanding as of such date (including 47,806,730 shares of unvested restricted stock). Our historical net tangible book value per share represents tangible assets, less liabilities and convertible preferred stock, divided by the aggregate number of shares of common stock outstanding as of September 30, 2020.

Our pro forma net tangible book value as of September 30, 2020 was $541.7 million, or $0.84 per share of common stock. Pro forma net tangible book value per share represents tangible assets, less liabilities, divided by the aggregate number of shares of common stock outstanding, after giving effect to the automatic conversion of all of our outstanding convertible preferred stock into 536,450,939 shares of our common stock.

After giving further effect to the sale by us of shares of common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of September 30, 2020 would have been $ million or $ per share. This represents an immediate increase in pro forma net tangible book value to existing stockholders of $ per share and an immediate dilution in pro forma net tangible book value to new investors of $ per share. Dilution per share represents the difference between the price per share to be paid by new investors for the shares of common stock sold in this offering and the pro forma as adjusted net tangible book value per share immediately after this offering.

The following table illustrates this dilution on a per share basis:

Assumed initial public offering price per share		$
Historical net tangible book deficit per share as of September 30, 2020	$(2.97)	
Pro forma increase in net tangible book value per share as of September 30, 2020 attributable to the pro forma transactions described above	3.81	
Pro forma net tangible book value per share as of September 30, 2020	0.84	
Increase in pro forma net tangible book value per share attributable to new investors participating in this offering		
Pro forma as adjusted net tangible book value per share after this offering		
Dilution per share to new investors participating in this offering		$

Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as applicable our pro forma as adjusted net tangible book value per share after this offering by $ per share and the dilution in pro forma per share to investors participating in this offering by $ per share, assuming that the number of shares of common stock offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each 1.0 million share increase or decrease in the number of shares offered by us would increase or decrease, as applicable our pro forma as adjusted net tangible book value per share after this offering by $ per share and the dilution in pro forma as adjusted net tangible book value per share to investors participating in this offering by $ per share, assuming the initial public offering price of $ per

share remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters exercise their over-allotment option to purchase additional shares of our common stock in full, the pro forma as adjusted net tangible book value per share of our common stock after this offering would be $ per share, and the dilution in pro forma net tangible book value per share to investors participating in this offering would be $ per share of common stock.

The following table sets forth, on the pro forma basis described above, as of September 30, 2020, the number of shares of common stock purchased from us, the total consideration paid, or to be paid, and the weighted-average price per share paid, or to be paid, by existing stockholders and by the new investors, at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, before deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us:

	Shares Purchased		Total Consideration		Weighted-Average Price Per Share
	Number	Percent	Amount(1)	Percent	
	(in thousands, except share, per share, and percent data)				
Existing stockholders	641,259,249	%	$853,765	%	$ 1.33
New investors					$
Total		100.0%	$	100.0%	

(1) Includes non-cash consideration of $148.3 million.

Each $1.00 increase or decrease in the assumed initial public offering price per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease, as applicable, the total consideration paid by new investors, total consideration paid by all stockholders, and the weighted-average price per share paid by all stockholders by approximately $ million, $ million, and $, respectively, assuming that the number of shares of common stock offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each 1.0 million share increase or decrease in the number of shares offered by us would increase or decrease, as applicable, the total consideration paid by new investors, total consideration paid by all stockholders, and the weighted-average price per share paid by all stockholders by approximately $ million, $ million, and $, respectively, assuming the initial public offering price of $ per share remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The foregoing tables assume no exercise of the underwriters' option to purchase additional shares or of outstanding stock options after September 30, 2020. If the underwriters' exercise their over-allotment option to purchase additional shares in full, the number of shares of common stock held by our existing stockholders will represent approximately % of the total number of shares of our common stock outstanding after this offering and the number of shares held by new investors will represent approximately % of the total number of shares of our common stock outstanding after this offering.

In addition, to the extent any outstanding stock options or other equity awards are exercised, RSUs are settled, or we issue additional equity or convertible securities in the future, investors participating in this offering will experience further dilution.

The foregoing tables and calculations (other than historical net tangible book value) are based on 641,259,249 shares of common stock outstanding as of September 30, 2020 ((i) including 47,806,730 shares of unvested restricted common stock, and (ii) after giving effect to the automatic conversion of all of our shares of

convertible preferred stock outstanding as of September 30, 2020 into an aggregate of 536,450,939 shares of our common stock immediately prior to the completion of this offering) and excludes:

- 38,709,333 shares of common stock issuable upon exercise of stock options outstanding as of September 30, 2020, with a weighted-average exercise price of $0.58 per share;
- 23,410,081 shares of common stock issuable upon exercise of stock options granted subsequent to September 30, 2020, with a weighted-average exercise price of $1.95 per share;
- 1,302,718 restricted stock units subject to vesting conditions and, as of September 30, 2020, (of which 585,039 shares have satisfied the vesting conditions), and will become outstanding six months after the effective date of the completion of this offering;
- 1,426,521 shares reserved for future issuance under our 2018 Equity Incentive Plan, as of September 30, 2020;
- 1,783,974 shares reserved for future issuance under our 2018 Equity Incentive Plan, which was increased subsequent to September 30, 2020;
- shares of our common stock reserved for future issuance under our 2021 Incentive Award Plan (the 2021 Plan), which will become effective on the date immediately prior to the date our registration statement relating to this offering becomes effective, as well as any future increases in the number of shares of common stock reserved for issuance under the 2021 Plan; and
- shares of our common stock reserved for future issuance under our Employee Stock Purchase Plan (the ESPP), which will become effective on the date immediately prior to the date our registration statement relating to this offering becomes effective, as well as any future increases in the number of shares of common stock reserved for issuance under the ESPP.

SELECTED CONSOLIDATED FINANCIAL DATA

The following tables set forth our selected consolidated financial data for the periods and as of the dates indicated. We have derived the selected consolidated statements of operations data for the period from July 13, 2018 (inception) to December 31, 2018 and the year ended December 31, 2019, except for pro forma amounts, and the selected consolidated balance sheet data as of December 31, 2018 and 2019 from our audited consolidated financial statements and related notes included elsewhere in this prospectus. We have derived the selected consolidated statements of operations data for the nine months ended September 30, 2019 and 2020, except for pro forma amounts, and the selected consolidated balance sheet data as of September 30, 2020, except for pro forma amounts, from our unaudited condensed consolidated financial statements and related notes included elsewhere in this prospectus. Our unaudited condensed consolidated financial statements were prepared on a basis consistent with our audited consolidated financial statements and include, in our opinion, all adjustments of a normal and recurring nature that are necessary for the fair statement of the financial information set forth in those statements included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results that may be expected in the future and our interim results are not necessarily indicative of the results that may be expected for the full year. You should read the following consolidated financial data together with our audited consolidated financial statements and our unaudited condensed consolidated financial statements and the related notes included elsewhere in this prospectus and the information in the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	Period from July 13, 2018 (Inception) to December 31, 2018	Year Ended December 31, 2019	Nine Months Ended September 30,	
			2019	2020
	(in thousands, except share and per share data)			
Consolidated Statements of Operations Data:				
Operating expenses:				
Research and development(1)	$ 9,040	$ 119,375	$ 80,101	$ 153,762
General and administrative	4,206	21,777	15,959	19,063
Total operating expenses	13,246	141,152	96,060	172,825
Loss from operations	(13,246)	(141,152)	(96,060)	(172,825)
Interest income, net	—	2,856	2,175	622
Other (expense) income, net	(1)	(29)	(52)	68
Loss before income taxes	(13,247)	(138,325)	(93,937)	(172,135)
Benefit from income taxes	—	7,547	6,204	—
Net loss	$ (13,247)	$ (130,778)	$ (87,733)	$ (172,135)
Net loss per share, basic and diluted(2)	$ (3.48)	$ (6.67)	$ (6.06)	$ (3.51)
Weighted-average shares outstanding used in computing net loss per share, basic and diluted(2)	3,808,344	19,610,571	14,480,086	48,997,930
Pro forma net loss per share, basic and diluted (unaudited)(3)		$ (0.33)		$ (0.33)
Weighted-average shares outstanding used in computing pro forma net loss per share, basic and diluted (unaudited)(3)		397,200,251		521,067,049

(1) Research and development expense for the year ended December 31, 2019 and the nine months ended September 30, 2019 and 2020 included non-cash expense of $1.9 million, $1.4 million, and $40.6 million for the success payment liabilities, respectively, and $17.9 million, $15.6 million, and $16.7 million for contingent consideration, respectively. Research and development expense for the year ended December 31, 2019 and the nine months ended September 30, 2020 included non-cash expense of $11.9 million and $0.4

million, respectively, in connection with license agreements. See Note 3, Acquisitions, Note 5, License and collaboration agreements, and Note 7, Fair value measurements to each of our audited consolidated financial statements and our unaudited condensed consolidated financial statements included elsewhere in this prospectus, and the subsection titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" for more detail on the success payments and contingent consideration.

(2) See Note 15, Net loss per share to each of our audited consolidated financial statements and our unaudited condensed consolidated financial statements included elsewhere in this prospectus for an explanation of the calculations of our basic and diluted net loss per share, and the weighted-average number of shares outstanding used in the computation of the per share amounts.

(3) See the subsection titled "Management's Discussion and Analysis of Financial Condition and Results of Operations—Unaudited Pro Forma Information" for an explanation of the calculations of our basic and diluted pro forma net loss per share, and the weighted-average number of shares outstanding used in the computation of the per share amounts.

	December 31,		September 30,
	2018	2019	2020
	(in thousands)		
Consolidated Balance Sheet Data:			
Cash, cash equivalents, and marketable securities	$ 30,630	$ 138,982	$ 459,070
Working capital(1)	30,811	124,434	429,031
Total assets	34,333	415,698	767,715
Convertible preferred stock	45,721	417,359	852,897
Accumulated deficit	(13,247)	(144,127)	(316,262)
Total stockholders' deficit	(13,188)	(142,542)	(311,175)

(1) We define working capital as current assets less current liabilities. See our consolidated financial statements and unaudited condensed consolidated financial statements and the related notes included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with the section titled "Selected Consolidated Financial Data," and our audited consolidated financial statements and unaudited condensed consolidated financial statements and the related notes included elsewhere in this prospectus. This discussion and analysis and other parts of this prospectus contain forward-looking statements based upon current beliefs, plans and expectations related to future events and our future financial performance that involve risks, uncertainties and assumptions, such as statements regarding our intentions, plans, objectives and expectations for our business. Our actual results and the timing of selected events could differ materially from those described in or implied by these forward-looking statements as a result of several factors, including those set forth in the section titled "Risk Factors." See also the section titled "Special Note Regarding Forward-Looking Statements."

Overview

We were founded on the belief that engineered cells will be one of the most important transformations in medicine over the next several decades. The burden of diseases that can be addressed at their root cause through engineered cells is significant. We view engineered cells as having the potential to be as therapeutically disruptive as biologics to clinical practice. Our long-term aspirations are to be able to control or modify any gene in the body, to replace any cell that is damaged or missing, and to markedly improve access to cellular and gene-based medicines. We have brought together an experienced group of scientists, engineers, and company builders and combined them with the necessary technologies to move this vision forward. We are developing *in vivo* and *ex vivo* cell engineering platforms to revolutionize treatment across a broad array of therapeutic areas with unmet treatment needs, including oncology, diabetes, central nervous system, cardiovascular diseases, and genetic disorders, among others. While our current product candidates are all in preclinical development, our goal is to file multiple investigational new drug applications (INDs) both in 2022 and 2023 .

The process of repairing and controlling genes in the body, referred to as gene therapy or *in vivo* cell engineering, requires *in vivo* delivery of a therapeutic payload and modification of the genome. Of these, we believe delivery of a therapeutic payload represents the greatest unmet need and is thus at the core of our strategic focus, with our ultimate goal being the delivery of any payload to any cell in a specific and repeatable way. Our initial effort is on cell-specific delivery and increasing the diversity and size of payloads. Using fusogen technology, we have shown in preclinical studies that we can specifically target numerous cell surface receptors that, when combined with delivery vehicles to form fusosomes, allow cell-specific delivery across multiple different cell types. We have initially chosen to focus this technology on delivering payloads to T cells, hepatocytes, and hematopoietic stem cells.

Frequently in disease, cells are damaged or missing entirely, and an effective therapy needs to replace the entire cell, an approach referred to as cell therapy or *ex vivo* cell engineering. A successful therapeutic requires an ability to manufacture cells at scale that engraft, function, and have the necessary persistence in the body. Of these, long-term persistence related to overcoming immunologic rejection of another person's cells has been the most challenging, which has led many to focus on autologous, or a patient's own, cells as the therapeutic source. However, autologous therapies require a complex process of harvesting cells from the patients, manipulating them outside the body, and returning them to the patient. Products utilizing this approach have had to manage significant challenges such as scalability, product variability, product quality, cost, patient accessibility, and a limited number of cell types being amenable to this approach. Given these limitations, rather than utilizing autologous cells to overcome immune rejection, we have invested in creating hypoimmune cells that can "hide" from the patient's immune system. We are striving to make therapies utilizing pluripotent stem cells with our hypoimmune genetic modifications as the starting material, which we then differentiate into a specific cell type, such as a pancreatic beta cell, before treating the patient. Additionally, for cell types for which effective differentiation protocols from a stem cell have not yet been developed, such as T cells, instead of starting from a

pluripotent stem cell, we can utilize an allogeneic cell, differentiated cells sourced from a donor, as the starting material to which we then apply our hypoimmune genetic modifications.

Our *in vivo* and *ex vivo* cell engineering platforms combined with early investment in manufacturing have the potential to treat a broad set of diseases and will require significant investment over the coming years to move them toward and then conduct clinical trials. We are in the early stages of development across a broad pipeline of product candidates, all of which are currently in the preclinical stage of development and are summarized below:

Our *ex vivo* and *in vivo* technology represents an aggregation of years of innovation and technology from multiple academic institutions and companies, including our fusogen technology acquired from Cobalt Biomedicines Inc. (Cobalt), our *ex vivo* cell engineering programs focused on replacing damaged cells in the heart and certain brain disorders acquired from Cytocardia Inc. (Cytocardia) and Oscine Corp. (Oscine), respectively, and hypoimmune technology licensed from the President and Fellows of Harvard College (Harvard) and The Regents of the University of California (UCSF), amongst others. See the subsections titled " —License and Collaboration Agreements" and " —Acquisitions" and Note 3, Acquisitions and Note 5, License and collaboration agreements to each of our audited consolidated financial statements and unaudited condensed consolidated financial statements included elsewhere in this prospectus.

We were incorporated in July 2018 and commenced operations thereafter. Our operations to date have included developing our *in vivo* and *ex vivo* cell engineering platforms, identifying and developing potential product candidates, executing preclinical studies, acquiring technology, organizing and staffing the company, business planning, establishing our intellectual property portfolio, raising capital, and providing general and administrative support for these operations. All of our programs are currently in the development stage, and we do not have any products approved for sale. Since our inception, we have incurred net losses each year. Our net losses were $13.2 million and $130.8 million for the period from July 13, 2018 (inception) to December 31, 2018 and for the year ended December 31, 2019, respectively, and $87.7 million and $172.1 million for the nine months ended September 30, 2019 and 2020, respectively. As of September 30, 2020, we had an accumulated deficit of $316.3 million. Our net losses resulted primarily from our research and development programs and, to a lesser extent, general and administrative costs associated with our operations.

To date, we have funded our operations from the issuance and sale of our convertible preferred stock and have not generated any revenues. From July 13, 2018 (inception) through September 30, 2020, we raised an

aggregate of $705.5 million in gross proceeds from the sales of our convertible preferred stock. Most recently, in June 2020, we closed our Series B convertible preferred stock financing and raised an aggregate of $435.6 million. As of September 30, 2020, we had cash, cash equivalents, and marketable securities of $459.1 million. Based on our current operating plan, we believe that our existing cash, cash equivalents, and marketable securities, together with the net proceeds from this offering, will be sufficient to meet our working capital and capital expenditure needs for at least the next months.

We anticipate that our expenses and operating losses will increase substantially over the foreseeable future. The expected increase in expenses will be driven in large part by our ongoing activities, if and as we:

- continue to advance our *in vivo* and *ex vivo* cell engineering platforms;
- continue preclinical development of our current and future product candidates and initiate additional preclinical studies;
- commence clinical studies of our current and future product candidates;
- establish our manufacturing capability, including developing our contract development and manufacturing relationships, and building our internal manufacturing facilities;
- acquire and license technologies aligned with our *in vivo* and *ex vivo* cell engineering platforms;
- seek regulatory approval of our current and future product candidates;
- expand our operational, financial, and management systems and increase personnel, including personnel to support our preclinical and clinical development, manufacturing, and commercialization efforts;
- continue to develop, grow, perfect, and defend our intellectual property portfolio; and
- incur additional legal, accounting, or other expenses in operating our business, including the additional costs associated with operating as a public company.

We are also investing early in building world class capabilities in key areas of manufacturing sciences and operations, including development of our *in vivo* and *ex vivo* cell engineering platforms, product characterization, and process analytics from the time candidates are in early research phases. Our investments also include scaled research solutions, scaled infrastructure, and novel technologies to improve efficiency, characterization, and scalability of manufacturing.

The global COVID-19 pandemic continues to evolve rapidly, and we will continue to monitor it closely. The extent of the impact of the COVID-19 pandemic on our business, operations, and clinical development timelines and plans remains uncertain and will depend on certain developments, including the duration and spread of the outbreak and its impact on our clinical trial enrollment, trial sites, CROs, contract manufacturing organizations, and other third parties with whom we do business, as well as its impact on regulatory authorities and our key scientific and management personnel. We have experienced modest delays in our discovery and development activities as a result of the COVID-19 pandemic, primarily due to temporary and partial shutdowns at certain of our CROs and academic institutions that have since resumed operations, and due to the Washington, California and Massachusetts stay-at-home orders where our operations are located. However, to the extent possible, we are conducting business as usual, with necessary or advisable modifications to employee travel and most of our non-laboratory employees working remotely. We will continue to actively monitor the situation related to COVID-19 and may take further actions that alter our operations, including those that may be required by federal, state, or local authorities, or that we determine are in the best interests of our employees and other third parties with whom we do business.

We anticipate that we will need to raise additional financing in the future to fund our operations, including the commercialization of any approved product candidates. Until such time, if ever, as we can generate

significant product revenue, we expect to finance our operations with our existing cash, cash equivalents, and marketable securities, the net proceeds from this offering, any future equity or debt financings, and upfront and milestone and royalties payments, if any, received under future licenses or collaborations. We may not be able to raise additional capital on terms acceptable to us or at all. If we are unable to raise additional capital when desired, our business, results of operations, and financial condition would be adversely affected.

License and Collaboration Agreements

Harvard

In March 2019, we entered into an exclusive license agreement with Harvard (the Harvard Agreement) to access certain intellectual property for the development of hypoimmune cells. Under this agreement, we paid $3.0 million in cash and issued 8,977,650 shares of our Series A-2 convertible preferred stock, valued at $1.00 per share, for total consideration of $12.0 million, which was recorded in research and development expense for the year ended December 31, 2019. Additionally, we agreed to pay Harvard $6.0 million in cash contingent upon the closing of our Series B convertible preferred stock financing. As of December 31, 2019, the estimated fair value of this contingent payment was $4.6 million and was recorded in research and development expense with a corresponding liability on our balance sheet. We closed the Series B convertible preferred stock financing in June 2020 and paid the $6.0 million contingent payment to Harvard. As a result, an additional $1.4 million was recorded in research and development expense for the nine months ended September 30, 2020.

Pursuant to the Harvard Agreement we may be required to make certain pre-specified development and regulatory milestone payments up to an aggregate of up to $76.0 million, which would double if we undergo a change of control. We do not expect to make any payments for the pre-specified development milestones under the Harvard Agreement upon an IPO or within one year of an IPO. Additionally, we may be required to make success payments (Harvard Success Payments) up to an aggregate of $175.0 million based on increases in the fair value of our Series A convertible preferred stock, or any security into which such stock has been converted or exchanged. The potential Harvard Success Payments are based on multiples of increased value ranging from 5x to 40x based on a comparison of the fair value of the Series A convertible preferred stock relative to its original $1.00 issuance price at pre-determined valuation measurement dates. The Harvard Success Payments can be achieved over a maximum of 12 years from the effective date of the agreement. The following table summarizes the potential success payments, which are payable in cash:

Multiple of Equity Value at Issuance	**5x**	**10x**	**20x**	**30x**	**40x**
Per share Series A convertible preferred stock price required for payment	$5.00	$10.00	$20.00	$30.00	$40.00
Success payment(s) (in millions)	$ 5.0	$ 15.0	$ 30.0	$ 50.0	$ 75.0

The valuation measurement dates are triggered by events which include: an equity financing prior to an IPO of more than $25.0 million, the one year anniversary of an IPO, and periodically thereafter, a merger, an asset sale, the sale of the majority of the shares held by Series A convertible preferred stockholders, and the last day of the term of the success payments. If a higher success payment tier is met at the same time a lower tier is met, both tiers will be owed. Any previous success payments made under the Harvard Agreement are credited against the success payment owed as of any valuation measurement date, so that Harvard does not receive multiple success payments in connection with the same threshold.

Our liability for the Harvard Success Payments is carried at fair value with the initial valuation and subsequent changes in value recognized in research and development expense. As of December 31, 2019 and September 30, 2020, the estimated fair value of the Harvard Success Payment liability was $1.9 million and $7.4 million, respectively. We recorded research and development expense of $1.9 million and $5.5 million for the year ended December 31, 2019 and the nine months ended September 30, 2020, respectively, in connection with the Harvard Success Payments.

The Regents of the University of California

In January 2019, we entered into an exclusive license agreement with UCSF (the UCSF Agreement) to access certain intellectual property for the development of immunoengineered pluripotent cells. Pursuant to this agreement, we paid $0.1 million in cash and issued 2,950,061 shares of our Series A-2 convertible preferred stock, valued at $1.00 per share, for total consideration of $3.1 million. The $3.1 million was recorded in research and development expense for year ended December 31, 2019. Under the agreement, we may be required to make certain pre-specified development milestone payments up to an aggregate of $22.4 million.

Oscine Corp.

In November 2018, we entered into a collaboration, license, and option to purchase agreement with Oscine (the Oscine Agreement) to pursue research related to Oscine's glial progenitor *ex vivo* cell engineering programs focused on brain disorders. We paid a $5.0 million non-refundable upfront fee, which was recorded in research and development expense for the period from July 13, 2018 (inception) to December 31, 2018. We recorded research and development expense of $0.2 million, $4.2 million and $3.4 million for the period from July 13, 2018 (inception) to December 31, 2018, the year ended December 31, 2019 and the nine months ended September 30, 2020, respectively.

In September 2020, we acquired Oscine for a total purchase price of $8.5 million. See the subsection titled "—Acquisitions" for more information.

Acquisitions

We have completed the acquisitions summarized below. For further details regarding these acquisitions, see Note 3, Acquisitions to each of our audited consolidated financial statements and unaudited condensed consolidated financial statements included elsewhere in this prospectus.

Oscine Corp.

In September 2020, we acquired all of the outstanding equity of Oscine, a privately-held early-stage biotechnology company developing glial progenitor *ex vivo* cell engineering programs focused on brain disorders for a purchase price of $8.5 million.

The transaction was accounted for as an asset acquisition of in-process research and development (IPR&D) with the purchase price of $8.5 million recorded in research and development expense for the nine months ended September 30, 2020. Of the total purchase price, $7.6 million was an upfront cash payment, and $0.9 million was set aside (the Oscine Holdback Amount) to satisfy certain general representations and warranties as set forth in the stock purchase agreement. The Oscine Holdback Amount will be held for 15 months, until December 2021, at which time the remainder of the balance, after payment of any claims, will be released to the prior stockholders of Oscine.

We are required to pay the prior stockholders of Oscine future milestone payments of up to an aggregate of $225.8 million upon the achievement of certain pre-specified development and commercial milestones. No milestones had been achieved as of September 30, 2020, and therefore no related amounts were recognized during the nine months ended September 30, 2020.

We incurred transaction costs of approximately $0.5 million in connection with the Oscine acquisition. These costs were included in general and administrative expense for the nine months ended September 30, 2020.

Cytocardia, Inc.

In November 2019, we acquired all of the outstanding equity in Cytocardia, a privately-held early-stage biotechnology company whose primary asset was in-process research and development related to its *ex vivo* cell engineering programs focused on replacement of damaged heart cells.

The transaction was accounted for as an asset acquisition of IPR&D with the purchase price of $8.0 million recorded as research and development expense for the year ended December 31, 2019. Of the total purchase price, $6.8 million was an upfront cash payment, and $1.2 million was set aside (the Cytocardia Holdback Amount) to satisfy certain general representations and warranties as set forth in the stock purchase agreement. The Cytocardia Holdback Amount will be held for 15 months, until February 2021, at which time the remainder of the balance, after payment of any claims, will be released to the co-founders.

We are required to pay the co-founders of Cytocardia future milestone payments of up to an aggregate of $140.0 million upon the achievement of certain pre-specified development, regulatory and commercial milestones. No milestones had been achieved as of September 30, 2020, and therefore no related amounts were recognized during the year ended December 31, 2019 or the nine months ended September 30, 2020.

We incurred transaction costs of approximately $0.2 million in connection with the Cytocardia acquisition. These costs were included in general and administrative expense for the year ended December 31, 2019.

Cobalt Biomedicine, Inc.

In February 2019, we acquired all of the outstanding equity in Cobalt, a privately-held early-stage biotechnology company developing a platform technology using its fusogen technology to specifically and consistently deliver various biological payloads to cells. The Cobalt acquisition added *in vivo* cell engineering technology to complement our *ex vivo* cell engineering technology.

The transaction was accounted for as an acquisition of a business with total consideration of $189.7 million. We issued 145,766,384 shares of our Series A-2 convertible preferred stock, valued at $136.0 million, and paid $28,000 in cash. Of the 145,766,384 shares of Series A-2 convertible preferred stock issued, 48,588,795 shares were restricted until the achievement of a preclinical milestone, which was achieved in July 2019, at which time the restriction was lifted. Additionally, 2,766,578 restricted stock awards and 1,383,288 restricted stock units were granted to former employees of Cobalt.

We also agreed to pay contingent consideration (Cobalt Contingent Consideration) of up to an aggregate of $500.0 million upon the achievement of certain pre-specified development milestones, and a success payment (Cobalt Success Payment) of up to $500.0 million. The Cobalt Success Payment will only be paid if, at pre-determined valuation measurement dates, our value is equal to or exceeds three times our implied value based on the per share value of the Series B convertible preferred stock at issuance, or any security into which such stock has been converted or exchanged, and we have a program based on the fusogen technology in a clinical trial pursuant to an IND, or have filed for, or received approval for, a BLA or new drug application (NDA). The valuation measurement dates for the Cobalt Success Payment are triggered by an arms' length equity financing, or an IPO, and periodically thereafter. In addition to an arms' length equity financing and an IPO, a valuation measurement date is triggered upon a change of control when at least one of our programs based on the fusogen technology is the subject of an active research program. If there is a change of control and our valuation implied by the per share value of our Series B convertible preferred stock at issuance, or any security into which such stock has been converted or exchanged falls below certain thresholds, the amount of the potential Cobalt Success Payment will decrease and the amount of potential Cobalt Contingent Consideration will increase. See Note 3, Acquisitions to each of our audited consolidated financial statements and our unaudited condensed consolidated financial statements included elsewhere in this prospectus for details on the different Company valuation thresholds and impact to the value of the potential Cobalt Success Payment and potential Cobalt Contingent Consideration if there is a change of control. The Cobalt Contingent Consideration and Cobalt Success Payment are payable in cash or stock, at our discretion. We expect the first valuation measurement date for the Cobalt Success Payment to be an IPO, but we do not expect to owe a Cobalt Success Payment upon an IPO or within one year of an IPO. However, such payment is dependent on the future stock price which is unpredictable and may fluctuate significantly from quarter to quarter and year to year.

The estimated fair value of the Cobalt Contingent Consideration related to the pre-specified development milestones was $69.1 million and $85.8 million as of December 31, 2019 and September 30, 2020, respectively. For the year ended December 31, 2019 and for the nine months ended September 30, 2020 we recorded research and development expense of $17.9 million and $16.7 million, respectively, in connection with the Cobalt Contingent Consideration. The estimated fair value of the Cobalt Success Payment liability was $2.4 million and $37.6 million as of December 31, 2019 and September 30, 2020, respectively. The change in value of the Cobalt Success Payment liability from the acquisition date to December 31, 2019 was immaterial. We recorded research and development expense of $35.2 million for the nine months ended September 30, 2020 in connection with the Cobalt Success Payment.

The components of the $189.7 million purchase price included an intangible asset of $59.2 million, a deferred tax liability of $7.5 million, and net liabilities assumed of $2.6 million, with the remaining amount of $140.6 million recorded as goodwill. The estimated fair value of the intangible asset was determined using the replacement cost method. The intangible asset is classified as an indefinite-lived asset until it becomes finite-lived upon the successful completion or the abandonment of the associated research and development technology. Accordingly, during the development period after the date of acquisition, this asset will not be amortized until regulatory approval is obtained in a major market, typically either the United States or the European Union. At that time, we will determine the useful life of the asset and begin amortization. If the associated research and development technology is abandoned, the related intangible asset will be written-off and an impairment charge recorded. None of the goodwill is expected to be deductible for income tax purposes. We have not recognized an impairment of goodwill or the intangible asset since inception.

We incurred $0.4 million of transaction costs related to the Cobalt acquisition. These costs were included in general and administrative expense for the year ended December 31, 2019.

Components of Operating Results

Operating Expenses

Research and Development

To date, research and development expenses have related primarily to discovery and development of our platform technology and product candidates. Research and development expenses are recognized as incurred and payments made prior to the receipt of goods or services to be used in research and development are recorded as prepaid expenses until the goods or services are received.

Research and development expenses consist of personnel-related costs, including salaries, benefits, and non-cash stock-based compensation, external research and development expenses incurred under arrangements with third parties, laboratory supplies, costs to acquire and license technologies aligned with our goal of translating engineered cells to medicines, facility and other allocated expenses, including rent, depreciation, and allocated overhead costs, and other research and development expenses.

Research and development expenses also include the change in the estimated fair value of the liabilities associated with our success payments and contingent consideration. Research and development expense related to our success payment liabilities and contingent consideration is unpredictable and may vary significantly from quarter to quarter and year to year due to changes in our assumptions used in the calculation. In addition, we may incur research and development expense to acquire and license technologies in the future, and the timing and amount of those expenses cannot be estimated with reliability and may also fluctuate from quarter to quarter and year to year.

We deploy our employee and infrastructure resources across multiple research and development programs for developing our *in vivo* and *ex vivo* cell engineering platforms, identifying and developing product candidates, and establishing manufacturing capabilities. Due to the number of ongoing projects and our ability to use

resources across several projects, the vast majority of our research and development costs are not recorded on a program-specific basis. These include costs for personnel, laboratory, and other indirect facility and operating costs.

Research and development activities account for a significant portion of our operating expenses. Excluding amounts attributable to changes in the estimated fair value of our success payment liabilities and contingent consideration, we anticipate that our research and development expenses will increase over the foreseeable future as we expand our research and development efforts including expanding the capabilities of our cell engineering platforms, identifying product candidates, completing preclinical studies and commencing clinical trials, seeking regulatory approval of our product candidates, and incurring costs to acquire and license technologies aligned with our goal of translating engineered cells to medicines. A change in the outcome of any of these variables could mean a significant change in the costs and timing associated with the development of our product candidates.

General and Administrative

General and administrative expenses consist of personnel-related costs, including salaries, benefits, and non-cash stock-based compensation, for our employees in executive, legal, finance, human resources, information technology, and other administrative functions, legal fees, consulting fees, recruiting costs, and facility costs not otherwise included in research and development expenses. Legal fees include those related to corporate and patent matters.

We anticipate that our general and administrative expenses will increase over the foreseeable future to support our continued research and development activities, operations generally, future business development opportunities, consulting fees, as well as due to the increased costs of operating as a public company.

Interest Income, Net

Interest income, net consists of interest earned on our cash, cash equivalents and investment balance.

Benefit from Income Taxes

Benefit from income taxes consists of the partial release of the valuation allowance on net deferred tax assets triggered by the deferred tax liabilities recorded as a result of the acquisition of Cobalt in 2019.

Results of Operations

Comparison of the Nine Months Ended September 30, 2019 and 2020

The following table summarizes our results of operations for the periods presented:

	Nine Months Ended September 30,		
	2019	2020	Change
	(in thousands)		
Operating expenses:			
Research and development	$ 80,101	$ 153,762	$ 73,661
General and administrative	15,959	19,063	3,104
Total operating expenses	96,060	172,825	76,765
Loss from operations	(96,060)	(172,825)	(76,765)
Interest income, net	2,175	622	(1,553)
Other income (expense), net	(52)	68	120
Loss before income taxes	(93,937)	(172,135)	(78,198)
Benefit from income taxes	6,204	—	(6,204)
Net loss	$ (87,733)	$ (172,135)	$ (84,402)

Research and Development Expenses

The following table summarizes the components of our research and development expenses for the periods presented:

	Nine Months Ended September 30,		
	2019	2020	Change
	(in thousands)		
Success payments	$ 1,427	$ 40,637	$ 39,210
Personnel	17,582	33,288	15,706
Research and laboratory	7,580	22,918	15,338
Facility and other allocated costs	12,525	21,249	8,724
Collaborations	4,347	5,535	1,188
Contingent consideration	15,564	16,672	1,108
Acquisition and licensing of technology	19,473	11,352	(8,121)
Other	1,603	2,111	508
Total research and development expense	$ 80,101	$ 153,762	$ 73,661

Research and development expenses were $80.1 million and $153.8 million for the nine months ended September 30, 2019 and 2020, respectively. The increase of $73.7 million was primarily due to:

- an increase of $39.2 million for the change in the estimated fair value of our Cobalt Success Payment and Harvard Success Payment liabilities in aggregate;
- increased personnel-related expenses of $15.7 million, including non-cash stock-based compensation of $1.7 million, which was primarily attributable to an increase in headcount to expand our research and development capabilities;
- an increase of $15.3 million in research and laboratory costs, including laboratory supplies, preclinical studies, and other external research expenses;

- an increase of $8.7 million of facility and other allocated costs, including rent, depreciation, and allocated overhead costs;
- an increase of $1.2 million for collaborative arrangements; and
- an increase of $1.1 million for the change in the estimated fair value of the Cobalt Contingent Consideration.

These increases were partially offset by a decline in costs to acquire and license technology of $8.1 million due to costs incurred under the Harvard Agreement and UCSF Agreement in 2019, partially offset by the cost of the Oscine acquisition in 2020.

General and Administrative Expenses

General and administrative expense were $16.0 million and $19.1 million for the nine months ended September 30, 2019 and 2020, respectively. The increase of $3.1 million was primarily due to increased personnel-related expenses of $1.6 million primarily attributable to an increase in headcount to build our infrastructure, increased information technology and facility costs including rent of $0.7 million, and increased business taxes and insurance of $0.5 million.

Interest Income, Net

Interest income, net was $2.2 million and $0.6 million for the nine months ended September 30, 2019 and 2020, respectively. The decrease of $1.6 million was due to lower interest rates on cash and investment balances.

Benefit from Income Taxes

Benefit from income taxes was $6.2 million for the nine months ended September 30, 2019, which was due to a deferred tax liability of $7.5 million associated with the intangible asset from the Cobalt acquisition. We recognized an income tax benefit of $6.2 million for the release of valuation allowance on existing U.S. deferred tax assets for the nine months ended September 30, 2019. There was no benefit from income taxes for the nine months ended September 30, 2020.

Comparison of the Period from July 13, 2018 (Inception) to December 31, 2018 and the Year Ended December 31, 2019

The following table summarizes our results of operations for the periods presented:

	Period from July 13, 2018 (Inception) to December 31, 2018	Year Ended December 31, 2019	Change
		(in thousands)	
Operating expenses:			
Research and development	$ 9,040	$ 119,375	$ 110,335
General and administrative	4,206	21,777	17,571
Total operating expenses	13,246	141,152	127,906
Loss from operations	(13,246)	(141,152)	(127,906)
Interest income, net	—	2,856	2,856
Other expense, net	(1)	(29)	(28)
Loss before income taxes	(13,247)	(138,325)	(125,078)
Benefit from income taxes	—	7,547	7,547
Net loss	$ (13,247)	$ (130,778)	$ (117,531)

Research and Development Expenses

The following table summarizes the components of our research and development expenses for the periods presented:

	Period from July 13, 2018 (Inception) to December 31, 2018	Year Ended December 31, 2019	Change
		(in thousands)	
Personnel	$ 2,073	$ 30,378	$ 28,305
Acquisition and licensing of technology	5,025	27,773	22,748
Contingent consideration	—	17,860	17,860
Facility and other allocated costs	1,360	18,246	16,886
Research and laboratory	33	13,302	13,269
Collaborations	199	6,543	6,344
Consulting	327	3,038	2,711
Other	23	2,235	2,212
Total research and development expense	$ 9,040	$ 119,375	$ 110,335

Research and development expenses were $9.0 million for the period from July 13, 2018 (inception) to December 31, 2018 and $119.4 million for the year ended December 31, 2019. The increase of $110.4 million was primarily due to:

- increased personnel-related expenses of $28.3 million, including non-cash stock-based compensation of $1.2 million, which was primarily attributable to an increase in headcount to expand our research and development capabilities;
- an increase of $22.7 million in costs to acquire and license technology associated with the Harvard Agreement, UCSF Agreement, and the Cytocardia acquisition in 2019, partially offset by costs incurred in 2018 related to the Oscine Agreement;
- an increase of $17.9 million for the change in the estimated fair value of the Cobalt Contingent Consideration;
- an increase of $16.9 million of facility and other allocated costs, including rent, depreciation, and allocated overhead costs;
- an increase of $13.3 million in research and laboratory costs, including laboratory supplies, preclinical studies, and other external research expenses;
- an increase of $6.3 million for collaborative arrangements; and
- an increase of $2.7 million in consulting fees.

General and Administrative Expenses

General and administrative expenses were $4.2 million for the period from July 13, 2018 (inception) to December 31, 2018 and $21.8 million for the year ended December 31, 2019. The increase of $17.6 million was primarily due increased personnel-related expenses of $9.1 million primarily attributable to an increase in headcount to build our infrastructure, increased consulting and legal fees of $4.0 million, and increased information technology and facility costs, including rent, of $3.9 million.

Interest Income, Net

Interest income, net was $2.9 million for the year ended December 31, 2019, which included interest earned on our cash, cash equivalents, and short-term investment balances. There was no interest income, net for the period from July 13, 2018 (inception) to December 31, 2018.

Benefit from Income Taxes

Benefit from income taxes was $7.5 million for the year ended December 31, 2019, which was due to a deferred tax liability of $7.5 million associated with the intangible asset from the Cobalt acquisition. We recognized an income tax benefit of $7.5 million for the release of valuation allowance on existing U.S. deferred tax assets for the year ended December 31, 2019. There was no benefit from income taxes for the period from July 13, 2018 (inception) to December 31, 2018.

Unaudited Pro Forma Information

Immediately prior to the completion of this offering, all outstanding shares of our convertible preferred stock will automatically convert into shares of our common stock assuming the sale of shares in this offering at the assumed public offering price of $ per share, the mid point of the price range set forth on the cover page of this prospectus. The unaudited pro forma basic and diluted net loss per share for the year ended December 31, 2019 and the nine months ended September 30, 2020 were computed using the weighted-average number of shares of common stock outstanding, including the pro forma effect of the conversion of all outstanding shares of convertible preferred stock into shares of common stock, as if such conversion had occurred at the beginning of the period, or their issuance dates if later. Pro forma net loss per share does not include the shares expected to be sold in this offering.

The following table sets forth the computation of the unaudited pro forma basic and diluted net loss per share of common stock for the periods presented:

	Year Ended December 31, 2019	Nine Months Ended September 30, 2020
	(in thousands, except share and per share data)	
Numerator:		
Net loss used in calculating pro forma net loss per share, basic and diluted	$ (130,778)	$ (172,135)
Denominator:		
Weighted-average common shares outstanding	19,610,571	48,997,930
Weighted-average convertible preferred stock	377,589,680	472,069,119
Pro forma weighted-average shares outstanding, basic and diluted	397,200,251	521,067,049
Pro forma net loss per share, basic and diluted	$ (0.33)	$ (0.33)

Liquidity, Capital Resources, and Capital Requirements

Sources of Liquidity

Since our inception, we have funded our operations through the sale and issuance of convertible preferred stock. From July 13, 2018 (inception) through September 30, 2020, we raised an aggregate of $705.5 million in gross proceeds from the sales of our convertible preferred stock. Most recently, in June 2020, we closed our Series B convertible preferred stock financing and raised an aggregate of $435.6 million. As of September 30, 2020, we had $459.1 million in cash, cash equivalents, and marketable securities. Since our inception, we have not generated any revenue from product sales or any other sources, and we have incurred significant operating losses. We have not yet commercialized any products and we do not expect to generate revenue from sales of any product candidates for a number of years, if ever. We had an accumulated deficit of $316.3 million as of September 30, 2020.

Future Funding Requirements

We expect to incur additional losses in the foreseeable future as we conduct and expand our research and development efforts, including conducting preclinical studies and clinical trials, developing new product

candidates, establishing internal and external manufacturing capabilities, and funding our operations generally. Based on our current operating plan, we believe that our existing cash, cash equivalents, and marketable securities, together with the net proceeds from this offering, will be sufficient to meet our working capital and capital expenditure needs for at least the next months. However, we anticipate that we will need to raise additional financing in the future to fund our operations, including the commercialization of any approved product candidates. We are subject to the risks typically related to the development of new products, and we may encounter unforeseen expenses, difficulties, complications, delays, and other unknown factors that may adversely affect our business.

Our future capital requirements will depend on many factors, including:

- the scope, timing, progress, costs, and results of discovery, preclinical development, and clinical trials for our current and future product candidates;
- the number of clinical trials required for regulatory approval of our current and future product candidates;
- the costs, timing, and outcome of regulatory review of any of our current and future product candidates;
- the cost of manufacturing clinical and commercial supplies of our current and future product candidates;
- the costs and timing of future commercialization activities, including manufacturing, marketing, sales, and distribution, for any of our product candidates for which we receive marketing approval;
- the costs and timing of preparing, filing, and prosecuting patent applications, maintaining and enforcing our intellectual property rights, and defending any intellectual property-related claims, including any claims by third parties that we are infringing upon their intellectual property rights;
- our ability to maintain existing, and establish new, strategic collaborations, licensing, or other arrangements and the financial terms of any such agreements, including the timing and amount of any future milestone, royalty, or other payments due under any such agreement;
- the revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- expenses to attract, hire and retain, skilled personnel;
- the costs of operating as a public company;
- our ability to establish a commercially viable pricing structure and obtain approval for coverage and adequate reimbursement from third-party and government payers;
- addressing any potential interruptions or delays resulting from factors related to the COVID-19 pandemic;
- the effect of competing technological and market developments; and
- the extent to which we acquire or invest in businesses, products, and technologies.

Until such time as we can generate significant revenue from product sales, if ever, we expect to finance our operations from the sale of additional equity or debt financings, or other capital which come in the form of strategic collaborations, licensing, or other arrangements. In the event that additional financing is required, we may not be able to raise it on terms acceptable to us, or at all. If we raise additional funds through the issuance of equity or convertible debt securities, it may result in dilution to our existing stockholders. Debt financing or preferred equity financing, if available, may result in increased fixed payment obligations, and the existence of securities with rights that may be senior to those of our common stock. If we incur indebtedness, we could become subject to covenants that would restrict our operations. If we raise funds through strategic collaboration, licensing

or other arrangements, we may relinquish significant rights or grant licenses on terms that are not favorable to us. Our ability to raise additional funds may be adversely impacted by potential worsening global economic conditions and the recent disruptions to, and volatility in, the credit and financial markets in the United States and worldwide resulting from the ongoing COVID-19 pandemic and otherwise. If we are unable to raise additional capital when desired, our business, results of operations, and financial condition would be adversely affected.

Cash Flows

The following table summarizes our cash flows for the periods indicated:

	Period from July 13, 2018 (Inception) to December 31, 2018	Year Ended December 31, 2019	Nine Months Ended September 30,	
			2019	2020
	(in thousands)			
Net cash provided by (used in):				
Operating activities	$ (13,495)	$ (85,504)	$ (51,708)	$ (100,423)
Investing activities	(780)	(87,861)	(114,644)	(265,604)
Financing activities	45,721	223,726	215,911	435,584
Net increase in cash, cash equivalents, and restricted cash	$ 31,446	$ 50,361	$ 49,559	$ 69,557

Operating Activities

During the nine months ended September 30, 2020, net cash used in operating activities was $100.4 million, consisting primarily of our net loss of $172.1 million partially offset by non-cash charges of $68.2 million and an increase in our net operating assets of $3.5 million. The non-cash charges of $68.2 million consisted of $40.6 million for revaluation of our success payment liabilities, $16.7 million for revaluation of contingent consideration, depreciation expense of $4.2 million, non-cash stock-based compensation expense of $3.0 million, right-of-use assets lease expense of $2.9 million, and other non-cash charges of $0.8 million.

During the nine months ended September 30, 2019, net cash used in operating activities was $51.7 million, consisting primarily of our net loss of $87.7 million and a tax benefit of $6.2 million recorded in connection with the Cobalt acquisition, partially offset by non-cash charges of $36.3 million and an increase in our net operating assets of $5.9 million. The non-cash charges of $36.3 million consisted primarily of $15.6 million for revaluation of contingent consideration, $11.9 million for the issuance of stock in connection with license agreements, $5.8 million for revaluation of our success payment liabilities and contingent liabilities, right-of-use assets lease expense of $1.6 million, and other non-cash charges of $1.4 million.

During the year ended December 31, 2019, net cash used in operating activities was $85.5 million, consisting primarily of our net loss of $130.8 million and a tax benefit of $7.5 million recorded in connection with the Cobalt acquisition, partially offset by non-cash charges of $42.3 million and an increase in our net operating assets of $10.5 million. The non-cash charges of $42.3 million consisted of $17.9 million for revaluation of contingent consideration, $11.9 million for the issuance of stock in connection with license agreements, $6.5 million for revaluation of success payment and contingent liabilities, depreciation expense of $1.8 million, and other non-cash charges of $4.2 million.

During the period from July 13, 2018 (inception) to December 31, 2018, net cash used in operating activities was $13.5 million, consisting primarily of our net loss of $13.2 million.

Investing Activities

During the nine months ended September 30, 2020, cash used in investing activities was $265.6 million, consisting primarily of net purchases, sales, and maturities of marketable securities of $251.0 million and purchases of property and equipment of $14.6 million.

During the nine months ended September 30, 2019, cash used in investing activities was $114.6 million, consisting primarily of net purchases and maturities of marketable securities of $91.0 million, purchases of property and equipment of $20.4 million, and net cash used for an acquisition of $3.2 million.

During the year ended December 31, 2019, cash used in investing activities was $87.9 million, consisting primarily of net purchases and maturities of marketable securities of $58.5 million, purchases of property and equipment of $26.2 million, and net cash used for an acquisition of $3.2 million.

During the period from July 13, 2018 (inception) to December 31, 2018, cash used in investing activities was $0.8 million, consisting of purchases of property and equipment of $0.5 million and the issuance of a promissory note of $0.3 million.

Financing Activities

During the nine months ended September 30, 2020, cash provided by financing activities was $435.6 million, consisting primarily of net proceeds from the sale of our convertible preferred stock.

During the nine months ended September 30, 2019, cash provided by financing activities was $215.9 million, consisting primarily of net proceeds from the sale of our convertible preferred stock.

During the year ended December 31, 2019, cash provided by financing activities was $223.7 million, consisting primarily of net proceeds from the sale of our convertible preferred stock.

During the period from July 13, 2018 (inception) to December 31, 2018, cash provided by financing activities was $45.7 million, consisting primarily of net proceeds from the sale of our convertible preferred stock.

Contractual Obligations and Commitments

The following table summarizes our significant contractual obligations and commitments as of December 31, 2019:

	Payments Due by Period				
	Less than 1 Year	1 to 3 Years	3 to 5 Years	More than 5 Years	Total
			(in thousands)		
Operating leases(1)	$ 6,624	$ 17,429	$ 18,580	$ 41,494	$ 84,127

(1) This table does not include the operating leases we entered into in Seattle, WA in September 2020 and Cambridge, MA in January and May 2020.

Other than as disclosed in the table above, the payment obligations under our license, collaboration, and acquisition agreements as of December 31, 2019 are contingent upon future events such as our achievement of pre-defined development, regulatory, and commercial milestones, or royalties on net product sales. See the section titled “Business—Key Intellectual Property Agreements” for more information about these payment obligations. We are also obligated to make a Cobalt Success Payment of up to $500.0 million if, at pre-determined valuation measurement dates, the value of our company meets or exceeds certain thresholds and we have an active program based on the fusogen technology in a clinical trial pursuant to an IND, or have filed for or received approval for, a BLA or NDA. We may also make Harvard Success Payments up to an aggregate of $175.0 million based on increases in the fair value of our Series A convertible preferred stock at pre-defined valuation measurement dates. See the subsection titled “—Critical Accounting Policies and Significant Judgments and Estimates—Success Payments.” The Cobalt Success Payment is payable in cash or stock, at our discretion, and the Harvard Success Payments are payable in cash. As of December 31, 2019, the timing and

likelihood of achieving the milestones and success payments and generating future product sales are uncertain and therefore, any related payments are not included in the table above.

We also enter into agreements in the normal course of business for sponsored research, preclinical studies, contract manufacturing, and other services and products for operating purposes, which are generally cancelable upon written notice. These obligations and commitments are not included in the table above.

Off-Balance Sheet Arrangements

Since our inception, we have not engaged in any off-balance sheet arrangements as defined under the rules and regulations of the SEC.

Quantitative and Qualitative Disclosures About Market Risk

We are exposed to market risks in the ordinary course of our business. These risks primarily include interest rate sensitivities.

Interest Rate Risk

We had cash, cash equivalents, and restricted cash of $151.4 million as of September 30, 2020, which consisted of bank deposits and money market funds. We also had marketable securities of $309.8 million as of September 30, 2020. The primary objective of our investment activities is to preserve capital to fund our operations while earning a low risk return. Because our marketable securities are primarily short-term in duration, we believe that our exposure to interest rate risk is not significant, and a hypothetical 1% change in market interest rates during any of the periods presented would not have had a significant impact on the total value of our portfolio. We had no debt outstanding as of September 30, 2020.

JOBS Act Accounting Election

We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act of 2012 (the JOBS Act). For so long as we remain an emerging growth company, we are permitted and intend to rely on certain exemptions from various public company reporting requirements, including not being required to have our internal control over financial reporting audited by our independent registered public accounting firm pursuant to Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and any golden parachute payments not previously approved. In particular, in this prospectus, we have provided only two years of audited financial statements and have not included all of the executive compensation-related information that would be required if we were not an emerging growth company. Accordingly, the information contained herein may be different than the information you receive from other public companies in which you hold stock. In addition, under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. We have elected to use the extended transition period for any new or revised accounting standards during the period in which we remain an emerging growth company; however, we may adopt certain new or revised accounting standards early.

Critical Accounting Policies and Significant Judgments and Estimates

Our audited consolidated financial statements and our unaudited condensed consolidated financial statements are prepared in accordance with generally accepted accounting principles in the United States. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the audited consolidated financial statements and the unaudited condensed consolidated financial statements, as well as the

reported expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. While our significant accounting policies are described in more detail in the notes to our audited consolidated financial statements and our unaudited condensed consolidated financial statements included elsewhere in this prospectus, we believe that the following accounting policies are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates.

Research and Development Expenses

We record research and development costs in the periods in which they are incurred. We accrue for research and development costs based on the estimated services performed, but not yet invoiced, pursuant to contracts with research institutions or other service providers that conduct and manage preclinical studies and other research services on our behalf and record these costs in accrued and other current liabilities. We make judgments and estimates in determining the accrued liabilities balance at each reporting period. Payments made prior to the receipt of goods or services to be used in research and development are recorded as prepaid expenses until the goods or services are received.

Research and development costs also include the estimated fair value of the potential liabilities associated with our Harvard Success Payments, Cobalt Success Payment, and Cobalt Contingent Consideration. See the subsections titled "—Contingent Consideration" and "—Success Payments."

To date, we have not experienced any material differences between accrued costs and actual costs incurred. However, the status and timing of actual services performed may vary from our estimates, resulting in adjustments to expense in future periods. Changes in these estimates that result in material changes to our accruals could materially affect our results of operations.

Acquisitions

We account for business combinations using the acquisition method of accounting, which requires the assets acquired, including IPR&D, and liabilities assumed, be recorded at their fair values as of the acquisition date. Any excess of the purchase price over the fair value of net assets acquired is recorded as goodwill. The determination of the estimated fair value of these items requires us to make significant estimates and assumptions.

If we determine the acquisition does not meet the definition of a business combination under the acquisition method of accounting, the transaction is accounted for as an asset acquisition and no goodwill or contingent consideration are recognized at the acquisition date. In an asset acquisition, up-front payments allocated to IPR&D are recorded in research and development expense if there is no alternative future use, and subsequent milestone payments are recorded in research and development expense when achieved.

Intangible Assets and Goodwill

Accounting for business combinations requires us to make significant estimates and assumptions with respect to tangible and intangible assets acquired and assumed liabilities. We use our best estimates and assumptions to accurately assign fair value to the tangible and intangible assets acquired and liabilities assumed at the acquisition date as well as the useful lives of those acquired intangible assets. Intangible assets are reviewed for impairment annually and upon the occurrence of triggering events or substantive changes in circumstances that could indicate a potential impairment.

Goodwill represents the excess of the purchase price over the estimated fair value of the identifiable assets acquired and liabilities assumed in a business combination. We evaluate goodwill for impairment annually and upon the occurrence of triggering events or substantive changes in circumstances that could indicate a potential impairment. Our evaluation includes assessing qualitative factors or performing a quantitative analysis to determine whether it is more-likely-than-not that the fair value of net assets are below the carrying amounts.

Contingent Consideration

At the acquisition date of a business combination and at each subsequent balance sheet date, contingent consideration obligations are remeasured to fair value. Any changes in fair value between balance sheet dates are recognized in research and development expense. We utilize significant estimates and assumptions in determining the estimated contingent consideration and associated expense or gain at each balance sheet date including assumptions regarding the progress toward achieving milestones. The valuation of contingent consideration uses assumptions we believe would be made by a market participant. In evaluating the fair value of contingent consideration, judgment is required to interpret the market data used to develop the estimates. We assess these estimates on an on-going basis as additional data impacting the assumptions are obtained. Contingent consideration may change significantly as development progresses and additional data are obtained, impacting our assumptions regarding probabilities of successful achievement of the related milestones used to estimate the fair value of the liability and the timing in which they are expected to be achieved. Accordingly, the use of different market assumptions and/or different valuation techniques could result in materially different fair value estimates.

Success Payments

We granted rights to success payments to Cobalt and Harvard pursuant to the terms of our acquisition agreement and license agreement with each of those entities, respectively. Pursuant to the terms of the Cobalt Agreement, we may be required to make a success payment, if, at pre-determined valuation measurement dates, our value is equal to or exceeds three times our implied value based on the per share value of our Series B convertible preferred stock at issuance, or any security into which such stock has been converted or exchanged, and we have an active program based on the fusogen technology in a clinical trial pursuant to an IND, or have filed for, or received approval for, a BLA or NDA. The payment can be made in cash or stock, at our discretion. Pursuant to the terms of the Harvard Agreement, we may be required to make success payments in cash based on increases in the per share value of our Series A convertible preferred stock at pre-determined valuation measurement dates. The Cobalt and Harvard Success Payments are accounted for under Accounting Standards Codification 815, *Derivatives and Hedging*.

Success payment liabilities are estimated at fair value at inception and at each subsequent balance sheet date with changes recorded in research and development expense. To determine the estimated fair value of the success payment liabilities we use a Monte Carlo simulation methodology which models the value of the liability based on several key variables, including the estimated number and timing of valuation measurement dates on the basis of which payments may be triggered, expected volatility, term of the success payments, and the risk-free interest rate. Additionally, the Cobalt Success Payment liability incorporates our estimated future value implied by the per share value of the Series B convertible preferred stock at issuance, or any security into which such stock has been converted or exchanged. The Harvard Success Payment liability incorporates the estimated future fair value of our Series A convertible preferred stock. The computation of expected volatility is estimated using peer company stocks for a time period matching the expected term assumption.

Stock-Based Compensation

We recognize compensation costs related to restricted stock awards, restricted stock units, and stock options granted to employees and nonemployees based on the estimated fair value of the awards on the date of grant, and we recognize forfeitures as they occur. For restricted stock awards the fair value of our common stock is used to determine the resulting stock-based compensation expense. For stock options we estimate the grant date fair

value, and the resulting stock-based compensation expense, using the Black-Scholes option pricing model. The fair value of the stock-based awards is recognized as an expense on a straight-line basis over the requisite service period, which is generally the vesting period.

The Black-Scholes option pricing model requires the use of highly subjective assumptions to determine the fair value of stock-based awards. These assumptions include:

- *Fair Value of Common Stock*—See the subsection titled "—Common Stock Valuations."
- *Expected Term*—The expected term represents the period that the stock-based awards are expected to be outstanding. We use the simplified method to determine the expected term, which is based on the average of the time-to-vesting and the contractual life of the options.
- *Expected Volatility*—Since we are not yet a public company and do not have any trading history for our common stock, the expected volatility is estimated based on the average historical volatilities of common stock of comparable publicly traded entities over a time period equal to the expected term of the stock option grants. The comparable companies are chosen based on their size, stage in the product development cycle, and area of specialty. We will continue to apply this process until sufficient historical information regarding the volatility of our own stock price becomes available.
- *Risk-Free Interest Rate*—The risk-free interest rate is based on the U.S. Treasury yield in effect at the time of grant for zero-coupon U.S. Treasury notes with maturities approximately equal to the expected term of the awards.
- *Expected Dividend*—We have never paid dividends on our common stock and have no plans to pay dividends on our common stock. Therefore, we used an expected dividend yield of zero.

See Note 13, Stock-based compensation to each of our audited consolidated financial statements and our unaudited condensed consolidated financial statements included elsewhere in this prospectus for information concerning certain of the specific assumptions we used in applying the Black-Scholes option pricing model to determine the estimated fair value of our stock options granted in the period from July 13, 2018 (inception) to December 31, 2018, the year ended December 31, 2019, and the nine months ended September 30, 2020. Such assumptions involve inherent uncertainties and the application of significant judgment. As a result, if factors or expected outcomes change and we use significantly different assumptions or estimates, our stock-based compensation could be materially different.

The intrinsic value of all outstanding options as of September 30, 2020 was approximately $ million, based on the assumed IPO price of $ per share, which is the midpoint of the estimated IPO price range set forth on the cover page of this prospectus, of which approximately $ million is related to vested options and approximately $ million is related to unvested options.

Common Stock Valuations

Prior to this offering, we were a privately-held company with no active public market for our common stock. Therefore, our board of directors, with the assistance and upon the recommendation of management, has for financial reporting purposes periodically determined the estimated per share fair value of our common stock on the date of grant in part using contemporaneous independent third-party valuations consistent with the American Institute of Certified Public Accountants Practice Aid, *Valuation of Privately-Held Company Equity Securities Issued as Compensation* (Practice Aid). Within the contemporaneous valuations performed by our board of directors, a range of factors, assumptions, and methodologies were used. The significant objective and subjective factors included, but are not limited to:

- our most recently available valuations of our common stock performed by an independent third-party valuation firm;
- the prices of shares of our convertible preferred stock sold to investors in arm's length transactions, and the rights, preferences and privileges of our convertible preferred stock relative to our common stock;

- committed future rounds of funding;
- our stage of development and material risks related to our business;
- our results of operations and financial position, including our levels of available capital resources;
- progress of our research and development activities;
- the lack of marketability of our common stock as a private company;
- the hiring of key personnel and the experience of management;
- the likelihood of achieving a liquidity event for our securityholders, such as an IPO or a sale of our company, given prevailing market conditions;
- the valuation of publicly traded companies in the life sciences and biotechnology sectors, as well as recently completed mergers and acquisitions of peer companies;
- the status of strategic transactions, including the acquisition of intellectual property and technology;
- trends and developments in our industry; and
- external market conditions affecting the life sciences and biotechnology industry sectors.

Our board of directors exercises significant judgment in estimating the fair value of our common stock. Such estimates involve inherent uncertainties and the application of significant judgment. As a result, if factors or expected outcomes change and we use significantly different assumptions or estimates, our equity-based compensation could be materially different. Changes in judgments could have a material impact on our results of operations.

For our valuations performed prior to September 30, 2020, in accordance with the Practice Aid, we determined the option pricing model (OPM) backsolve method was the most appropriate method for determining the fair value of our common stock based on our stage of development and other relevant factors. In an OPM framework, the backsolve method for inferring the equity value implied by a recent financing transaction involves making assumptions for the expected time to liquidity, volatility, discount for lack of marketability, and risk-free rate and then solving for the value of equity such that value for the most recent financing equals the amount paid. This method was selected as management concluded that the contemporaneous financing transactions were arms'-length transactions.

For our valuations performed on or subsequent to September 30, 2020, in accordance with the Practice Aid, we determined the hybrid method of the OPM and the Probability-Weighted Expected Return Method (PWERM) was the most appropriate method for determining the fair value of our common stock based on our stage of development and other relevant factors. The PWERM considers various potential liquidity outcomes. Our approach included assumptions for different timing of IPO scenarios, the sale of our company, and dissolution. Under the hybrid OPM and PWERM method, the per share value calculated under the OPM and PWERM are weighted based on expected exit outcomes and the quality of the information specific to each allocation methodology to arrive at a final estimated fair value per share value of the common stock before a discount for lack of marketability is applied.

Following the closing of this offering, our board of directors will determine the fair market value of our common stock based on its closing price as reported on the date of grant on the primary stock exchange on which our common stock is traded.

Recently Adopted and Recent Accounting Pronouncements

See Note 2, Summary of significant accounting policies to each of our audited consolidated financial statements and unaudited condensed consolidated financial statements included elsewhere in this prospectus for information about recent accounting pronouncements, the timing of their adoption, and our assessment, to the extent we have made one yet, of their potential impact on our financial condition or results of operations.

BUSINESS

Overview

We were founded on the belief that engineered cells will be one of the most important transformations in medicine over the next several decades. The burden of diseases that can be addressed at their root cause through engineered cells is significant. We view engineered cells as having the potential to be as therapeutically disruptive as biologics to clinical practice. Our long-term aspirations are to be able to control or modify any gene in the body, to replace any cell that is damaged or missing, and to markedly improve access to cellular and gene-based medicines. We have brought together an experienced group of scientists, engineers, and company builders and combined them with the necessary technologies to move this vision forward. We are developing *in vivo* and *ex vivo* cell engineering platforms to revolutionize treatment across a broad array of therapeutic areas with unmet treatment needs, including oncology, diabetes, central nervous system (CNS) disorders, cardiovascular diseases, and genetic disorders, among others. While our current product candidates are all in preclinical development, our goal is to file multiple investigational new drug applications (INDs) both in 2022 and 2023.

We believe the time is right to develop engineered cell therapies across a broad range of therapeutic areas. The field has seen initial clinical proof of concept for gene and cell replacement approaches across multiple diseases, including cancer and certain genetic disorders, through the application of adeno-associated virus (AAV) based gene therapies, autologous CAR T cell therapies, and autologous and allogeneic grafts/transplants. While such existing approaches have limitations, they provide evidence that a broad range of *in vivo* and *ex vivo* engineered cells can have transformative clinical potential in at least a subset of patients. Substantial progress in the understanding of genetics, gene editing, gene control, protein engineering, stem cell biology, immunology, process analytics, and computational biology have converged to create an opportunity to markedly increase the breadth and depth of the potential impact of genetic and cellular medicines.

We are seeking to overcome these existing limitations of gene and cell therapy through our *in vivo* and *ex vivo* cell engineering platforms, both of which may facilitate the development of therapies that can transform the lives of patients by repairing cells in the body when possible and replacing them when needed. For *in vivo* therapies, where the desire is to repair and control genes in the body, a successful product candidate requires both gene modification and *in vivo* delivery of the therapeutic payload. Of these, we view effective *in vivo* delivery as the greatest limitation to dramatically expanding the impact of this class of therapeutics. To this end, our initial focus is on cell-specific delivery as well as increasing the diversity and size of payloads. For *ex vivo* therapies, where diseased cells are damaged or missing entirely and an effective therapy needs to replace the entire cell, a successful therapeutic requires large-scale manufacturing of cells that engraft, function, and persist in the body. Of these, we view persistence as the greatest limitation to dramatically expanding the impact of this class of therapeutics. We believe that product candidates developed with our *ex vivo* cell engineering platform, which utilizes hypoimmune allogeneic cells that can “hide” from the patient’s immune system, can address this fundamental limitation and unlock a wave of disruptive therapeutics.

We believe we have the potential to develop transformative engineered cells as medicines because of our people and our capabilities:

Our **people** are the most important strength of the company. We have assembled a diverse group of experienced company builders, scientists, manufacturing scientists, engineers, and operators to execute our business plan.

- **Experienced Company Builders**. We have numerous individuals with vast experience in building disruptive biotech companies. Our Founder and Chief Executive Officer, Dr. Steve Harr, was previously CFO of Juno Therapeutics, helping to build the company and its CAR T cell therapy platform until its acquisition. He is a physician-scientist with experience in basic research, clinical medicine, finance, company building, and operations. Our Chairman of the Board and co-founder, Hans Bishop, is an experienced company builder and operator with success across a number of

companies. Our executive team is composed of multiple individuals with deep experience building high growth, disruptive companies, including Christian Hordo, Chief Business Officer, who previously ran Business Development and the Myeloma program at Juno Therapeutics, and Robin Andrulevich, Chief People Officer, who has held key senior leadership roles at Amazon, Google, and Juno Therapeutics.

- **Leading Scientists**. We believe that in order to be successful in drug development for engineered cells, significant investments in infrastructure and cross-functional capabilities need to be coupled with deep scientific expertise in the cell types of interest within each program. Our leadership team includes multiple world-class scientists, including researchers who have made seminal discoveries in gene delivery, immunology, CAR T cells, gene editing, and stem cell biology. These include Drs. Richard Mulligan, Terry Fry, Ed Rebar, Chuck Murry, Sonja Schrepfer, Steve Goldman, and Jagesh Shah. We have surrounded this team of discovery scientists with drug developers experienced in advancing product candidates through the development process with expertise in areas such as pharmacology, toxicology, regulatory, clinical development, and clinical operations. These include Drs. Donna Dambach and Paul Brunetta, and Ms. Farah Anwar.
- **Experienced Manufacturing Scientists, Engineers, and Operators**. Since our founding, we have proactively assembled manufacturing sciences and operations expertise on our board, on our executive team, and across the company. Our manufacturing organization is led by Dr. Stacey Ma, an experienced executive with over two decades of in manufacturing leadership, contributing to the commercialization of over ten products across multiple modalities.
- **Board and Investors with Shared Long-Term Vision**. Our board of directors is composed of renowned company builders, scientists, drug developers, and investors, including Dr. Joshua H. Bilenker, Mr. Hans Bishop, Dr. Doug Cole, Dr. Steve Harr, Dr. Richard Mulligan, Mr. Robert Nelsen, Dr. Alise S. Reicin, Ms. Michelle Seitz, Dr. Geoffrey von Maltzahn, Ms. Maggie Wilderotter, and Dr. Patrick Yang. We have raised $705.5 million of capital to date and are supported by a group of renowned institutional investors such as ARCH Venture Partners, Flagship Pioneering, Canadian Pension Plan Investment Board, Baillie Gifford, The Alaska Permanent Fund, The Public Sector Pension Investment Board, F Prime, GV, and ADIA, amongst others. Our investors share our long-term vision of advancing engineered cells as medicine to change the lives of patients. This has enabled our strategy of consolidating technologies, assets, and people to expand the potential impact of our long-term vision.

Our **capabilities** enable us to take a comprehensive approach to the most important and difficult aspects of engineering cells. We are pursuing *in vivo* and *ex vivo* cell engineering and can leverage the synergistic proficiencies required to succeed in both approaches. We believe we can capitalize on the shared expertise and infrastructure between the platforms to maximize the potential success and the reach of our transformative therapies. We have built deep internal capabilities across a wide range of areas focused on solving the most critical limitations in engineering cells including:

- **Gene Delivery**. We believe our delivery technologies have broad potential, with both near-term and long-term applications across a number of indications. We are investing in technologies that allow payload delivery to specific cell types, increase the diversity and size of payloads, enable repeat dosing of patients, and increase the volume of distribution inside the body in order to target and access more diverse cells.
- **Gene Modification**. The ability to knock-out, knock-in, modify, and control expression of genes is fundamental to our platforms' success. We have hired world-class scientists with experience in all of these capabilities and across multiple modalities. We are building internal capabilities that enable high throughput cell engineering and gene editing and control using multiple technologies through use of natural systems, protein engineering, and synthetic biology. We believe our capabilities across multiple modalities will allow us to utilize the appropriate system for the biologic problem of interest. We are developing proprietary gene editing capabilities as well as seeking strategic partnerships in key areas.

- **Immunology**. The immune system can be harnessed to treat multiple diseases, and it can also limit the therapeutic effect of most cell- and gene-based therapies. Understanding and harnessing the immune system can have a broad impact across our *in vivo* and *ex vivo* cell engineering portfolio. We are investing in our people and technologies to harness the immune system, particularly T cells, for the treatment of cancer and other diseases. Additionally, our hypoimmune technology has the potential to hide cells from the immune system, unlocking the potential of allogeneic *ex vivo* therapies for the treatment of numerous diseases.
- **Stem Cell and Disease Biology**. Developing our platforms into therapies for patients requires a deep understanding of both cell and disease biology. Furthermore, we are investing significantly in our people and the technologies that enable the differentiation of pluripotent stem cells into mature cells that can be used as therapeutics. In each therapeutic area we intend to pursue, we have brought in-house senior world-class scientists to lead our efforts, and our research teams have significant experience in various areas of biology.

Our in vivo and ex vivo Cell Engineering Platforms

The advent of recombinant DNA technology in the 1970s ushered in a new era of therapeutics, enabling the synthetic manufacture of human protein therapies at scale for the first time. However, the critical inflection point occurred when key technological advancements eventually enabled the broad development of monoclonal antibodies with suitable therapeutic properties. These advancements, combined with progress in understanding disease biology, allowed biologics to become the second largest therapeutic class. We believe engineered cells are at a similar inflection point, with key recent technological advancements providing the potential for the broad applicability of this therapeutic class.

In vivo cell engineering

Engineering cells *in vivo* requires the development of both an appropriate delivery vector as well as a payload to effectively modify the cell. Advances in gene editing, gene regulation, and RNA biology have provided scientists with diverse payload options to modulate genome sequence and gene expression. These payloads need to be delivered in the form of DNA, RNA, proteins, and their complexes; however, the delivery of sufficient amounts of these novel payloads specifically to the desired cells *in vivo* remains a key limitation. AAV and LNPs have proven to be successful vectors for limited payloads and for some cell types in certain diseases, but their application is limited by issues related to lack of specificity, limited payload size and diversity, complex manufacturing, and immunogenicity.

Our goal for *in vivo* cell engineering is to repair and control the genes of any cell in the body. Our ultimate aim is to achieve the delivery of any payload, to any cell, in a specific and repeatable way. We believe that success in any one of these areas has the potential to unlock whole novel categories of medicines to treat a diversity of diseases. Our initial focus is on cell-specific delivery and on increasing the diversity and size of payloads. Our *in vivo* cell engineering platform harnesses fusogen technology, which targets cell surface receptors, and thereby can enable cell specific delivery for a meaningful number of different cell types. Using our fusogen technology, we have shown in preclinical studies that we can specifically target numerous cell surface receptors that, when combined with delivery vehicles to form fusosomes, allow cell-specific delivery across multiple different cell types.

Ex vivo cell engineering

Engineering cells *ex vivo* requires the ability to engineer and manufacture cells at scale and then deliver them to the patient, so that they engraft, function appropriately, and have the necessary persistence in the body. Advances in understanding cellular biology have led to successful, but limited, applications including bone marrow transplants and autologous CAR T cells. However, autologous therapies require a complex process of

harvesting cells from the patients, manipulating them outside the body, and returning them to the patient. Products utilizing this approach have had to grapple with significant challenges such as scalability, product variability, product quality, cost, and patient accessibility. More recently, scientific advances have led to the ability to generate induced pluripotent stem cells (iPSCs) and differentiate these iPSCs into functional cells for a range of cell types. In addition, some approaches use allogeneic cells, or cells derived from another person, to address some of the manufacturing challenges of autologous therapy. However, current efforts to translate these approaches into therapies typically require the use of immunosuppression to promote the necessary persistence of cells in the body, which in turn significantly limit their therapeutic potential.

Our goal for *ex vivo* cell engineering is to replace any cell in the body with cells that engraft, function, and persist over time, and to manufacture those cells cost-effectively at scale. Our *ex vivo* cell engineering platform utilizes our hypoimmune technology to create cells that can "hide" from the patient's immune system to enable persistence of allogeneic cells. We are striving to make therapies utilizing pluripotent stem cells with our hypoimmune genetic modifications as the starting material, which we then differentiate into a specific cell type, such as a pancreatic beta cell, before treating the patient. Additionally, for cell types for which effective differentiation protocols from a stem cell have not yet been developed, such as T cells, instead of starting from a pluripotent stem cell, we can utilize a allogeneic cell, differentiated cells sourced from a donor, as the starting material to which we then apply our hypoimmune genetic modifications. Our goal is to manufacture genetically modified cells that are capable of both replacing the missing cell and evading the patient's immune system. We are now applying our technologies to make cell products for the treatment of multiple diseases.

Our *in vivo* and *ex vivo* cell engineering technologies are built upon decades of foundational research at world-renowned academic centers of excellence such as Cornell, École normale supérieure de Lyon, Harvard, Inserm, Paul Ehrlich Institute, UCLA, UCSF, University of Rochester, University of Washington, and Washington University in St. Louis as well as many years of research and discovery at Flagship Pioneering.

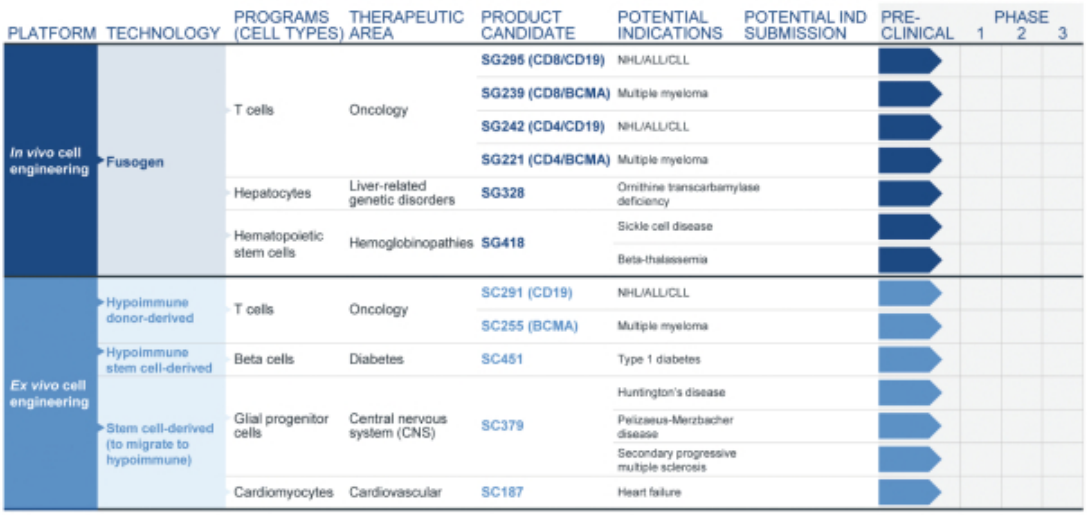
Our Portfolio Strategy

We believe the potential applications of our platforms are vast. To prioritize programs for our *in vivo* and *ex vivo* engineering pipeline we have used the following strategies:

- minimize biology risk where there is platform risk, or in other words, prioritize opportunities where success with our platform should lead to success in addressing the underlying disease;
- prioritize program investments in diseases where the strengths of our *in vivo* and *ex vivo* cell engineering platforms can address the key limitations of existing therapeutic approaches;
- focus on conditions of high unmet need, including the most grievous diseases; and
- prioritize efforts where success in one area begets success in others.

Our Pipeline

We are developing a broad pipeline of product candidates focused on creating transformative *in vivo* and *ex vivo* engineered cell therapies across a range of therapeutic areas. We are in the early stages of development across a broad pipeline of product candidates, all of which are currently in the preclinical stage of development and are summarized below:



SanaX

Our goal is to lead both the present and future of cell engineering and we are committed to making significant investments in research and other activities that will ensure a leadership position throughout the next decade. Towards this end we have established SanaX as a distinct research arm. SanaX research efforts are aimed at making fundamental improvements of existing technology and establishing new paradigms for gene and cell delivery that will ultimately lead to the development of completely new therapeutic modalities. Current SanaX research activities are focused on areas including cells as delivery vehicles, novel viral vectors, novel production approaches to current viral vectors, novel methods for enabling the exogenous control of transgene expression via small molecule drugs, and new paradigms for genetically manipulating specific immune response in order to engender immunological tolerance to specific antigens, cells, and organs.

Our *in vivo* Cell Engineering Platform

Overview

In vivo cell engineering aims to treat human disease by delivering a therapeutic payload to cells inside a patient's body to repair or control genes. Historically there have been four key challenges to *in vivo* cell engineering:

- Delivering any payload (such as DNA, RNA, proteins, organelles, integrating versus non-integrating, size),
- to any cell (by increasing the volume of distribution),
- in a specific (for instance just T cells), and
- repeatable way (such as achieving limited immunogenicity to allow re-dosing).

Our *in vivo* cell engineering platform is focused on engineering fusogens that, when combined with delivery vehicles, can effectively deliver a payload to a desired cell or location in the appropriate quantities *in vivo*. The combination of a fusogen with a delivery vehicle referred to as a fusosome. We believe our platform provides us with the flexibility to deliver a wide range of payloads to make different modifications for different diseases, as well as delivery vehicle options to address volume of distribution and re-dosing, which could fundamentally expand the treatment potential of *in vivo* therapies.

Our Approach to Building our in vivo Cell Engineering Platform

We have approached the development of our *in vivo* cell engineering platform by investing in solutions to overcome the key challenges outlined above:

- **Delivery.** We believe the critical limitation for *in vivo* cell engineering is delivery, and therefore, we are investing significantly in delivery technologies, including our fusogen technology, which is designed to enable both cell-specific delivery and delivery of diverse payloads. We were founded with core technology in this area which was the product of a multi-year effort by a Flagship Labs innovation team at Flagship Pioneering led by Dr. Geoffrey von Maltzahn, one of our board members. This effort is led by Dr. Jagesh Shah, our VP, Gene Therapy Technologies.
- **Gene modification.** There has been substantial recent progress in gene modification and the field is now at the point where virtually any desired modification can be performed *in vitro*. However, no single technology or platform is optimal for all possible applications. To this end, we are developing capabilities across multiple technologies and investing to develop our own novel technologies to be applied on a case-by-case basis, an effort that is led by Dr. Ed Rebar, our Senior Vice President, Chief Technology Officer.
- **Manufacturing.** We are investing proactively in process development, analytical development, CMC regulatory, and other manufacturing sciences in order to enable scalable manufacturing of our *in vivo* therapies and ensure broad access. This effort is led by Dr. Stacey Ma, our Executive Vice President, Technical Operations.

Our Approach to Building our in vivo Cell Engineering Portfolio

We have prioritized cell types for our programs where:

- existing proof of concept in humans and animal models demonstrates that *in vivo* cell engineering should have a clinical benefit;
- high unmet need can be addressed by modifying a particular cell type;
- delivery is the most critical bottleneck, such that delivering payloads specifically to the target cell type could lead to highly differentiated and transformative therapeutics; and
- an opportunity to apply the technology more broadly exists, which creates the potential for more medicines if successful (for example, delivery to hepatocytes unlocks potential to treat many diseases with different payloads).

Based on this prioritization, we are initially focused on the following cell types:

T Cells

Autologous CAR T therapy has shown impressive potential in oncology, but complexity in manufacturing, amongst other things, has limited its broad impact. Our fusosomes have the potential to deliver a CAR specifically to the patient's cells *in vivo*. This approach would essentially use the patient's body as a bioreactor to manufacture the CAR T cell, thereby addressing the manufacturing complexities of existing approaches. It may also avoid the safety issues associated with lymphodepletion prior to CAR delivery, which is required for *ex vivo* CAR T therapy. Finally, because we do not need to manipulate, grow, and cryopreserve the T cells outside the body during the manufacturing process, we have the potential for more consistent and higher quality CAR T cells.

Hepatocytes

While multiple modalities exist that enable delivery of genetic material to liver cells, including AAV and LNPs, these approaches have limitations, including a non-integrating payload, limited payload size, pre-existing

immunity, and lack of cell specificity. Our fusogen technology, which can enable delivery of a payload specifically to hepatocytes in the liver, can potentially address all or some of these limitations. We have initially chosen to focus on severe genetic diseases where treating a pediatric patient is likely to lead to a significant clinical benefit, as our technology can integrate the new DNA into the target cell's chromosomal DNA providing sustained payload expression as the hepatocytes of the pediatric patient divide and amplify during organ growth.

Hematopoietic Stem Cells

There has been early clinical success across several gene editing platforms in modifying hemoglobin expression and providing a potentially curative treatment to patients with sickle cell disease and beta-thalassemia. However, complicated manufacturing processes and high-dose conditioning chemotherapy requirements may limit their clinical impact. Our technology has the potential to deliver the payload to modify hemoglobin production directly to the cells inside a patient's body, eliminating both the complicated cell manufacturing and the need for high-dose chemotherapy.

History of in vivo Cell Engineering and Current Limitations

Starting several decades ago, the nascent field of gene therapy focused on experimenting with different means of transmitting genetic payloads via viral vectors. Seminal work by Dr. Richard Mulligan, our Executive Vice-Chairman and Head of SanaX, and colleagues established the promise of gene therapy by delivering genes into host chromosomes, thereby correcting genetic deficits. In the late 1990s and early 2000s, an incomplete understanding of virus/vector-biology resulted in serious safety setbacks, which stunted progress in the field. More recently, significant investments have resulted in improved safety and efficacy of viral vectors. However, most approaches continue to concentrate on adapting the innate capabilities of various viruses to transmit these payloads. Currently, over one hundred clinical trials that utilize viral vectors are underway for a variety of monogenic diseases, infectious diseases, complex neurodegenerative disorders, and cancers.

Profound benefits have been realized in cases where there is direct correlation between the biological activity transmitted by the therapy and the genetic activity that is missing in the patient. An example of this is providing the missing activity of a gene in a patient with a monogenic recessive disorder. This understanding of disease biology has led to the development and commercialization of three *in vivo* cell engineering therapies since 2012: Glybera (alipogene tiparvovec), which was approved by the European Medicines Agency in 2012 for the treatment of LPL deficiency; Luxturna (voretigene neparvovec), which was approved by the U.S. Food and Drug Administration (FDA) in 2017 for the treatment of a rare retinal disease; and Zolgensma (onasemnogene abeparvovec), which was approved by the FDA in 2019 for the treatment of the most severe form of spinal muscular atrophy. All three therapies use AAV vectors, which are broadly used by gene therapy researchers due to their broad tissue tropism, lack of pathogenicity, and ability to target both dividing and non-dividing cells. While these therapies have had a categorical impact on their target patient populations, they have only scratched the surface of the potential of *in vivo* cell engineering, with success limited to a small number of patients.

Broad impact of gene therapies has been limited by challenges within three key areas:

Payload delivery is limited by*:*

- **Limited Cell Specificity**. Most commonly used AAV vectors have broad tissue specificities. If a specific type of cell needs to be targeted within a tissue or organ to achieve the desired therapeutic effect, a lack of targeting specificity can result in a limited amount of payload reaching the desired cell. Moreover, the transduction of non-target cells can necessitate the use of high doses of vector to achieve the maximal therapeutic effect in the desired target tissue, which in turn can lead to toxicities due to the transduction of non-target cells.
- **Limited Volume of Distribution**. Volume of distribution refers to the ability of a therapeutic to reach various tissues. While AAV vectors can be used to systemically deliver payloads to certain tissues,

such as muscle, in the case of other therapeutically important targets, such as cells of the CNS, only a small proportion of cells can be transduced.

- **Immunogenicity**. Most viruses used as vectors elicit an immune response in the patient, causing the patient's immune system to attack the vector. Previous exposure to the virus used as a vector increases the immune response and may limit the benefit or create safety issues for the patient. Many patients, for example, demonstrate pre-existing antibodies to specific AAV serotypes which can limit transduction efficiencies, and therefore clinical benefit. Furthermore, once an AAV vector is administered to a patient, in most cases the infection leads to an immune response that precludes the ability to re-dose.

Genome modification is limited by:

- **Payload Size and Type Restrictions**. The natural genome size of a virus vector imposes a discrete limit on the amount of biological information that can be transmitted. Currently, there exist a number of important disease targets that require the delivery of payloads too large for AAV, which has a maximum payload capacity between 4.5-5kb. In addition to the need to deliver sequences encoding a desired protein that may not fit into an AAV vector, the increasing interest in the use of gene-editing machinery to correct specific gene defect via homologous recombination or transposition will require delivery vehicles capable of a larger payload capacity than is currently available. For most viruses currently used for *in vivo* therapy, the payload type is generally limited to the specific genetic material of the virus (e.g. DNA or RNA). The ability to deliver additional payloads, such as proteins, could unlock novel therapeutic opportunities.
- **Durability Limitations**. Obtaining the persistence of the desired level of expression over long periods of times can be problematic, due to both immune reactions and the silencing of vector expression. In cases where the target cells are undergoing replication, as can be the case in pediatric patients for example, durability of expression by non-integrating vectors can also be limited by the gradual loss of vector sequences as infected cells replicate.

Execution in manufacturing is limited by:

- **Complex manufacturing**. Today, the adage of "the process is the product" applies with particular relevance to these *in vivo* therapies. These therapies are relatively more complex to characterize and control during manufacturing compared to other common biologically derived modalities such as recombinant proteins and antibodies. Similarly, process and analytical sciences that can enable significant scale-up for *in vivo* therapies are still well behind that of proteins and antibodies. Current vector manufacturing has limited scale and yield, which limits access for patients.

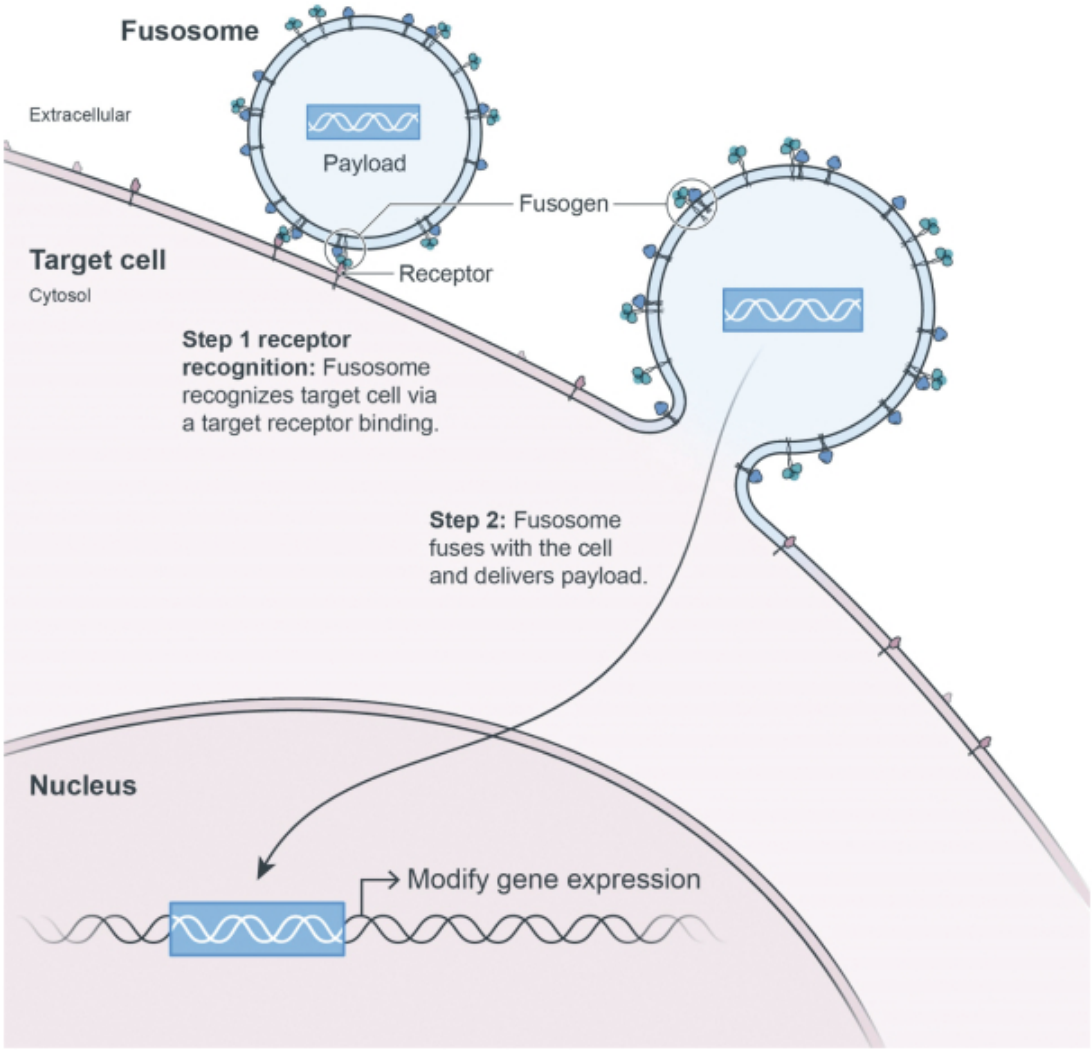
Our Solution – Fusogen Technology

To address some of the existing challenges of *in vivo* cell engineering, we are developing our fusogen technology by engineering proteins found in nature to enable the delivery of any payload to specific cells.

Background on Fusogens

Fusogens are a well-studied class of naturally occurring proteins that mediate the trillions of cell-to-cell and intracellular fusion events occurring in the human body every second. In 2013, the Nobel Prize in Physiology or Medicine was awarded for the elucidation of the roles of fusogens in mediating intracellular trafficking in nature. First, fusogens enable recognition of a specific target membrane. Second, they promote membrane fusion by acting as thermodynamic engines for opposing membranes, pulling them together and thereby promoting fusion.

Our Fusogen Technology



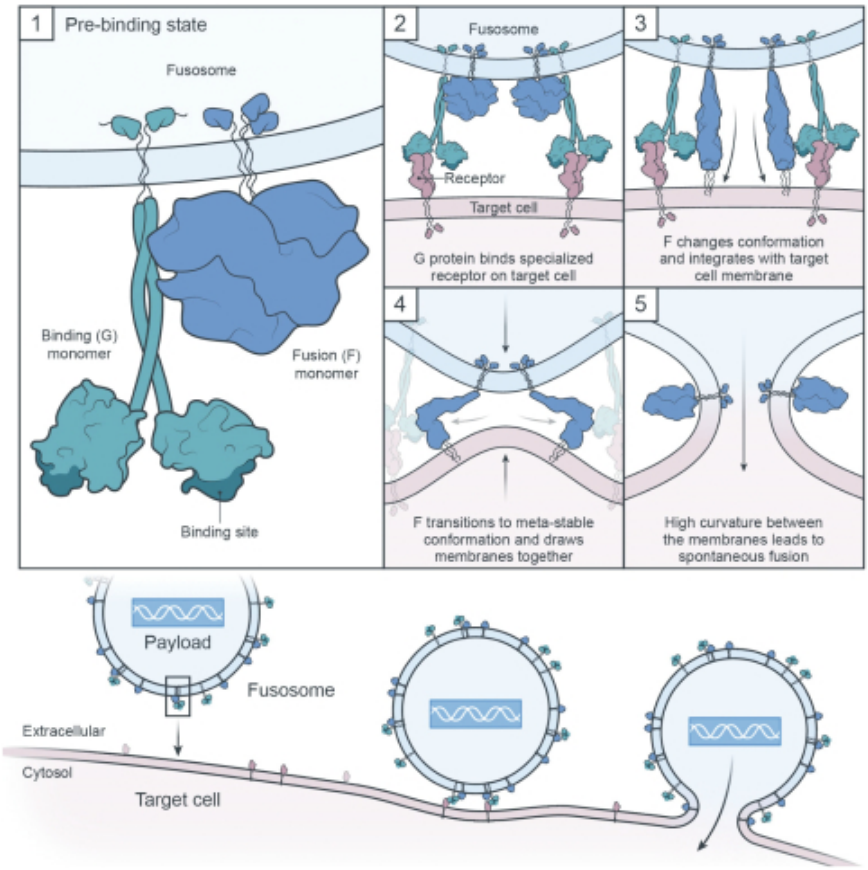
Fusogens are widely used by enveloped viruses to confer target specificity and to drive the process of introducing material in target cells. A well-known current example of a viral fusogen is the SARS-CoV-2 coronavirus that causes COVID 19. This virus uses its spike glycoprotein to target cells expressing the ACE2 receptor and to fuse with the cell membrane of host cells and release the viral genome into the cell. Many other biological processes utilizing fusogens for the delivery of complex, diverse, and large payloads to specific cell types have also been found. For example, the process of fertilization occurs as a result of a sperm fusing specifically with the egg and the transfer of the paternal genetic material to the oocyte. Similarly, the fusion of myoblasts with other myoblasts is essential for the formation, growth, and regeneration of skeletal muscle. The myoblast delivers an entire novel nucleus to the muscle cell, highlighting the utility of this system to deliver quite large and complex payloads. These and a myriad of other processes rely on this vast class of protein machines.

Applying fusogens to in vivo cell engineering

Building on both our team's deep understanding of fusogen biology and extensive research in protein engineering, we are developing a technology designed to allow us to engineer the biological properties of these naturally occurring proteins. In doing so, we are developing a highly modular system that can specifically target numerous cell surface receptors and thereby deliver diverse therapeutic payloads to a variety of cell types.

Our current programs use fusogens derived from a virus from the paramyxoviridae family. The fusogen protein complex is comprised of two proteins: the receptor recognition G protein and membrane fusion F protein. The combination of a fusogen with a delivery vehicle such as a gene therapy vector or lipid vesicle is referred to as a fusosome. The diagram below depicts the mechanism of fusogen-mediated membrane fusion. This protein complex is found on the outer membrane of the fusosome (1). As the fusosome interacts with cells, only those with the target receptor will engage the G protein of the fusogen complex (2). The binding of the G protein to the receptor stimulates the F protein to initiate its membrane fusion activity. The F protein first partially unfolds to bind to the target membrane (3) and then refolds to bring the target and fusosome membranes in proximity (4), to ultimately promote membrane fusion (5), and subsequent payload delivery.

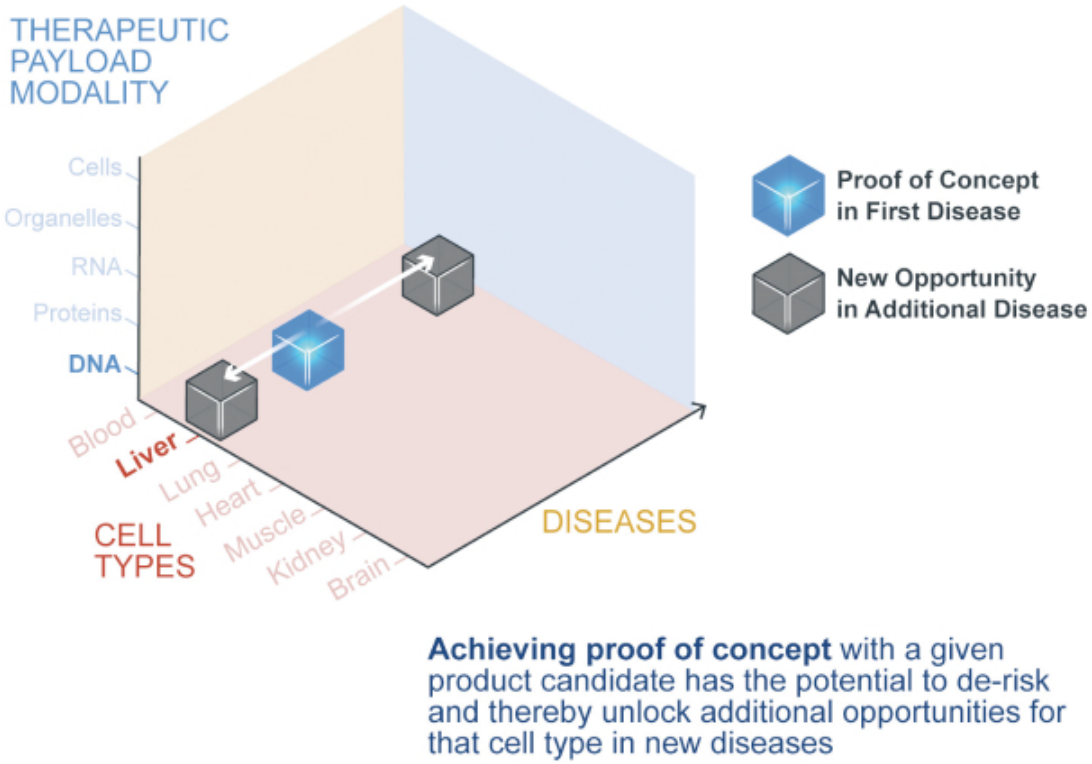
Mechanism of Fusogen-Mediated Membrane Fusion



The G protein has the potential to be engineered for a high degree of cell selectivity. To accomplish this, we first engineer the G protein so that its natural binding domain is no longer functional. We then add a targeting scaffold to the G protein that re-directs the fusogen to a cell-specific receptor. The targeting scaffold can be any one of naturally occurring or synthetic single chain affinity binders, such as single chain variable fragment

(scFvs), camelid single-domain antibodies (VHHs), or designed ankyrin repeat proteins (DARPins). Finally, we iteratively rebuild our fusogen using insights from protein engineering to improve titers, or potency. By serially swapping different targeting scaffolds we believe we can target multiple different cell surface receptors, giving us the ability to target many different cell types.

Re-targeting the specificity of the G-protein is a challenging protein engineering problem, since altering the protein structure directly impacts all aspects of biological function. However, once we have achieved the desired specificity and potency for a certain cell type, we have the ability to deliver a variety of payloads to that cell. This feature of the technology should allow us to create multiple therapies targeting a variety of diseases with each successful fusogen. As a result, we believe success with any initial therapy targeting a given cell type may meaningfully accelerate lead candidate selection for other indications and increases our confidence that we will be successful with subsequent therapies targeting that same cell type. For example, a successful hepatocyte-targeting fusogen applied to a fusosome for a given monogenic liver disease meaningfully accelerates lead candidate selection and increases our confidence that we will be successful with subsequent therapies.



Addressing key in vivo cell engineering challenges

We believe that our *in vivo* cell engineering platform enables us to address key challenges associated with successful *in vivo* cell engineering – payload delivery, genome modification, and execution in manufacturing:

Payload delivery

High cell specificity for diverse cell types. We believe we can engineer fusogens with cell specificity to maximize on-target effects, while reducing or eliminating off-target risk. In our research, we have used fusogens to successfully target numerous cell surface receptors and cell types. As an example, in preclinical studies, we have demonstrated that our fusogens can specifically target CD8, CD4, or CD3 T cells (see the subsection titled

"—Our *in vivo* Cell Engineering Pipeline—T cell Fusosome Program"), potentially enabling delivery of a payload *in vivo* to transduce specific T cell populations and enabling targeted cell killing through the creation of CAR T cells.

Engineering Fusogens to Target a Variety of Cell Types

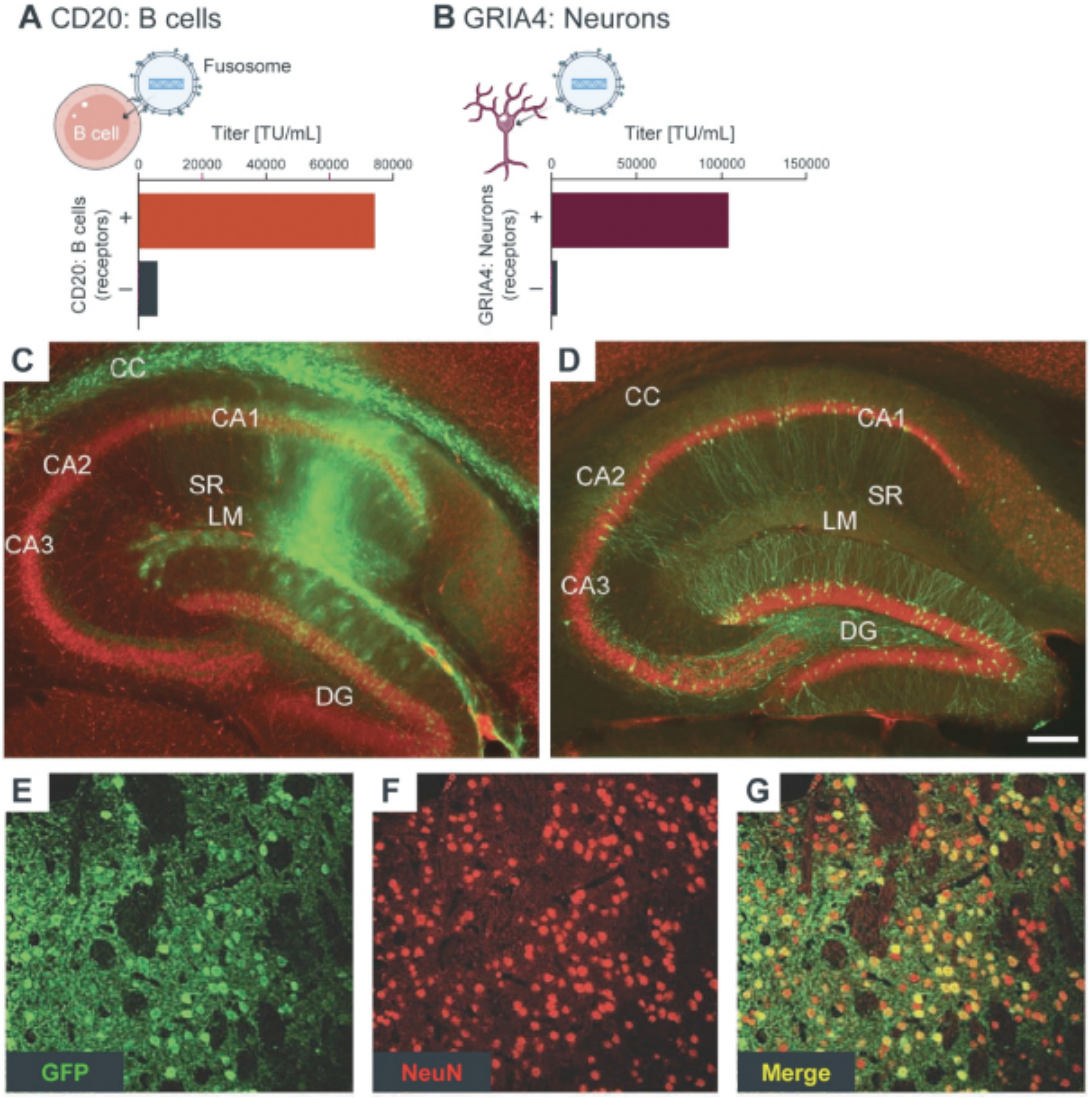


Figure A depicts the increased transduction efficiency (measured in titer) of a fusogen engineered for targeting CD20 on receptor enriched B cells as compared to B cells that were negative for the receptor. Similar transduction efficiency was also observed in an engineered fusogen targeting a neuronal surface protein, GRIA4, as depicted in Figure B. Neuronal-specific transduction of the Green Fluorescent Protein (GFP) payload in the murine hippocampal region was observed using a fusosome specific for GRIA4 when injected into the hippocampal space (as depicted by the green coloring in Figure D) compared to widespread transduction when using a VSV-G fusogen (Figure C). Confirmation of neuron-specific targeting of the fusogen can be observed by the colocalization of GFP positive cells (green, Figure E) with the presence of a neuron-specific protein (NeuN in red, Figure F) and considering the high degree of overlap (colocalization seen as yellow, Figure G). Figures C-G from Anliker et al, Nature Methods, 2010.

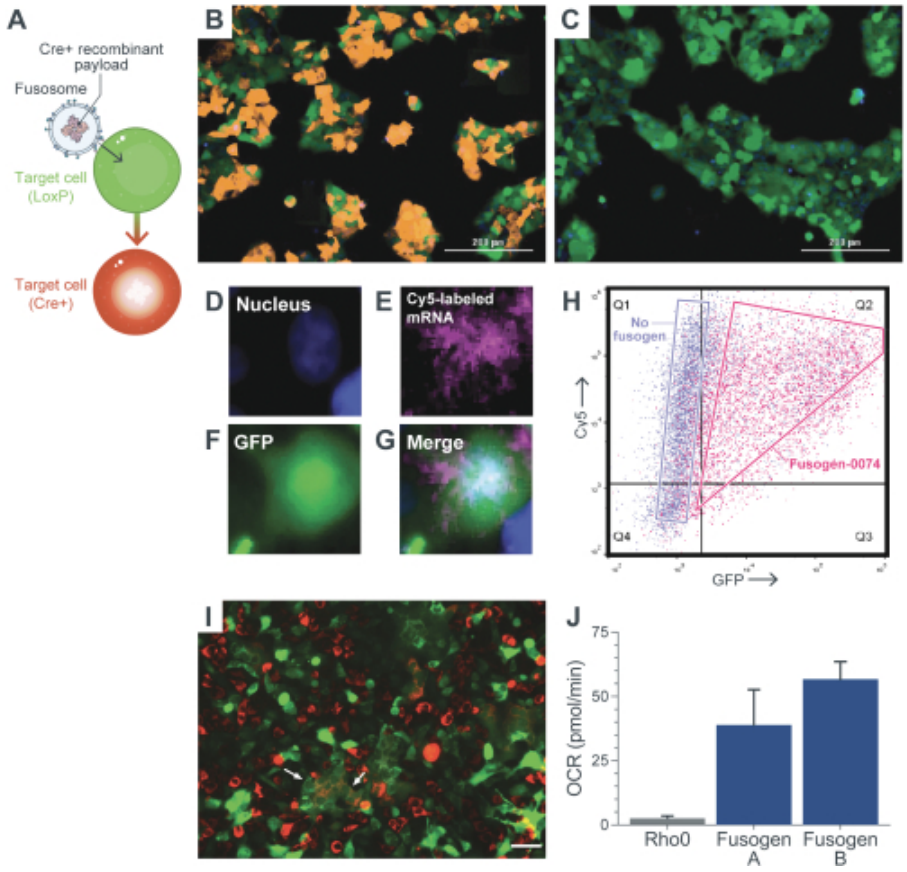
Broad volume of distribution. Our SanaX business unit is actively working on next generation approaches to broaden the volume of distribution, including exploring cells as fusosome delivery vehicles.

Immunogenicity. We have initially focused our efforts on selecting fusogens for which the general population does not have pre-existing immunity. We are also working with a number of fusogens that exist naturally in humans, as neither these native fusogens nor re-targeted versions are likely to induce an immune response, making re-dosing more readily attainable.

Genome modification

High degree of payload flexibility. We have successfully delivered a variety of payloads including DNA, RNA, and proteins, using viral delivery methods and have used cells engineered to express specific fusogens to deliver organelles to a broad range of target cells. We believe this provides us the opportunity to potentially intervene in a wide range of human diseases.

Diverse Payload Delivery via Fusosomes



Cre protein loaded cell-based fusosomes delivered recombinase activity to cells that activated the expression of a red fluorescent protein in cells already expressing green fluorescent protein, seen as orange cells (Figures A,B). In contrast, fusosomes in which the fusogen is not included, but only contain Cre protein, showed no recombinase activity, or no orange cells (Figure C). Fusosomes loaded with fluorescently labeled RNA showed cellular localization and green fluorescense consistent with cytoplasmic delivery and translation of delivered RNA (Figures D-G). Flow cytometric analysis showed cellular uptake of fluorescent RNA (Cy5, Y axis) and

GFP expression from the RNA (GFP, X axis) (Figure H). Importantly, the inclusion of a fusogen in the fusosome dramatically increased GFP expression due to the translation of the RNA. Cell-based fusosomes delivered red fluorescent mitochondria with respiration activity to cells with respiration-negative green mitochondria, (Rho0 cells) shown in Figure I. An increased oxygen consumption rate (OCR), due to respiration, was seen in Rho0 cells after Fusosome-mediated delivery of active mitochondria using two distinct fusogens (Figure J).

Expanded payload capacity. Our current fusosome has approximately twice the genetic capacity of the commonly used AAV vectors. This greater payload size increases the potential of addressing defects in larger genes or conditions where delivery of multiple genes may be required. Our research efforts include other fusosomes with even larger payload capacities. For example, utilizing a cell as the delivery vehicle can confer an almost limitless capacity.

Durability limitations. We can engineer our fusosomes to integrate into the target cell genome or to deliver non-integrating payloads. Integrated payloads allow the genetic information transmitted by the vector to be propagated durably with the genetic material of the target cell when it undergoes cell division. Thus, conditions that require this type of genetic propagation, such as genetic diseases in essential genes functioning in growing tissues or in T cells expanding after recognizing a target antigen, can be better addressed by this approach. Our preclinical studies have also demonstrated the ability to deliver gene-editing machinery, such as CRISPR, with this system. In this case, the entire payload does not integrate, but instead, it transiently delivers the machinery to permanently modify the DNA in the target cell. Thus, we are able to make targeted, specific, and durable repairs to the genome of the target cell.

Execution in Manufacturing

Manufacturing of cell and gene therapies remains complex due to incumbent challenges in areas such as product consistency, process robustness, and scalability. Our fusosome approach has significant advantages over current solutions. Targeted delivery of complex payloads *in vivo* has the potential to create autologous, gene-modified cells without the complexities of *ex vivo* manufacturing. We believe that these therapies have the potential to have greater product consistency, improved scale, and lower costs than current autologous solutions. Currently, there are a number of therapies either approved or in development for *ex vivo* modification of autologous T cells and autologous HSCs. Additionally, vectors that deliver payload to random or off target cells not only create the risk for toxicities, but they necessitate meaningfully larger doses in order to ensure adequate delivery to the targeted cells. Our targeted delivery offers the potential for meaningfully lower doses, which could decrease scale needs in manufacturing.

Further, we are investing across a number of areas to improve manufacturing scale, costs, consistency, and product quality in the near-term and long-term. Manufacturing novel fusosome compositions is complex. Since our inception, we have invested in scientific and process engineering expertise to improve manufacturing of our therapies. Examples include novel stable producer cell lines, novel processes and analytical technology, as well as incorporating suspension bioreactors into our process early in the research phase. By building out these capabilities early, we hope to improve the probability of technical success for our programs and have a thoughtful approach to deliver consistent supply while managing cost of goods with the goal of improving patient access.

Our *in vivo* Cell Engineering Pipeline

T cell Fusosome Program

Our most advanced CAR T cell fusosome product candidates (SG242, SG295) target CD19+ cancer cells, including NHL, CLL, and ALL. We intend to develop these product candidates with the goal of filing an IND as early as . In parallel with the CD19 CAR product candidates we are developing other CAR T cell therapies, including BCMA product candidates for the treatment of multiple myeloma (SG221, SG239) as well as other targets on a spectrum of cancers.

Background on B Cell Malignancies

B cell malignancies represent a spectrum of cancers including non-Hodgkin lymphoma (NHL), chronic lymphocytic leukemia (CLL), acute lymphoblastic leukemia (ALL) and multiple myeloma (MM) and result in over 100,000 deaths per year in the United States and Europe.

NHL is the most common cancer of the lymphatic system. NHL is not a single disease, but rather a group of several closely related cancers. Although the various types of NHL have some things in common, they differ in appearance under the microscope, genetics, growth patterns, prognosis, and treatment. Over 77,000 cases of NHL are diagnosed annually in the United States, and 85% derive from B cell lineages, which express CD19. B cell NHLs are a large group of cancers that are typically divided into aggressive (fast-growing) and indolent (slow-growing) types. The most common histologic type of aggressive lymphoma, and most common subtype of NHL overall, is diffuse large B cell lymphoma (DLBCL), representing approximately 40% of new cases annually. Unlike indolent lymphomas, which have a median survival time as long as 20 years, DLBCL, if left untreated, may have survival measured in weeks or months.

CLL is the most common type of leukemia, and it occurs most frequently in older individuals, with diagnoses in persons under 30 years of age occurring only rarely. Each year, approximately 20,000 patients are diagnosed with CLL in the United States. Nearly all CLL develops from B cells that express CD19. Approximately 75–80% of individuals with CLL have standard risk disease at diagnosis, and for these patients the level of disease burden determines both prognosis and the need for immediate treatment or “watchful waiting” before the initiation of any therapy. Over time, CLL develops poor risk features, including expression of CD38, ZAP70, unmutated immunoglobulin heavy chain sequences, cytogenetic abnormalities, or gene mutations. Approximately 20–25% of CLL patients can initially present with poor risk disease. Median progression-free survival in these high-risk groups is often less than 12 to 18 months after frontline therapy, and less than 12 months in R/R disease.

ALL is an uncontrolled proliferation of lymphoblasts, which are immature white blood cells. The lymphoblasts, which are produced in the bone marrow, cause damage and death by inhibiting the production of normal cells. Approximately 6,000 patients are diagnosed with ALL in the United States each year, and although just under half of the new diagnoses are in adult patients, the vast majority of the approximately 1,500 deaths per year occur in adults. There are two main types of ALL, B cell ALL and T cell ALL. Approximately 80% of cases of ALL in the United States and Europe are B cell ALL, which almost always express the CD19 protein. The five-year overall survival in adults over the age of 60 with ALL is approximately 20%, and in patients with R/R ALL after two or more lines of therapy, the median disease-free survival is less than six months. B cell ALL is the most common cancer in children. Although children with ALL fare better than adults, children with R/R disease have poor outcomes. Because of the frequency, ALL remains a leading cause of death due to cancer in children.

Multiple myeloma is a cancer of the plasma cells, which typically express a protein called B Cell Maturational Antigen (BCMA). Plasma cells are B cells that have matured to specialize in the production of antibodies. As plasma cells are primarily found in the bone marrow, cancerous plasma cells usually generate tumors in bone, and infrequently appear elsewhere. Multiple myeloma is a condition in which these plasma cells become malignant, with a single clone growing at an uncontrolled pace. These myeloma cells secrete large quantities of the same antibody, and patient symptoms can develop from the myeloma cells crowding out other plasma and bone marrow cells, leading to increased risk of infection, risk of bone destruction, and kidney disease. Multiple myeloma is the second most common hematologic malignancy making up approximately 2% of all cancers, accounting for over 32,000 new cases per year. Despite many recent advances in therapy, there is a lack of curative treatments. Thus, this form of cancer represents an area of high unmet medical need, with greater than 12,800 deaths estimated to occur in 2020.

Current Treatment Landscape and Unmet Need

First line therapy for NHL typically consists of multi-agent cytotoxic drugs in combination with the monoclonal antibody Rituxan. In younger patients with NHL who have good organ function, high dose chemotherapy followed by stem cell transplantation is often used. Patients often relapse, however, and over the last three years, several therapeutics have been approved in the United States for the treatment of patients with R/R NHL who have received prior therapies. These approved therapies include CD19 CAR T therapies tisagenlecleucel and axicabtagene ciloleucel, CD19 antibody drug conjugate therapy polatuzumab vedotin, and CD19 antibody tafasitamab.

Newly diagnosed CLL patients are often treated with targeted therapies such as BTK inhibitors, PIK3 inhibitors, BCL-2 inhibitors, or monoclonal antibodies targeting CD20, or CD52 in combination with chemotherapy. However, most patients treated with these regimens become refractory. Numerous drug candidates are in clinical development for the refractory patients, including next-generation kinase inhibitors and both autologous and allogeneic CAR T therapies targeting CD20 and CD19.

Cure rates for ALL patients have continued to increase over the last four decades, with pediatric ALL cure rates reaching greater than 80% in developed countries. This progress has been enabled by advances in combination chemotherapy, monitoring of minimal residual disease, expanded use of kinase inhibitors for Philadelphia chromosome–positive ALL, and the recent approval of Kymriah for R/R pediatric ALL. Adult patients fare much worse, however, with 5-year overall survival rates of approximately 20%, and there are still significant challenges managing R/R disease across all age groups. Multiple therapeutic candidates are in development for these R/R patients, including proteasome inhibitors, antimetabolites, JAK inhibitors, monoclonal antibodies, as well as autologous and allogeneic CAR T candidates.

First line therapy for MM is induction and high-dose chemotherapy followed by a potential stem cell transplant. There are no curative treatment options for MM patients and the standard of care for R/R MM includes immunomodulary agents, proteasome inhibitors, monoclonal antibodies, cytotoxic agents, and hematopoietic stem cell transplant. Despite the recent advancement in available therapies for disease management, the 5-year overall survival rate remains approximately 50%. To this end, several groups are investigating autologous and allogeneic CAR T cell therapies for R/R MM. BCMA is among the most promising antigens used to target MM, with multiple late-stage clinical trials ongoing. Novel treatments with other mechanisms of action are also under development, including bispecific T cell engagers, next-gen antibodies, and antibody drug conjugates.

As highlighted above, recent therapeutic advances across R/R B cell malignancies have led to a variety of treatment options and better patient outcomes. In particular, autologous surface protein directed CAR T therapies have been highly effective in certain subsets of patients with R/R disease. However, not all patients have access to novel therapies, and even with them, many patients will ultimately relapse and succumb to their cancer, resulting in 100,000 deaths per year in the United States and Europe across these indications.

There are two outstanding challenges that have limited utilization of these CAR T therapies and their impact on broader groups of patients.

Relapse. The emerging post-approval data with tisagenlecleucel and axicabtagene ciloleucel have indicated that there are two broad categories of relapse. One involves loss of CD19 on malignant cells resulting in tumor escape. This finding was initially established for ALL and is the cause of relapse after CAR T cells for roughly half of patients. More recent data indicate that low antigen expression contributes to the lack of response in some patients with NHL. The second pattern of relapse relates to suboptimal CAR T cell functionality (poor expansion, poor persistence, T cell exhaustion) resulting in relapse of cancer that retains the targeted antigen. Unfortunately, re-infusion of the same CAR T cell product has had limited benefit in these patients although treatment with a different CAR T cell has demonstrated some promise in the context of ongoing clinical trials.

Manufacturing. The manufacturing process for a patient-specific product is complex, leading to limited access due to both infrastructure and cost considerations. As such, approved CAR T cell therapies have not been available to all patients in need of these highly effective therapies. Even for patients who are fortunate enough to have access, inevitable delays (often a month or more) in manufacturing may prevent use of therapy in patients with rapidly progressing malignancies. There are groups that are seeking to overcome access limitations by using healthy donor-derived, or allogeneic, CAR T cells instead of patient T cells., This approach yields off-the-shelf therapeutics that can be manufactured consistently, but questions remain around efficacy and durability, largely due to the inability to effectively control the host versus graft response with concern for eventual rejection of these products. As will be discussed in the subsection titled "—Our *ex vivo* Cell Engineering Pipeline," our *ex vivo* allogeneic T cell program also seeks to address this host versus graft response.

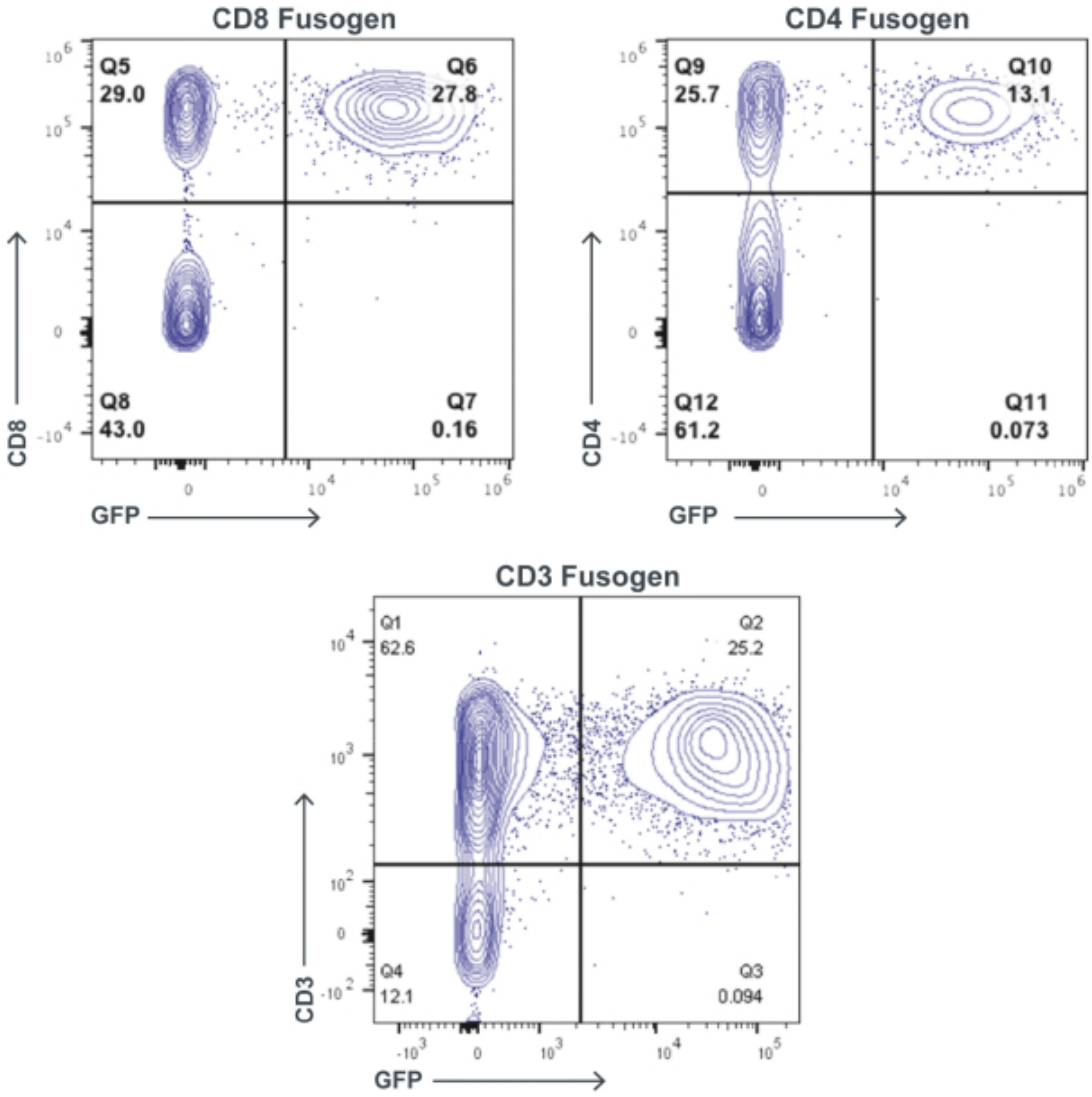
Our T Cell Fusosome Approach

Our T cell fusosome approach provides us with an opportunity to develop potential product candidates to expand access to CAR T cell therapy to many more patients in need. In addition, we believe the ability to deliver a payload encoding a CAR to a T cell inside the body has the potential to improve effectiveness over *ex vivo* manufactured CAR T cell products. Experience thus far has demonstrated that both CD8+ and CD4+ T cells contribute to the CAR T cell response. Thus, the fusosome programs we are developing will deliver the CAR gene using fusogens that directly and specifically target the CD8 co-receptor or the CD4 co-receptor on T cells following a single intravenous injection. These approaches should result in the generation of therapeutically active CAR T cells without the complexities and delays associated with the process of T cell collection and *ex vivo* manufacturing. Furthermore, the *ex vivo* expansion in the presence of high cytokine concentrations, while necessary for the manufacture of approved CAR T cell products, also contributes to marked changes in T cell quality that may not be therapeutically beneficial. The generation of a CAR T cell within the natural physiological environment has the potential to improve the quality of the CAR T cell generated, potentially improving both efficacy and the side effect profile. Finally, the effectiveness of *ex vivo* manufactured CAR T cells is dependent on the administration of a lymphodepleting preparative regimen prior to infusion to facilitate expansion of the CAR T cell product, which can have meaningful adverse safety implications. We do not expect to need a lymphodepleting regimen prior to *in vivo* delivery of the CAR gene, as our goal is to expose our fusosomes to as many T cells in the body as possible.

Preclinical Data

Our preclinical data have demonstrated that fusosomes can deliver a genetic payload specifically and efficiently to human T cells in culture and in immunodeficient mice with intraperitoneally injected human peripheral blood mononuclear cells (PBMC) and fused with a single dose of a fusosome. The T cells can be categorized into functional subsets based on the expression pattern of cell surface molecules. CD3 is a protein expressed on all T cells, CD4 is expressed on the Helper T cells that primarily activate T and B cells to carry out their function, and CD8 is found on cytotoxic T cells that primarily kill cancerous or virally infected cells. We generated fusogens against these three cell-surface molecules and have demonstrated that we can deliver a marker gene to cells bearing these cell surface proteins *in vitro*.

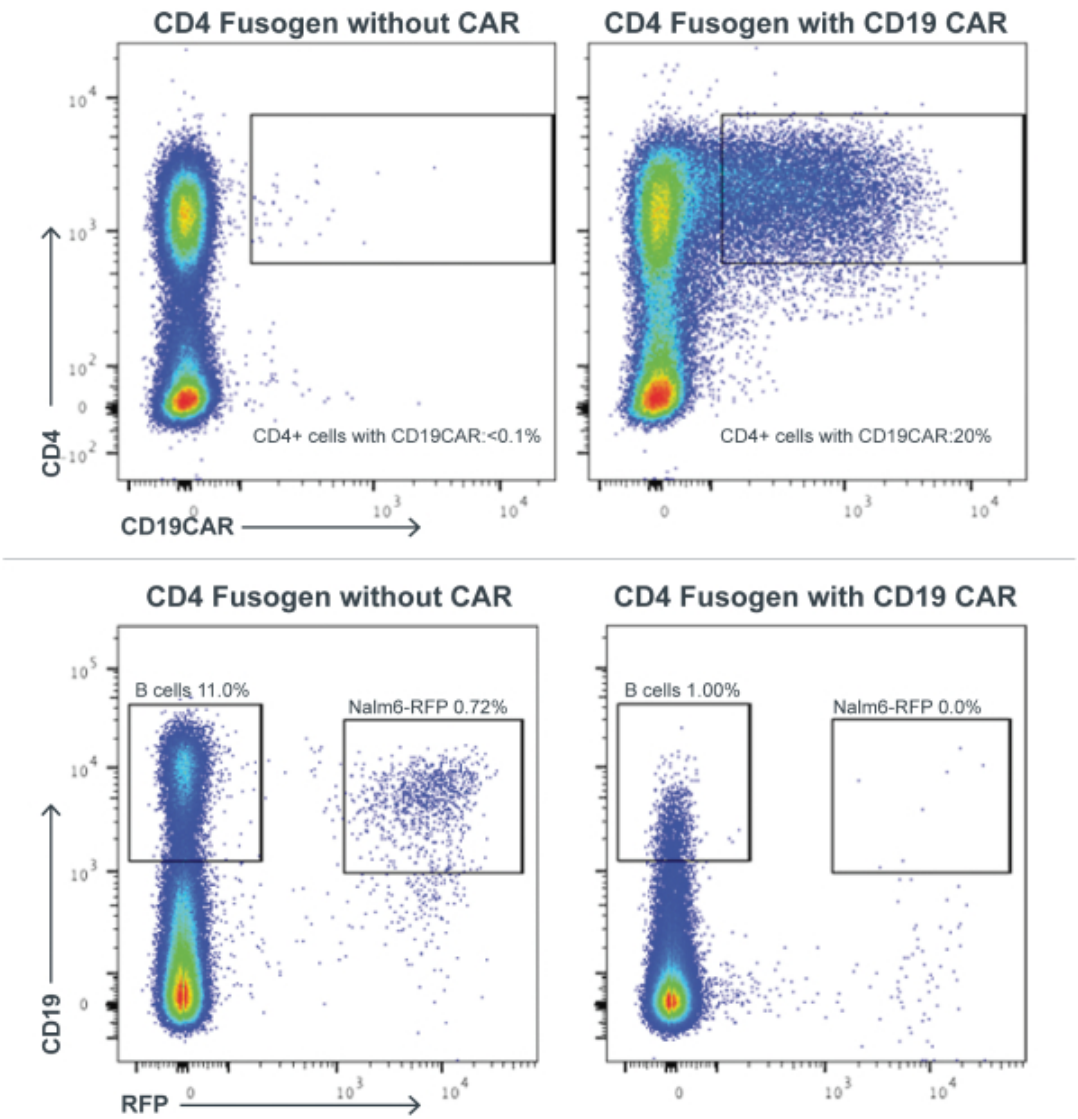
Fusogens Demonstrate the Ability to Target Multiple T Cell Subtypes



Fusosomes containing a gene that encodes a fluorescent marker protein called GFP (used to identify cells have been genetically modified by the fusogen) can efficiently and specifically deliver GFP to T cells in culture (CD8, CD4, and CD3). Expression of GFP is restricted to the population of T cells that express the specific T cell receptor targeted by the fusogen (CD8, CD4, or CD3).

We have further established that fusosome delivery of a CD19 CAR gene to CD4 or CD8 T cells results in killing of human B cells and CD19+ leukemia cells in culture:

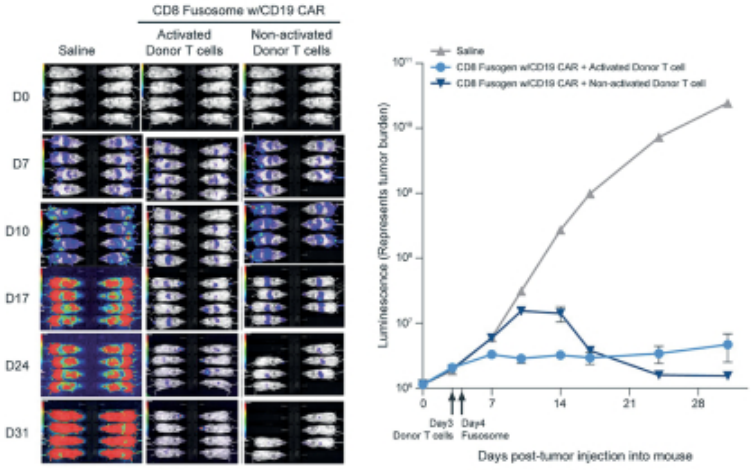
Delivery of CD19 CAR to CD4 T cells Leads to *in vitro* Killing of B cells and CD19+ Leukemia cells



Demonstrates that the fusosome-generated CD4 CAR is functional and eradicates both nonmalignant B cells (CD19+/RFP-) as well as CD19+ leukemia cells expressing NALM6-RFP.

We have also validated, *in vivo*, the tumor-killing activity of CD8 T cells to which CD19 CAR has been delivered via a fusosome.

Delivery of CD19 CAR to CD8 Cells Leads to *in vivo* Killing of Leukemia Cells in a Human Xenograft Mouse Model



Left panel: demonstrates activity of CD8 Fusosome delivering CD19 CAR to human T cells in a murine leukemia xenograft model (Nalm-6). Note that when compared to untreated controls, fusosome delivery results in eradication of leukemia cells. Activated T cells were cultured with CD3/CD28 beads for 3 days prior to injection. CD8 Fusosome delivering the CD19 CAR is effective regardless of activation status of T cells at time of injection. Right panel: represents quantification of luminescence (representing leukemic burden) from mice shown in left panel. Both cohorts of fusosome treated mice had significantly reduced tumor burden when compared to control as early as D7 (p£.0001; One-way ANOVA Bonnferroni) Experimental note: Tumors injected on Day 0, Donor T cells injected on Day 3 and Fusosome injected on Day 4.

Using a human xenograft mouse model for leukemia (Nalm-6), we observed both prolonged survival and clearance of the leukemic cells. During the manufacture of autologous CAR-Ts, cytokine signaling has to be activated in order to successfully produce functional CAR T cells. In our mouse experiments the CD8 fusosome was able to generate CD19 CAR cells just as effectively with both activated and non-activated donor T cells.

Several of our human T cell fusogens cross-react on non-human primate (NHP) T cells. We believe this will enable critical NHP experiments that could establish that fusosomes can transduce NHP T cells, establish that delivery of a CAR targeting a B cell antigen results in B cell depletion, provide important information on dosing parameters, and provide pharmacokinetic, pharmacodynamic, and toxicology data.

Development Plan and Key Next Steps

We are currently conducting experiments to validate the ability of a systemically administered fusosome to transduce T cells in an NHP and for these CAR T cells to deplete B cells. These NHP studies are also expected to inform preclinical pharmacology and toxicology.

As a next step, we intend to focus first on good laboratory practices (GLP) production for our IND-enabling studies. While these studies are ongoing, we intend to scale our GMP manufacturing and finalize our initial development plan. We intend to file an IND in NHL with SG295 as early as and with SG242 as early as . Our BCMA programs in MM, SG239, and SG221, have the goal of lead construct identification as early as .

Hepatocyte Fusosome Program

Numerous genetic metabolic diseases arise from gene defects that manifest in the liver and, in particular, in the hepatocyte. Additionally, hepatocytes can serve as protein manufacturing sites to deliver proteins to other cells in the body. Multiple modalities exist that enable delivery of genetic material to liver cells, including AAV and LNPs. However, these approaches have limitations, including non-integrating payloads, payload size, lack of cell specificity, and, in the case of AAV, immunogenicity. Our fusogen technology, which we expect will be able to deliver a payload specifically to hepatocytes in the liver, has the potential to address these limitations. Success with this heaptocyte-targeting technology may allow us to generate therapies for a number of genetic disorders. We are developing our lead product candidate, SG328, for ornithine transcarbamylase (OTC) deficiency, and we expect to file an IND as early as .

Hepatocyte Targeting Capability

Targeting the hepatocyte with a fusogen can enable specific delivery of either integrating or non-integrating payloads. It can also be used to deliver the machinery of gene editing and gene modification tools to these cells. Since we anticipate that hepatocytes transduced with fusosomes will harbor the novel genetic construct in their genome, all progeny of that cell will also have the genetic construct. Thus, the natural turnover and organ growth will not dilute the genetic construct, providing the potential for long-term expression and efficacy even when the fusosome is delivered during infancy, childhood, or when it is delivered to treat a disease where the disorder can cause rapid hepatocyte turnover.

We believe that success with an initial hepatocyte-targeted fusosome will meaningfully accelerate our future hepatocyte programs. Once a hepatocyte-targeting fusosome is established, our subsequent programs will require only substituting the relevant payload to correct for the defective gene in question, opening up the possibility to address multiple inherited liver diseases. Our initial focus is on monogenic diseases with clear biology linking the missing activity of a gene in hepatocytes to a disease outcome. Proof of concept in these initial diseases will enable expansion to other diseases, such as hemophilia, where we may be able to address an unmet need by providing a durable *in vivo* therapy in the hepatocyte.

According to the National Institute of Health, over 30 genetic disorders of the liver exist, impacting over 10,000 births annually around the world. Many of these disorders lead to death in the first few years or cause long term disabilities. The following table identifies examples of these genetic disorders:

Examples of Genetic Disorders of the Liver

Biotinidase deficiency	Hereditary angioedema
Holocarboxylase synthetase deficiency	Acute intermittent porphyria
Pyruvate carboxylase deficiency	D-bifunctional protein deficiency
Lysinuric protein intolerance	Porphyria cutanea tarda
Carnitine palmitoyltransferase type II (CPT II) deficiency	Lipoprotein lipase deficiency
Medium chain acyl-CoA dehydrogenase (MCAD) deficiency	N-acetylglutamate synthase (NAGS) deficiency
Short chain acyl-CoA (SCAD) dehydrogenase deficiency	Cobalamin A deficiency (methylmalonic acidemia)
Very long chain acyl-CoA dehydrogenase (VLCAD) deficiency	Cobalamin B deficiency (methylmalonic acidemia)
Glycogen storage disease (GSD) IXa/b/c	Cobalamin C deficiency (methylmalonic acidemia)
GSD IIIa/b	Cobalamin D deficiency (methylmalonic acidemia)
GSD Ia (Von Gierke disease)/GSD Ib	Citrullinemia type I
GSD IV (Andersen disease, Brancher enzyme)	Citrin Deficiency
PMM2-CDG	Phenylketonuria (PKU)
Cystathionine beta-synthase deficiency (classic homocystinuria)	Progressive familial intrahepatic cholestasis Type 1 (PFIC1)
Tyrosinemia type II	Progressive familial intrahepatic cholestasis Type 2 (PFIC2)
Galactosemia	Progressive familial intrahepatic cholestasis Type 3 (PFIC3)
Glucose-6-phosphate dehydrogenase (G6PD) deficiency	Progressive familial intrahepatic cholestasis Type 4 (PFIC4)
Cystinuria	OTC
Wilson disease	Crigler-Najjar
Lesch-Nyhan syndrome	CMSUD
Hemochromatosis, type IIa/b	MMA
Alagille syndrome 1	Propionic Acidemia
Familial TTR amyloidoisis	Hereditary Tyrosinemia Type 1 (HTT1)
Primary hyperoxaluria type I/II/III	CPS1
Lysosomal acid lipase deficiency	HoFH

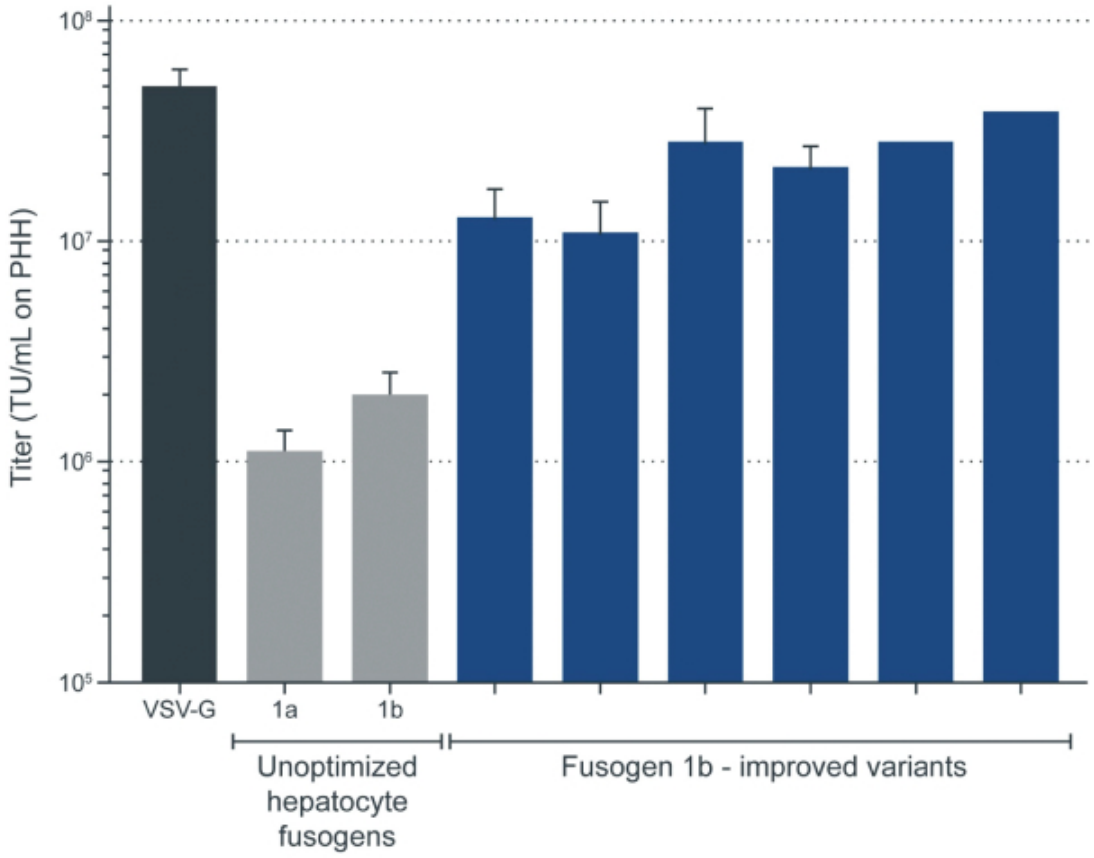
Preclinical Data

Our ability to use our hepatocyte-targeting fusosomes in relevant animal models is limited by a lack of cross-species transduction. To address this, we first developed murine disease models and introduced the therapeutic payload utilizing a conventional lentivirus pseudotyped with VSV-G. The VSV-G fusogen targets the

LDL receptor which is highly expressed in hepatocytes providing a potent *in vivo* delivery vehicle for hepatocytes. These models established proof of concept to treat these diseases through genomic integration of the corrected gene as well as transduction efficiency in the range that would be needed for efficacy. However, the LDL receptor is found on a significant number of other cell types resulting in extensive off-target transduction. We do not intend to move forward with this non-specific lentivirus construct, as its lack of specificity creates potential challenges in humans. However, it does provide a preclinical model system for us to understand the percentage of hepatocytes, as well as the expression level of the novel genetic material that are required for the intended therapeutic effect.

In parallel, we have developed and improved hepatocyte-specific fusosomes for high on target transduction efficiency (as measured by titer), with the goal of achieving potency comparable to or better than what we see with conventional lentivirus. Engineering of hepatocyte specificity is generated through the choice of target receptor selectively expressed in human hepatocytes. Through an iterative process focusing on multiple hepatocyte-selective cell surface protein targets, diverse binders, and protein engineering, we have developed constructs that have met our potency goals.

Improved Targeted Fusogens Exhibit High *in vitro* Transduction of Primary Human Hepatocytes (PHHs)



Improved hepatocyte-targeted fusosomes show levels of in vitro transduction similar to conventional lentivirus. Protein engineering of Fusogen 1b resulted in new sets of fusogens with significantly increased titer on PHHs. The most potent of these approach the hepatocyte titer of fusosomes based on VSV-G, a potent but non-selective fusogen.

Background on OTC Deficiency

OTC deficiency is the most common inherited disorder of the urea cycle, the process by which the body detoxifies ammonia and produces urea. It is the only urea cycle disorder that is X-linked, leading to more severe disease in males. OTC deficiency occurs in approximately 1 in 50,000 births, and there are approximately 10,000 patients worldwide. A deficiency of the OTC enzyme leads to accumulation of ammonia, which can lead to neurotoxicity manifesting early as vomiting and anorexia, before progressing to a progressive lethargy, seizures, intellectual impairment, coma, and death. The severity and age of onset of OTC deficiency can vary with the most severely affected, typically males, presenting shortly after birth. In this severe, neonatal onset of OTC deficiency, patients present with an overwhelming illness that rapidly progresses with up to 90% mortality rate despite advances in standard of care treatments. In less severely affected patients who present later in childhood or as adults, severe elevations of ammonia and resulting neurotoxicity still occur, primarily precipitated by an illness or excessive protein intake.

OTC Deficiency: Current Treatment Landscape and Unmet Need

The standard of care for patients with OTC deficiency includes a low protein diet, nutrient supplementation, and the use of ammonia scavengers such as benzoate, phenylacetate, or phenylbutyrate. While these ammonia scavengers provide an alternate pathway for ammonia excretion resulting in some improved outcomes, they are not curative, have a possibility of neurotoxicity, have inconvenient dosing regiments, and must be used cautiously in patients with cardiac, renal, or hepatic dysfunction. Maintaining a very low protein diet is also challenging for patients and results in a reduced quality of life. Despite all of these measures, patients may still experience acute hyperammonemia crises particularly in the setting of increased protein catabolism that can be induced by viral illness or certain medications. These acute crises are treated with supportive care including kidney dialysis for rapid ammonia reduction. The frequency and duration of hyperammonemia crises has been directly linked to poor long-term outcomes and intellectual disability. The only curative therapy available is liver transplantation, which has become more common as surgical techniques and supportive care have improved over time. In those patients with severe, neonatal onset of OTC deficiency, liver transplantation is commonly performed before the age of five and, in some cases, can occur before one year of age.

In addition to the standard of care therapies noted above, therapies to replace the defective OTC gene have been pursued. Recent trials have primarily utilized AAVs to deliver a corrected OTC gene. While these viruses have to date been generally well tolerated, they are still associated with significant immunogenicity that can preclude use in the up to one third of patients with pre-existing antibodies to AAV and can lead to systemic symptoms, including elevated liver enzymes. Beyond the challenge of pre-existing antibodies, the primary drawback is the potential for transient efficacy as the gene replacement via AAV would not be expected to be permanent if replication of the target cell occurs. While the durability of an AAV delivered gene replacement for OTC deficiency depends on many factors, one of the key determinants is the rate of hepatocyte turnover. This is especially relevant in pediatric patients with growing livers and rapid cell turnover. This dilution of effect has been supported by animal studies where AAV delivered gene replacement was successful in adult animals but not successful in younger animals. The most severe form of OTC deficiency presents in the neonatal period and, if a donor is available, may be treated with liver transplantation, a permanent gene therapy that provides long lasting benefit to patients is required to address the greatest unmet need from OTC deficiency. Additionally, as hepatocytes continue to divide approximately once a year even in adults, a durable gene therapy would also be expected to provide an advantage even in adult patients where an AAV delivered gene therapy is likely to lose function over time.

We believe our approach of pursuing a permanent gene replacement therapy has the potential to improve morbidity, mortality, and quality of life even in the youngest, most severely ill patients.

Development Plan and Key Next Steps

We are conducting mouse studies to establish proof of concept and inform the dose profile of our lead hepatocyte fusosome. In the near term, we are seeking to finalize the hepatocyte-targeted fusosome candidates.

and begin GLP production. Dose and safety of our lead fusosome compositions for OTC will be further informed through NHP studies, and we expect to yield an IND for SG328 as early as . We evaluating development of additional liver-specific gene therapies targeting genetic diseases such as Hemophilia and Alpha-1 antitrypsin deficiency.

HSC Fusosome Program

We are developing hematopoietic stem cell (HSC) targeted fusosomes, designed to target and repair genetic abnormalities underlying diseases such as sickle cell disease and beta-thalassemia (SG418), with the goal of achieving preclinical proof of concept as early as .

Background on hemoglobinopathies

Devastating inherited hematologic disorders, including sickle cell disease, beta-thalassemia, and other hemoglobinopathies, are caused by a monogenic variant, and patients suffering from these diseases are candidates for *in vivo* cell engineering.

Sickle cell disease (SCD) is caused by a single point mutation in the beta globin gene (HbB). The resulting mutant form of the protein, referred to as HbS, is prone to aggregate into long, rigid molecules that deform red blood cells (RBCs) into a sickle shape, obstructing blood vessels and undergoing premature lysis. The consequences are severe pain (sickle cell crisis), tissue infarction, infection, anemia, stroke, and early death. SCD is the most common inherited blood disorder in the United States, affecting an estimated 100,000 individuals, and 134,000 individuals in Europe. The global prevalence of SCD is estimated to be approximately 4.4 million individuals and is most common among people of African, Middle Eastern and South Asian descent.

Beta-thalassemia is an inherited blood disorder caused by any one of over 200 mutations in HbB which results in reduced production of functional hemoglobin. Transfusion-dependent beta-thalassemia (TDBT) is the most severe form of this disease, often requiring multiple transfusions per year. Patients with TDBT suffer from failure to thrive, persistent infections, and life-threatening anemia. Frequent blood transfusions can lead to iron overload that then require iron chelation therapy, which itself is associated with significant toxicities, resulting in low levels of adherence. Even with frequent transfusions, patients with TDBT continue to suffer from failure to thrive, persistent infections, and life-threatening anemia.

The prevalence of beta-thalassemia globally is estimated to be 288,000. The total combined prevalence of beta-thalassemia in the United States and Europe is estimated to be approximately 19,000 patients, mostly in Europe. Of the patients currently treated in the United States and Europe, we believe approximately 50% and 10%, respectively, are transfusion dependent. Beta-thalassemia is especially prevalent in developing countries of Africa, South Asia, Southeast Asia, the Mediterranean region and the Middle East. Although historically prevalent in Mediterranean North Africa and South Asia, thalassemias are now encountered in other regions as a result of changing migration patterns. As such, there is a growing focus on developing new therapeutics aimed at improving quality of life for this significant unmet medical need.

Correction of the causal monogenic defects could potentially provide a one-time, curative treatment approach, rather than the current lifelong, multidisciplinary standard of care treatment.

Current Treatment Landscape and Unmet Need

Despite its clear and well-known genetic nature, SCD remains underserved, with existing treatment strategies mostly supportive in nature. Allogeneic HSC transplantation (HSCT) is currently the only potentially curative therapy available. However, HSCT is limited by donor availability (approximately 15-30% worldwide).
Furthermore, chronic graft-versus-host disease is a major risk that contributes to the long-term morbidities associated with allogeneic HSCT. Otherwise, treatment options largely manage disease symptoms, including

analgesia during crises, hydroxyurea, L-glutamine, and anti-infectives. Recently, two disease-modifying treatments were approved by the FDA, crizanlizumab and voxelotor. Crizanlizumab was approved for treating crises in SCD patients who are unresponsive to either hydroxyurea or L-glutamine. Voxelotor is an oral small molecule inhibitor of HbS polymerization, which compared to placebo, was associated with a reduction in acute crises. While these agents represent a meaningful advance in the treatment of SCD, they focus on supportive care and do not address the mutation in the gene that is the root cause of the disease.

As in SCD, there are limited treatment options available for TDBT, and those that exist are supportive in nature. Allogeneic HSCT is similarly potentially curative but is also limited by donor availability, the risk of GVHD, and other comorbidities that result from the procedure. Because of the need for recurring blood transfusions, patients require ongoing chelation therapy to avoid iron load from the transfusions and its associated organ damage. However, this treatment is burdensome and associated with significant toxicities, and consequently, has low adherence. Currently, there is only one FDA approved therapy for beta-thalassemia, luspatercept, which significantly reduces the frequency of blood transfusions needed. However, safety concerns remain with a possible increased risk for hypertension and thromboembolic events.

There are several therapies in development to treat diseases of the hematopoietic system that have demonstrated clinical proof of concept through *ex vivo* gene modification. These approaches directly address the genetic activity missing in SCD and TDBT by supplying a novel gene to the patient's cell or by editing the genome to enhance hemoglobin expression. The *ex vivo* process begins with the mobilization and removal of cells from the blood, a process known as leukapheresis. Next, these cells undergo a process to enrich for cells expressing an HSC marker, CD34. The enrichment of CD34 cells increases the percentage of long-lived HSCs, the key stem cell that is both persistent and can differentiate into all the cells of the blood. However, even under enrichment, long-lived HSCs make up less than 1% of all the CD34 cells. CD34+ cells are transduced with either a novel gene or genome editing complexes, each having a distinct therapeutic action. The cells are then cryopreserved and sent back to the patient. Before transplantation, the patients receive conditioning chemotherapy to prepare the body so that the gene-modified cells engraft after re-infusion. The current conditioning regimens are toxic, with significant risks and side effects, although less toxic regimens are in development. Key questions remain regarding durability and safety, particularly over time, for transplanting these *ex vivo* modified HSCs. Furthermore, manufacturing complexities, cost, and the complications from the myeloablative conditioning chemotherapy regimens remain significant obstacles to widespread adoption. There are multiple ongoing efforts to improve this approach by focusing on HSC procurement, transduction, gene-editing, milder conditioning regimens, and transplantation efficiency. We believe that the most meaningful opportunity to improve outcomes is to eliminate the complex *ex vivo* modification and transplantation steps by utilizing our fusogen technology to develop fusosomes that specifically target HSC and other key hematopoietic cells via *in vivo* delivery.

Our HSC Fusosome Approach

The use of an *in vivo* fusosome-based delivery system bypasses the requirement for *ex vivo* manufacturing and would require no conditioning chemotherapy. Without the manufacturing complexity and the requisite hospital stay for a patient who has undergone conditioning, as well as the concomitant costs and risks of each, *in vivo* therapies have the potential to meaningfully increase the number of patients that receive these therapies.

Targeting HSCs *in vivo* using fusogens requires identifying the appropriate cells and their corresponding cell surface receptors. HSCs have no single specific marker, but there are a number of cell surface proteins that are highly enriched on HSCs. Some of these markers also appear on erythrocytic, or red blood cell, progenitors, which may help establish both short-term and long-term efficacy. We have an ongoing program to discover fusogens with appropriate target specificity.

In parallel, we are establishing our capability to deliver different payloads utilizing the fusosome system. Our goal is to establish the appropriate cell specificity with the ability to utilize the appropriate gene modification

system to achieve the right outcome for patients. With successful cell-specific targeting, we have an opportunity to deliver the therapeutic payload to the right cell without the need for complex *ex vivo* manufacturing or toxic conditioning chemotherapy.

Development Plan and Key Next Steps

The next major milestones are to identify candidate fusogens for specific HSC targeting and fusosome compositions with relevant genome modification payloads. Our goal is to achieve preclinical proof of concept for SG418 as early as .

Our *ex vivo* Cell Engineering Platform

Overview

Ex vivo cell engineering aims to treat human disease by engrafting new cells to replace diseased cells that are damaged or missing in patients. Historically there have been four key challenges to *ex vivo* cell engineering:

- engraftment of the right cell in the right environment;
- appropriate function of the cells, necessitating an understanding of and ability to produce the desired cell phenotype;
- persistence of the cells in the host, particularly by overcoming immune rejection; and
- manufacturing the desired cell in the quantities required.

Our *ex vivo* cell engineering platform seeks to address these four challenges and is focused on engineering hypoimmune cells that engraft, function, and persist in patients by evading immune rejection. These are derived from cell sources that are scalable and we believe that continued progress with this platform has the potential to create broad access for patients.

Our Approach to Building our ex vivo Cell Engineering Platform

We have approached the development of our *ex vivo* cell engineering platform by investing in solutions to address the key challenges outlined above:

- **Stem cell and disease biology.** We believe that it is critical to have expertise in the developmental biology of stem cell differentiation and a deep understanding of the desired cell phenotype biology of stem cell differentiation in order to generate cells that function appropriately, as well as a deep understanding of the desired cell phenotype. The latter requires expertise in normal and disease biology. Furthermore, clinical understandings of disease pathology and transplant medicine are required to determine how to engraft the right cell in the right environment. Each of our programs is led by a prominent clinician-scientist with deep expertise in both cell therapy and disease biology, including Dr. Terry Fry, our Senior Vice President, Head of T Cell Therapeutics, for T cells, Dr. Steve Goldman, our Senior Vice President, Head of CNS Therapy, for glial cells, and Dr. Chuck Murry, our Senior Vice President, CSO of Cell Therapy, for cardiomyocytes and beta cells.
- **Immunology and gene modification.** We believe that a deep understanding of the immunological response to engineered cells is essential to unlocking the potential of *ex vivo* therapies. This effort is led by Dr. Sonja Schrepfer, our Senior Vice President, Head of Hypoimmune Platform, and draws from decades of research. We have licensed technologies from University of California San Francisco, Harvard University, Washington University, and others to enable this effort. In addition, in order to create successful hypoimmune cells, we are investing in building out our gene editing, modification, and insertion capabilities, led by Dr. Ed Rebar, our Senior Vice President, Chief Technology Officer.
- **Manufacturing.** We are investing proactively in process development, including scale up and optimization of differentiation protocols, analytical development for product characterization, CMC/

regulatory, and other manufacturing sciences in order to develop processes that can enable scalable manufacturing of cell therapies and broad patient access. We are also investing to access high quality, GMP-grade pluripotent stem cell lines for our programs. This manufacturing effort is led by Dr. Stacey Ma, our Executive Vice President, Technical Operations.

Our Approach to Building our ex vivo Cell Engineering Portfolio

We have prioritized cell types for our programs where:

- high unmet need can be addressed by cell replacement;
- existing proof of concept in humans and/or animal models demonstrating that cell transplantation should have a clinical benefit;
- evidence exists that the cell type can be successfully differentiated from pluripotent stem cells and that such stem cell-derived cells can function appropriately *in vivo;*
- there has been the ability to hire or partner with one of the world experts in the field to ensure our programs are rooted in a deep understanding of the underlying cell and disease biology; and
- evading immune system rejection via the hypoimmune technology is either not required initially but would be disruptive over time (such as cardiomyocytes) or is the critical missing element to developing a cell therapy (such as beta cells).

Based on this prioritization, we are initially focused on four cell types:

T Cells

While autologous CAR T therapy has had a transformative impact on certain patients with hematological malignancies, there remains substantial unmet need, including a lack of access to these therapies due to manufacturing complexities. A safe and effective allogeneic *ex vivo* therapy could address this unmet need, and we believe we have a potential differentiated allogeneic approach with our hypoimmune technology. This approach addresses both adaptive and innate immune response, and thus has the potential to improve cell persistence and thereby treatment durability. We are investing in the capabilities to utilize allogeneic donor T cells and, in the future, iPSC-derived T cells. Allogeneic donor T cells have significantly greater near-term applicability. Although iPSC-derived T cells are biologically complex and progress is needed to make them readily viable, they have the potential to simplify and improve production long-term.

Beta cells

Type 1 diabetes represents a substantial unmet need with a large patient population that faces major challenges with the current standard of care. Cadaveric-donor islet transplantation in humans has been successful in reversing the disease course of diabetes, providing a robust proof of concept, but it has limited scalability and durability. Our approach of transplanting hypoimmune stem cell-derived beta cells has the potential to provide a scalable, durable, disruptive solution to both generation of functional beta cells and evasion of immune system rejection.

GPCs

Myelin and astrocytic disorders, including leukodystrophies and multiple sclerosis, have limited treatment options which, when available, only address the downstream consequences of disease. Our approach more directly addresses the primary biologic manifestation of these diseases by directly replacing lost or damaged glial cells, thus providing an opportunity to address major unmet need across substantial patient populations.

Cardiomyocytes

Heart failure represents one of society's most substantial unmet medical needs, with a lack of treatment options that address the underlying deficiencies in heart function as a result of lost or damaged cardiomyocytes. Our cardiomyocyte program aims to directly regenerate the heart, by replacing lost cardiomyocytes with stem cell-derived cardiomyocytes, with the goal of restoring heart muscle and increase function.

Historical context of ex vivo therapy

Blood transfusions have been a standard treatment for many patients for over 100 years. The first successful kidney transplant occurred in 1954, followed by the first successful heart transplant in 1967, demonstrating the transformative clinical potential of replacing damaged or missing cells in the body. Surgical enhancements have improved the success of engraftment, but lack of organ access, a complex surgical procedure, and immune rejection of the donated organs have limited the impact of these procedures.

Progress in immunosuppressive regimens, such as the development of cyclosporine, has improved organ survival rates. However, substantial side effects and the fact that many patients are ineligible or non-compliant has reduced their impact.

Ultimately, the field has looked for a scalable source of therapeutic cells that can be accessed broadly at a manageable cost, as well as cells that can evade immune rejection without immunosuppression. The advent of stem cell technology and subsequent improvements in methods to generate functional differentiated cells at scale have the potential to address the shortage of donor tissues and organs. In addition, over the past decade a deeper understanding of the immunology of host versus graft responses, coupled with novel techniques to manipulate the immunological profile of cells via gene editing, have raised the prospect that *ex vivo* engineered cells can significantly benefit patients without the requirement for significant immunosuppression.

Sources of allogeneic cells

There are three main potential sources of allogeneic cells, or cells that do not originate from the patient, and therefore have the potential to be manufactured and supplied at scale. These are embryonic stem cells (ESCs), iPSCs, and donor-derived cells. Our portfolio currently reflects a mix of sources, with the ambition of transitioning primarily to iPSCs over time.

Embryonic Stem Cells

The recognition that every cell in the body originates from a zygote, or fertilized egg, led to the research and ultimate discovery of human ESCs, with the derivation of the first human ESC line in 1998. ESCs are pluripotent stem cells which can potentially differentiate into any cell type and are derived from the inner cell mass of a blastocyst or pre-implantation stage embryo. They are typically cultured *in vitro* and grown through cycles of cell division, known as passages, until a line of cells is established that can proliferate without differentiating, and retain their pluripotency while remaining well characterized, including free from potentially deleterious genetic mutations. Because pluripotent stem cells can divide indefinitely without exhaustion, an ESC line can be used to generate cell banks, consisting of large numbers of well-characterized vials of cells, that can be frozen and stored for future use.

Induced Pluripotent Stem Cells

The discovery that mature, differentiated cells can be reprogrammed to be the equivalent of an ESC and capable of generating any cell type in the body, has led to the research and ultimate development of human iPSCs, providing an alternative option as a source of stem cells for use in *ex vivo* engineered cells. A key scientific step was the discovery, in 1962, that the differentiation of cells into specialized cell types is reversible,

via nuclear transfer, also known as cloning. A second key step was a breakthrough in 2006, demonstrating that mature cells could be reprogrammed via the expression of a small number of genes to result in pluripotent cells. This has led to the development of iPSCs reprogrammed using a small number of transcription factors. These iPSCs have similar potential to ESCs to be used as an indefinitely renewable cell bank for manufacturing of cell-based therapies.

Donor-Derived Allogeneic Cells

Another source of cells, which we utilize in our T cell program, comes from mature donor-derived allogeneic cells. While these cells are neither pluripotent nor from an infinitely renewable source, T cells can be obtained as mature cells from human donors at scale. The use of donor-derived cells for our T cell program should allow us to most rapidly advance the program towards the clinic with the implementation of our hypoimmune technology.

Approach to Sources of Allogeneic Cells

We are primarily focused on iPSCs as the starting material for our programs, which offers regulatory and cultural advantages to ESCs, and scale and product consistency advantages to donor-derived allogeneic cells. Our portfolio currently reflects a mix of sources, which is primarily driven by historical factors. For example, our GPC program, which is more advanced, is currently based on ESCs. Similarly, our T cell program is initially based on donor-derived allogeneic T cells, given the aforementioned challenges in generating pluripotent-stem cell derived T cells. Other programs either use or are being transitioned to iPSCs where the technology allows it. Our ambition is to transition primarily to iPSCs over time.

Crucial aspects of developing allogeneic cells from any source include the thorough characterization of the cells, a comprehensive understanding of the global regulatory environment, and an ability to maintain cells under the required conditions, such as current Good Manufacturing Practices (GMP), at various stages of the manufacturing processes. We believe our early investment in building capabilities in the science and manufacturing of these cells will increase our likelihood of success. This investment is anticipated to yield sources of cells suitable for the global clinical development and commercialization of *ex vivo* engineered cells for a broad patient population, in line with our vision to democratize access.

Background on Immunological Barriers to ex vivo Therapies and Current Limitations

Starting with studies in renal transplantation in the early 1900s, it became clear that there were immunological factors preventing successful transplantation. Initially, it was suspected to be mediated by an antibody response, but in the 1950s it was discovered that cell-mediated immune pathways also play a critical role in transplant rejection.

Further studies established T cells as playing a key role in the host immune response to transplant. T cells belong to the “adaptive” immune system, recognizing and eliminating “non-self” cells via recognition of differences in cell-surface proteins encoded by the major histocompatibility (MHC) locus. There are two types of MHC molecules: MHC class I, expressed on the surface of almost all nucleated cells, and MHC class II, expressed constitutively on professional antigen presenting cells (APC), including macrophages and dendritic cells. Expression of MHC class II is also induced in many additional cells in the context of inflammation. MHC class I molecules typically display peptides on the cell surface from degraded intracellular proteins. Cells display peptides from normal “self” proteins on MHC class I, which typically will not activate an immune response due to a process called tolerance, where the body recognizes these peptides as “self”. However, if a cell displays a peptide from a foreign or mutated protein on MHC class I, for example as a result of a protein mutation, it may result in the activation of a cytotoxic T cell response specific to the peptide-MHC complex via the T cell receptor (TCR) on the T cell surface. The activated T cell then eliminates the cell. MHC class II molecules typically display peptides derived from phagocytosis of extracellular proteins on the surface of APCs. These peptide-MHC

complexes interact with TCRs on helper T cells, such as CD4+ T cells, resulting in a downstream cellular and humoral immune response. The humoral immune response leads to antibody production against foreign proteins. In allogeneic transplants, the cellular and humoral processes can recognize proteins from the donor as "foreign", resulting in an immune response to the transplant including potential elimination of the transplanted cells. In the allogeneic setting, MHC proteins can be highly immunogenic due to their inherent polymorphism, increasing the risk of the recognition of transplants as "foreign". This underlies the basis for MHC typing and matching to assess and reduce the risk of organ transplant rejection.

Many groups have attempted to engineer cells that can evade the adaptive immune system, typically by downregulating or eliminating expression of MHC molecules on the surface of cells. While this can reduce the adaptive immune response to donor cells, the human immune system has evolved so that parts of the innate immune system will recognize cells missing MHC molecules and eliminate them. For example, natural killer (NK) cells express receptors known as inhibitory killer-cell immunoglobulin-like receptors (inhibitory KIRs). KIRs recognize self MHC class I molecules on the surface of cells and provide inhibitory signals to the NK cells to prevent their activation. Cells missing MHC class I molecules are corresponding eliminated by NK cells because of the lack of inhibitory KIR signaling and a resulting cytolytic activation. Known as the "missing self-hypothesis," this important redundancy in immunology enables the elimination of virally infected or transformed cells that have downregulated MHC class I, but also has complicated the development of allogeneic cells as broadly applicable therapeutics. Our hypoimmune technology seeks to engineer cells to avoid immune rejection by addressing both the adaptive and innate immune response.

There are three key strategies that have been utilized to date to overcome immune rejection, with limited success:

- **Immune Suppression**. Cyclosporine and other molecules that suppress T cell responses are commonly used, and many patients have been helped by the approaches in areas such as an organ transplantation. However, immune suppression often leads to significant systemic side effects, including a decreased ability to fight-off infections, increased susceptibility to cancer, and a wide variety of organ toxicities. Furthermore, patients typically require these on a lifelong basis, and any disruption in immunosuppression can rapidly trigger rejection.
- **Matching HLA Type**. A second approach to overcoming immune rejection is to find a donor with a matched HLA type. HLA stands for human leukocyte antigen which, in humans, is a synonym for MHC. This approach addresses the root of the mechanism that the immune system uses to identify "non-self" cells and has achieved some success. Finding a matched donor, however, can be difficult and is usually limited to close relatives who are willing and able to donate. While some have advocated for creating large banks of cells that match a wide variety of HLA types, even with fully matched HLA class I and class II donors and recipients, there is a need for at least some immune suppression due to the presence of numerous minor antigen mismatches.
- **Autologous Approaches**. More recently, researchers have pursued autologous approaches, where a patient's own cells are modified and introduced back as a graft. These cells may avoid immune rejection as they would be recognized as "self." Autologous approaches have demonstrated effectiveness in certain diseases, such as autologous CAR Ts for hematological malignancies, but these are limited in their adoption due to manufacturing cost and complexity. Furthermore, autologous approaches are generally are limited to cells that exist in the patient in suspension, such as blood cells, and they cannot be applied to treat acute illnesses, such as myocardial infarction or stroke, due to the time it takes to prepare these cells for administration.

Our Solution – Hypoimmune Technology

To address the challenge of immune rejection with allogeneic cell transplantation, we are developing our hypoimmune technology, utilizing gene modification to introduce permanent changes to the cells. We are

applying the hypoimmune technology to both iPSCs, which can then be differentiated into multiple cell types, and to donor-derived allogeneic T cells, which has the goal of making potent CAR T cells at scale. Our goal with this technology is to transplant allogeneic cells into patients without the need for systemic immune suppression. We believe that enabling this capability has the potential to enable *ex vivo* engineered cells to become an important therapeutic modality alongside small molecules, protein biologics, and *in vivo* engineered cells.

Some of our scientific founders, including Dr. Sonja Schrepfer, our Senior Vice President, Head of Hypoimmune Platform, and their collaborators have worked on creating hypoimmune cells for well over a decade. A key insight was focusing on the phenomenon of fetomaternal tolerance during pregnancy. The fetus, despite having half its genetic material from the father, is not rejected by the mother's immune system. However, after birth, few if any children would qualify as a matched donor for a cell or organ transplant for their mother. These scientists categorized the differences of the maternal-fetal border and systematically tested them to understand which, if any, of these were most important to immune evasion. They have tested these changes in both *in vitro* and *in vivo* animal models.

Designing Hypoimmune Cells

Our goal is to create a universal cell that is able to evade immune detection, regardless of cell type or transplant location. Our first-generation technology, which is progressing through late-stage animal confirmatory studies, combines the three gene modifications below to hide these cells from the host immune system:

- disruption of MHC class I expression;
- disruption of MHC class II expression; and
- overexpression of CD47, a protein that hides cells from the innate immune system, including macrophages and NK cells.

Preclinical Development of Hypoimmune Cells

We and our licensors have carried out a series of experiments in various model systems of increasing immunological complexity. These included (i) transplanting undifferentiated mouse hypoimmune iPSCs- into MHC mismatched allogeneic mice, (ii) transplanting mouse hypoimmune iPSC-derived differentiated cells, such as endothelial cells, into MHC mismatched allogeneic mice, (iii) transplanting human hypoimmune iPSCs into MHC mismatched humanized allogeneic mice; and (iv) transplanting human hypoimmune iPSCs into non-human primates (NHPs). We are currently carrying out experiments transplanting NHP hypoimmune iPSC cells into NHPs as well as transplanting NHP hypoimmune iPSC-derived differentiated cells, such as beta cells, into allogeneic NHPs.

Each mouse experiment, evaluated:

- whether hypoimmune cells can be successfully transplanted into the recipient without the need for immunosuppression and without eliciting an immune response; and
- whether differentiated cells derived from our hypoimmune cells were successfully engrafted in the recipient without needing immunosuppression and without eliciting an immune response.

We are investigating both human iPSCs in NHPs as well as NHP iPSCs in NHPs, as we want insights into how the NHP immune system reacts to each of these species. We have largely completed the study of human iPSCs and will have data from the NHP iPSCs over the next several quarters. We are encouraged by data to date across species, with the NHP immune system most closely resembling the human immune system, representing the strictest test outside of testing these cells in humans. We are evaluating both iPSCs as well as differentiated cells transplanted into the microenvironment we intend to target in humans. Depending upon the results of these NHP studies, we intend to test these hypoimmune cells in humans as a next step.

Mouse iPSC-derived hypoimmune cells transplanted into MHC mismatched allogeneic mouse

Mouse hypoimmune iPSCs transplanted into an MHC mismatched allogeneic mouse were protected from the mouse immune system, and no evidence was seen of either adaptive or innate immune system activation. The control arm transplanted non-edited mouse iPSCs into MHC mismatched allogeneic mice, and, as expected, these non-edited mouse iPSCs were rapidly rejected by the recipient's immune system with a robust adaptive immune response. In another experiment, the genes that lead to for MHC class I and MHC class II expression were knocked out. These modifications protected the cells from the recipient mouse's adaptive immune system, but NK cells rapidly killed the transplanted cells. These data highlight the importance of making all three gene modifications in order to protect cells from the immune system with an allogeneic transplant.

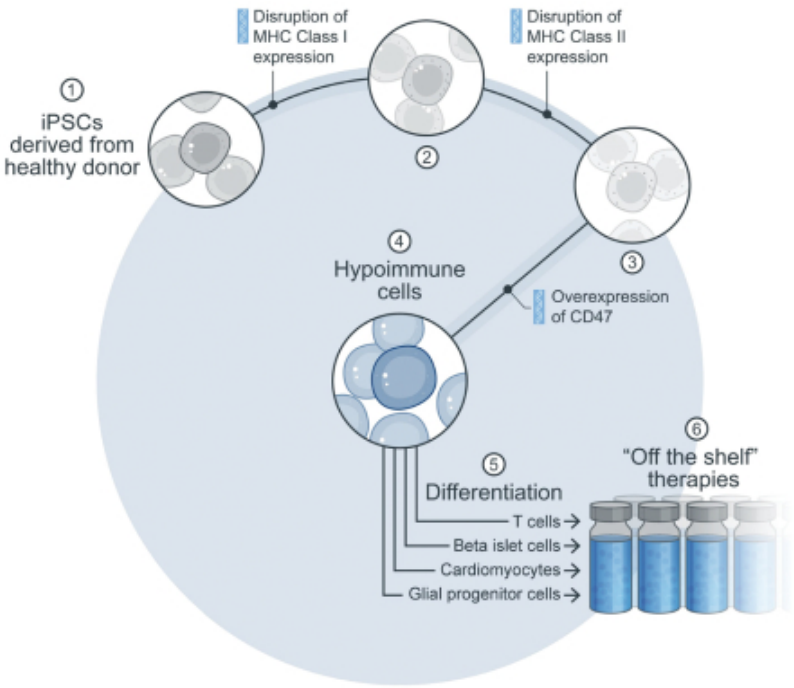
Next, to ensure that hypoimmune gene modifications protected differentiated cells and that these modifications did not impact the ability of iPSCs to differentiate into various cell types, commonly referred to as pluripotency, it was tested whether the hypoimmune iPSCs cells could be differentiate into three different cell types, function *in vivo*, and evade the host immune system. The three cell types were cardiomyocytes, endothelial cells, and smooth muscle cells. It was observed that hypoimmune iPSCs could successfully differentiate into all three cell types, the cells functioned in the mouse, and the transplanted cells survived for the full standard observation period with no evidence of immune system activations despite any immune suppression. Differentiated cells derived from non-edited iPSC cells led to immune activation in the host mouse, and they did not survive. These data provide initial proof of concept that iPSCs can be genetically modified, and differentiated into target cells that can engraft, function, and evade the recipient's immune system following transportation.

Human iPSC-derived hypoimmune cells transplanted into MHC mismatched allogeneic humanized mouse

Having demonstrated the ability of mouse iPSC-derived hypoimmune cells to satisfy each of three testing criteria, the experiments were advanced to evaluate human hypoimmune cells. This was evaluated using a "humanized" mouse system, generated by grafting a functioning human immune system in place of the mouse immune system.

In addition to evaluating the three primary criteria—immune response to the human hypoimmune cells, pluripotency and differentiation of the human hypoimmune cells, and immune response to cells differentiated from the human hypoimmune cells—the ability to successfully engineer human hypoimmune cells from human iPSCs and whether differentiated cells derived from human hypoimmune cells retain biological function were also evaluated.

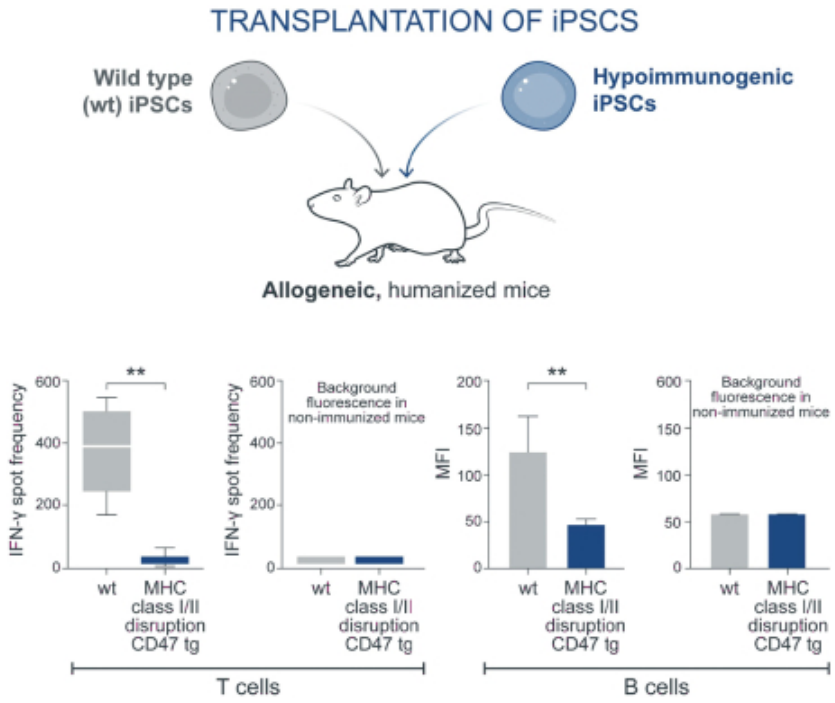
Creating Hypoimmune Therapeutic Cells from Human iPSCs



Our hypoimmune technology combines the three gene modifications below to hide cells from the host immune system: Disruption of MHC class I and class II expression (which inactivates adaptive immune responses), and overexpression of CD47 (which hides cells from the innate immune system, including macrophages and natural killer (NK) cells). Pluripotent stem cells from healthy donors are used as the starting material and are then genetically modified with the hypoimmune edits. These edited cells are then differentiated into cell types of therapeutic interest, which are administered to the patient as "off the shelf" therapies.

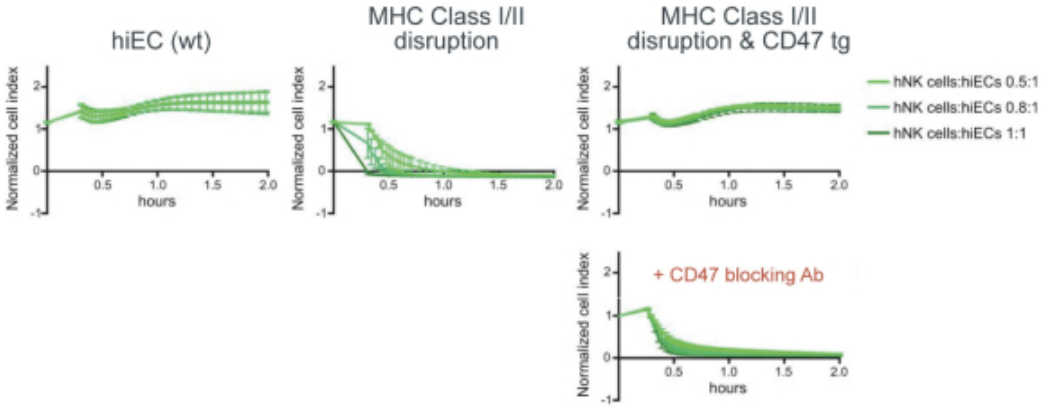
First, the foregoing three edits were replicated in human iPSCs to engineer a human hypoimmune cell line that had comparable properties to the mouse hypoimmune cells *in vitro*. Next, non-edited human iPSCs were transplanted into MHC mismatched humanized mice. It was observed that these non-edited human iPSCs were rapidly rejected. Human hypoimmune cells were then transplanted into MHC mismatched humanized mice. It was observed that the human hypoimmune cells survived the full length of the experiment and failed to elicit any type of immune response. From this, it was concluded that, in humanized mice, the human hypoimmune cells can evade the immune system. Pluripotency of human hypoimmune cells was confirmed by differentiation into two different cell types, endothelial cells and cardiomyocytes. These differentiated cells exhibited the characteristics of normal endothelial cells and cardiomyocytes. Finally, to test whether these the differentiated cell types derived from human hypoimmune cells continue to evade the immune system, the differentiated cells were transplanted into humanized mice, and the transplanted cells survived for the full standard observation period. In contrast, differentiated cells derived from non-edited human iPSC cells did not survive after being transplanted, as anticipated. It was also observed that the hypoimmune endothelial cells formed primitive vasculature with active blood flow and the hypoimmune cardiomyocyte cells matured into functional-looking heart cells.

Absence of T and B Cell Activation Following Transplantation of Hypoimmune-Edited Human iPSCs into Mismatched Humanized Mice



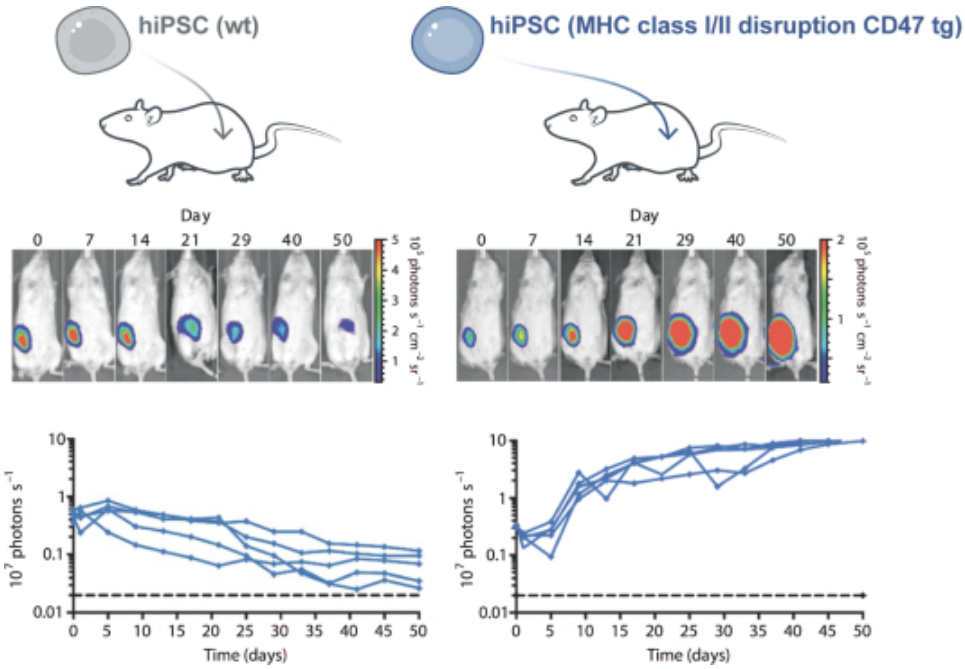
Left panels: T cell activation was measured by EliSpot counts for interferon-gamma production. Immune cells from mice that received wild type (wt) iPSC grafts show a brisk interferon response when tested against allogeneic wt iPSC grafts. In contrast, immune cells from mice that received hypoimmune-edited (MHC class I/II disruption, CD47 tg) cells show only minimal interferon production when exposed to allogeneic hypoimmune cells, comparable to background frequency in non-immunized mice. Right panels: B cell activation was measured by antibody binding to each cell type, shown as mean fluorescence intensity (MFI). Wild type cells exhibit significant antibody binding when incubated with serum from mice that received wt cells. In contrast, hypoimmune-edited cells show only background levels of binding when treated with serum from mice that received hypoimmune-edited cells. Adapted from Deuse et al, Nature Biotechnology 2019.

CD47 is Required to Protect Hypoimmune-Edited Cells from Killing by Human NK cells



Human iPSCs were differentiated into endothelial cells (hiECs) and plated as a monolayer in a multielectrode system. After exposure to NK cells, monolayer viability was measured electrical impedance, indicated here as normalized cell index. As expected, wt cells were not killed by NK cells. In contrast, cells lacking MHC class I and II (but not expressing CD47 tg; MHC class I/II disruption) were rapidly killed. Addition of CD47 tg prevented killing by NK cells. A blocking antibody to CD47 abolished protection from NK cells, affirming the importance of CD47 overexpression in protection from innate immune cell killing. From Deuse et al, Nature Biotechnology 2019.

Survival of Hypoimmune-Edited human iPSC Grafts in MHC-Mismatched Humanized Mice



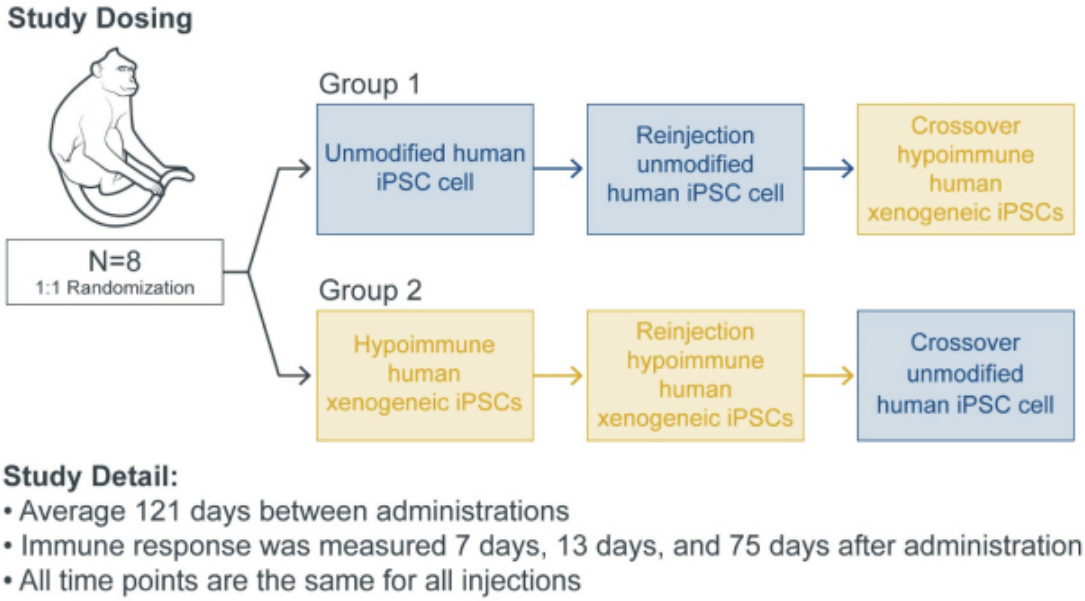
Wild type (wt) and hypoimmune-edited (MCH class I/II disruption CD47 tg) iPSCs were engineered to express firefly luciferase before transplantation. Emission of light was used as an index of graft cell viability. Sequential light emission scans from the same representative animal receiving wt cells show progressive loss of graft viability, indicating graft rejection, confirmed quantitatively in the line tracings below. In contrast, mice receiving hypoimmune-edited cells show graft expansion over the course of the experiment, indicating immune evasion. From Deuse et al, Nature Biotechnology 2019.

Human hypoimmune cells transplanted into NHPs

To further evaluate the immune evasion properties of the human hypoimmune cells, we transplanted human hypoimmune iPSCs and WT non-edited iPSCs into NHPs. This experiment allowed us to explore whether these hypoimmune gene modifications can protect cells from both allogeneic rejection as well as xenogeneic, or cross-species, rejection.

The study was a randomized, blinded, parallel group study involving eight NHPs in two cohorts. The first cohort received an initial subcutaneous injection of non-edited human iPSCs, a reinjection of non-edited human iPSCs, and a final injection of human hypoimmune cells (i.e., a crossover design). The second cohort received an initial injection of human hypoimmune cells, a subsequent reinjection of human hypoimmune cells, and a final injection of non-edited human iPSCs. The injections in both arms were separated temporally by approximately four months. The first injection allowed us to test the immune evasion in a naive recipient and the second injection allowed us to explore the potential for re-treatment and the impact of previous exposure. The cross-over injections allowed us to understand the impact of injecting hypoimmune cells into an NHP with a pre-existing immune response to non-edited cells, essentially replicating aspects of auto-immune disorders. The following diagram summarizes the study design:

Design for Xenotransplantation Study Involving Wild Type (Unmodified) and Hypoimmune iPSC Delivery to NHPs

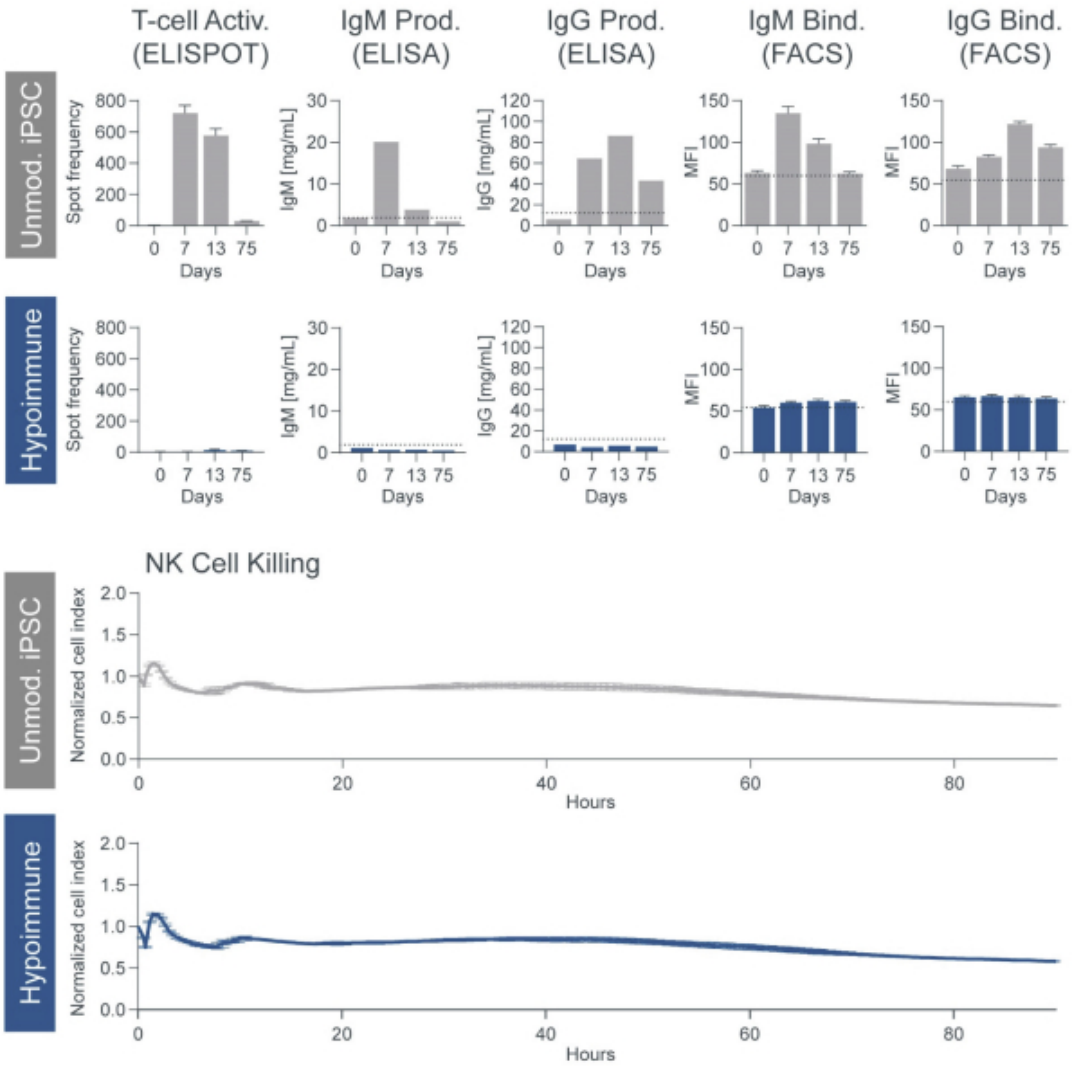


When human hypoimmune cells were grafted into NHPs without immunosuppression, we saw no evidence of a systemic immune response, including no T cell activation and no antibody formation. Additionally, macrophages and NK cells did not recognize or kill these hypoimmune cells. In contrast, iPSCs without the hypoimmune edits generated a robust systemic immune response, including T cells and both IgM and IgG antibodies. Neither hypoimmune nor the non-edited cells survived long-term. While there was no systemic immune response to the hypoimmune cells, we did see a local neutrophil infiltration, likely due to a xenogeneic response both to the cells and murine proteins in the matrix used to deliver the cells. We have seen similar local infiltrates of neutrophils in xenogeneic transplants across every species we have studied to date. We do not intend to introduce xenogeneic cells in any human therapeutic. We have ongoing studies exploring NHP iPSCs

transplanted into NHPs to confirm that this infiltrate was due to human proteins introduced into an NHP, a xenogeneic issue which would not be relevant in the context of the therapies we intend to move forward.

The following figure depicts the systemic immune results observed following the initial injection of human hypoimmune cells and non-edited human iPSCs.

Absence of T Cell, B Cell, or NK Cell Responses Following the First Delivery of Hypoimmune Human iPSCs into NHPs



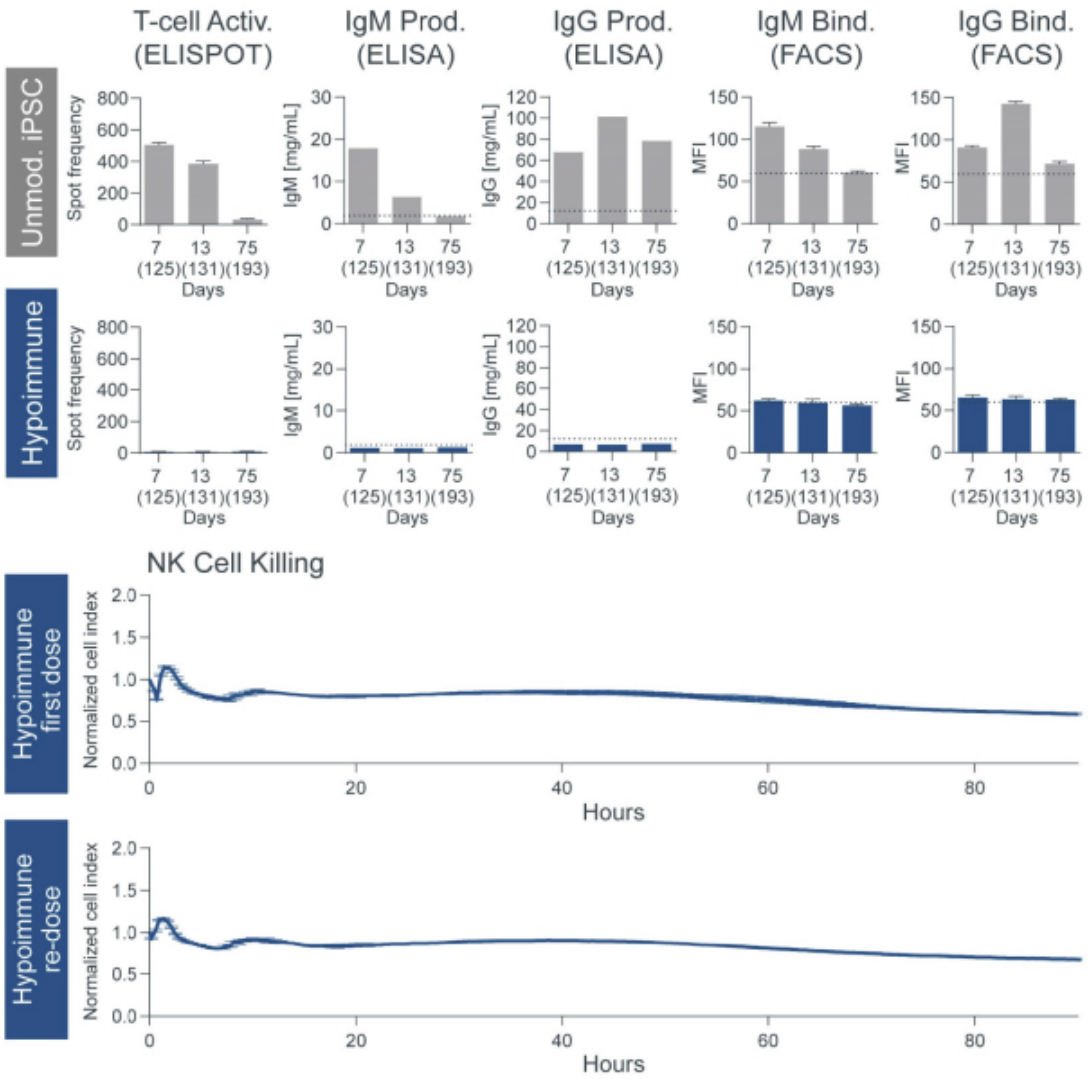
Immune cells from animals receiving unmodified (wt) human iPSCs show robust T cell interferon responses when exposed to wt iPSCs in vitro. In contrast, immune cells from animals receiving hypoimmune iPSCs showed no reponse when exposed to hypoimmune iPSCs in vitro. Delivery of wt iPSCs activated B cells, as evidenced by production of IgM, IgG, and by binding of these antibodies to the surface of donor cells (increased mean fluorescent intensity, MFI). Delivery of hypoimmune iPSCs did not induce antibody production above background, and no binding of IgM or IgG to the cell surface was seen. Neither unmodified nor hypoimmune-edited cells were

susceptible to killing by NK cells, indicating protection from the "missing self" signal. Data above from a single NHP; results representative of studies in four NHPs. Dotted lines, background level of assay.

To evaluate if the NHP immune system retained any immunological memory of its encounter with the human cells, we re-dosed NHPs with the same type of cells they received in their initial dose. As with the first injection, the human hypoimmune cells induced no systemic immune response, including no T cell activation and no antibody production. In contrast, non-edited human iPSCs elicited a robust and rapid T cell and antibody response, suggesting immune memory to these cells from the previous injection. Again, the human hypoimmune cells did not survive long-term, as there was a similar local infiltration of neutrophils. These results, if confirmed with better graft survival with hypoimmune NHP iPSCs, raise the possibility of re-dosing human hypoimmune cells as part of future therapies.

The results of the redosing experiment are depicted below:

Absence of T Cell, B Cell, or NK Cell Response to a Second Dose of Human Hypoimmune-Edited iPSCs in NHPs

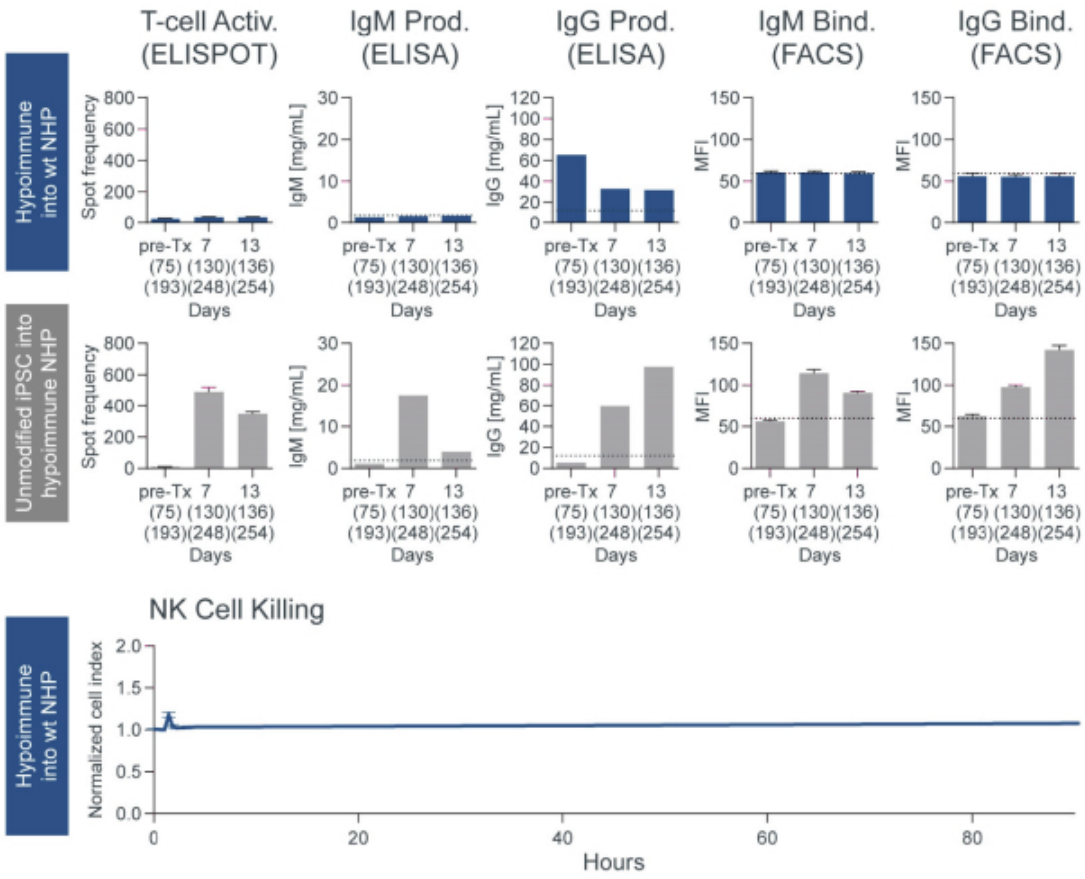


A second dose of unmodified human iPSCs induced a robust T cell response (EliSpot assay for interferon production) as well as strong induction of antibody production from B cells, as indicated by increased IgM and IgG levels, along with increased antibody binding to donor cells. In sharp distinction, re-administration of hypoimmune iPSCs induced no T cell or B cell activation. As before, neither cell population was susceptible to NK cell killing. Data above from a single NHP; results representative of studies in four NHPs.

To evaluate whether pre-existing immunity to non-edited human iPSCs adversely impacts immune evasion of human hypoimmune cells, we then performed the crossover portion of this experiment, injecting human hypoimmune cells into NHPs that had previously been dosed with unmodified human iPSCs. Recall, these NHPs

had all demonstrated a robust T cell and antibody responses to the unmodified iPSCs. As indicated in the figure below, human hypoimmune cells again elicited no systemic immune response despite pre-existing T cells and antibodies to the non-edited versions of these cells. These data suggest that human hypoimmune cells may be able to evade immune detection even in patients with pre-existing immune responses to that cell type, opening the opportunity to explore auto-immune diseases. We also injected NHPs that had been twice dosed with human hypoimmune cells with human iPSCs. In contrast to when these NHPs received hypoimmune iPSCs, injection of the unmodified iPSCs led to a strong T cell and antibody responses, suggesting that the NHPs immune systems were intact. Again, there was no long-term graft survival due to the local xenogeneic inflammatory response.

Hypoimmune-Edited iPSCs do not Elicit T Cell, B Cell, or NK Cell Activation when Administered to NHPs Pre-Sensitized with Unmodified Cells



The top row shows absence of T cell (EliSpot) or B cell (IgM and IgG production and binding) activation when hypoimmune iPSCs were given to NHPs that had been administered two doses of unmodified cells. The bottom row shows activation of T cells and B cells by unmodified iPSCs in animals whose immune system had previously been quiescent following delivery of hypoimmune iPSCs. This indicates that there is no immunosuppression resulting from hypoimmune cell delivery. As before, there was no NK cell killing of hypoimmune iPSCs following the crossover dose. Data above from a single NHP; results representative of studies in four NHPs.

Going forward, we intend to test the hypoimmune technology in a more therapeutically relevant context—the appropriate cell type, in the appropriate microenvironment, and without the xenogeneic barrier. We expect to have data from this series of experiments as early as .

In light of our preclinical data to date, we believe our hypoimmune technology has the potential to address the most fundamental limitation of *ex vivo* therapies, persistence, and thereby unlock waves of disruptive therapies across a variety of cell types.

We also have an ongoing program to further refine our hypoimmune technology. Our research teams are working on additional modifications to expand our toolkit, as different microenvironments and different immune states may require additional modifications.

Safety Switch for Hypoimmune Cells

We are actively investigating approaches to control hypoimmune cells after administration into the patient. If necessary, the aim of these "safety switches" would be to provide a mechanism to eliminate hypoimmune cells within the body in a targeted fashion, in scenarios where the cells are not in a location where physical removal is viable. Such a safety switch would be beneficial to mitigate the potential risk of a hypoimmune cell becoming infected with a virus or undergoing oncogenic transformation, in light of the immune evasion modifications to these cells. We have identified several safety switches with *in vivo* activity and intend to continue to explore them.

Our *ex vivo* Cell Engineering Pipeline

Allogeneic T Cell Program (SC291, SC255)

Our allogeneic T cell program utilizes T cells from healthy donors to generate CAR T therapies that will initially target CD19, a protein expressed on the cell surface of B cell malignancies, to treat patients with refractory lymphoma. We believe that applying the hypoimmune technology to allogeneic T cells gives us an opportunity to create differentiated allogeneic CAR T therapies.

We believe our allogeneic T cell and T cell fusosome discovery programs provide us with two potentially disruptive programs to address the limitations of adoptive T cell therapy for cancer, which should increase the likelihood of success since both approaches have idiosyncratic risks and opportunities. We also believe each approach can address separate and valuable opportunities if they are both successful. Specifically, our allogeneic T cell program offers the opportunity to perform multiple gene edits in a T cell, which may allow us to make intentional modifications to control T cell function or to deliver more complex chimeric receptors and signal integration machinery to enable the T cell to distinguish tumor cells based on surface antigen combinations to improve the specificity of targeting. These approaches may prove especially valuable in targeting solid tumors, which have remained largely refractory to CAR T approaches to date. We also have an earlier-stage program looking to differentiate hypoimmune iPSCs into T cells. While we are still working to successfully create the appropriate T cells from an iPSC, we expect that progress with our allogeneic T cell program will also inform the iPSC T cell program. Separately, the fusogen technology allows for the *in vivo* generation of CAR T cells in a patient, offering a distinct advantage in terms of manufacturability and scalability that may enable the introduction of gene-modified T cells earlier in the course of a patient's therapy. Additionally, modifying the T cells inside the body without the need for *ex vivo* manipulation of the cells may generate CAR T cells with more favorable attributes.

We intend to develop our CD19 allogeneic T cell therapies with the goal of filing an IND for SC291 as early as . We are also advancing an allogeneic T cell program targeting BCMA for multiple myeloma, with the goal of achieving preclinical proof of concept for SC255 as early as .

Background on B cell Malignancies

B cell malignancies represent a spectrum of cancers including non-Hodgkin Lymphoma (NHL), chronic lymphocytic leukemia (CLL), acute lymphoblastic leukemia (ALL), and multiple myeloma (MM) and result in

over 100,000 deaths per year in the United States and Europe. See the subsection titled "—in vivo Cell Engineering Pipeline—Background on B Cell Malignancies" for further background discussion. In addition to our *in vivo* cell engineering technology, we believe our *ex vivo* cell engineering technology also has the potential to address B cell malignancies.

Current Treatment Landscape and Unmet Need

We believe our hypoimmune edited cells have the potential to create a differentiated platform for developing allogeneic T cells. There are two major hurdles to the use of allogeneic T cells. The first is the risk of graft versus host disease, in which the allogenic donor T cells target and kill recipient tissues. Multiple CAR T cell product candidates in clinical development have managed to prevent this reaction through gene edits targeting components of the T cell receptor such as TCR-alpha gene. The more significant challenge has been host versus graft disease, in which the patient's immune system kills the transplanted T cells. One strategy to approach this challenge has been to essentially eliminate the patient's immune system, neutering its ability to find and destroy the transplanted allogeneic CAR T cells. This strategy has two limitations. First, the patient is at risk of severe infections during this period of substantial immune suppression. Second, as the immune system returns, it will inevitably reject the allogeneic CAR T cells, limiting the duration that these therapeutic cells are in the body. Experience with autologous CAR T cells in patients with B cell malignancies has demonstrated that persistence of CAR T cells is important for the durability of response. Thus, the ability to effectively prevent long term rejection of an allogeneic CAR T therapy without significant immune suppression would be a major advance. We are aware of other efforts to develop allogeneic CAR T cell products that focus on overcoming the adaptive immune system (T and B cells). Our technology addresses rejection mediated by both the adaptive and innate immune systems, giving us the potential to create a differentiated allogeneic CAR T solution.

Our Allogeneic T Cell Program Approach

Our hypoimmune technology is designed to hide the cell from the patient's immune system, and we are applying this technology to manufacture allogeneic CAR T cells. We intend to utilize T cells from healthy donors and make the gene modifications necessary to overcome host versus graft disease utilizing our hypoimmune technology, to overcome graft versus host disease, and to introduce the CAR. We then intend to expand these cells *ex vivo*, with a goal of making many batches from a single donor as well as creating comparable CAR T cells from various healthy donors. These allogeneic CAR T therapies could be frozen and delivered as an "off the shelf" product for cancer patients without the need for severe immunosuppression.

Development Plan and Key Next Steps

Process development work is ongoing within the Technical Operations team to develop manufacturing processes to generate high-quality and consistent allogeneic T cell product candidates at sufficient scale. In parallel, our cell engineering team is developing scaled, efficient, and specific gene editing processes to enable manufacturing of our allogeneic T cell product candidates.

The next major milestone is to complete GLP production and manufacturing scale-up with the goal of filing an IND for SC291 as early as . We are also advancing an allogeneic T cell program targeting BCMA for multiple myeloma, with the goal of achieving preclinical proof of concept for SC255 as early as .

Beta Cell Program

Our beta cell program aims to restore lifelong glucose control in Type I diabetes mellitus (T1DM), patients by transplanting hypoimmune iPSC-derived beta cells. Current therapies for T1DM require continual management, and we believe that effectively restoring beta cell functionality will meaningfully improve patient outcomes for patients with T1DM. We intend to develop this program with the goal of filing an IND for SC451 as early as .

Background on Type 1 Diabetes

T1DM is an autoimmune disease in which the patient's immune system destroys its own pancreatic beta cells. The destruction of these cells leads to complete loss of insulin production and a metabolic disease wherein patients are unable to control their blood glucose levels. Often called "juvenile diabetes", this disease commonly has its onset in adolescence. Beta cells reside in specialized hormone-producing clusters within the pancreas called the Islets of Langerhans. In T1DM, activated T lymphocytes infiltrate the islets and selectively kill the beta cells, progressively reducing the body's capacity to produce insulin. Once the reserve capacity of beta cells is exhausted, blood glucose rises, and the patient will have a life-long battle to control blood glucose levels.

T1DM affects 1.6 million adults in the United States, and there are approximately 20,000 new cases diagnosed per year in patients under the age of 20. In Europe there are an estimated 2.4 million adults with T1DM, and 300,000 under the age 20, with 31,000 new cases of T1DM diagnosed each year. Combining prevalence in the United States and Europe yields a pool of approximately 4 million patients with T1DM.

Current Treatment Landscape and Unmet Need

Insulin injection is the main treatment option for T1DM. Despite significant advances in types of insulins, glucose monitoring, and insulin pumps, life expectancy for T1DM is still approximately 15 years shorter than for people without diabetes. Patients are at risk from acute complications of hyperglycemia, including diabetic ketoacidosis and coma. Conversely, they are also at risk of hypoglycemic episodes, particularly at night, which can lead to the "dead in bed" syndrome, thought to result from cardiac arrhythmias induced by low glucose. Long term elevations in blood glucose levels have particularly devastating effects on arteries and capillaries, resulting in premature myocardial infarction, stroke, limb ischemia, gangrene, kidney failure, and blindness due to diabetic retinopathy. "Insulin pumps," which feature a computerized system for sensing blood glucose and delivering appropriate doses of insulin, have improved glycemic control. However, when implanted chronically, they elicit a foreign body scarring reaction around the sensor, and this barrier introduces a lag between changes in glucose in the blood and at the sensor. Newer systems use short term implantable sensors on the tips of needles but require frequent punctures and are associated with injection site reactions. Notably, data from the FDA indicate that issues with insulin pumps are among the most frequently reported problems in their database. All current therapies require patients to carefully monitor their dietary intake, which, while inconvenient in adults, is a frequent point of failure in adolescents.

Pancreas transplantation for uncontrollable diabetes was first performed in the 1960s, and this established the principle that replacing the beta cells (here in the context of the whole pancreas) could restore physiological glucose control. Pancreas transplants are complicated surgical interventions, require lifelong immunosuppression, and are limited due to organ availability. Nevertheless, some 30,000 pancreas transplants have been performed worldwide to date.

Because of these challenges, the biomedical community began exploring pancreatic islet transplantation in the 1970s. This process involves enzymatic digestion of a donor pancreas and isolation of the Islets of Langerhans followed by delivery of these cells to an appropriate site in the body where the islets can engraft and become well vascularized. Multiple sites have been shown to support islet engraftment and glucose control, including kidney, liver, and skeletal muscle. The major lessons from islet transplantation have been that glucose homeostasis can be restored, insulin-independence can be achieved, hemoglobin A1C levels (a marker of long-term glucose levels) can be normalized, and severe episodes of hypoglycemia can be reduced. As with an organ transplant, patients must be immune suppressed to prevent immune rejection of the transplanted cells. In addition to complications from this immune suppression and the lack of cell availability, the principal limitation of islet transplantation has been the therapy's durability. Most patients lose glucose control over months to years and eventually become insulin-dependent again, primarily due to immune rejection of the allogeneic islets.

Our Beta Cell Program Approach

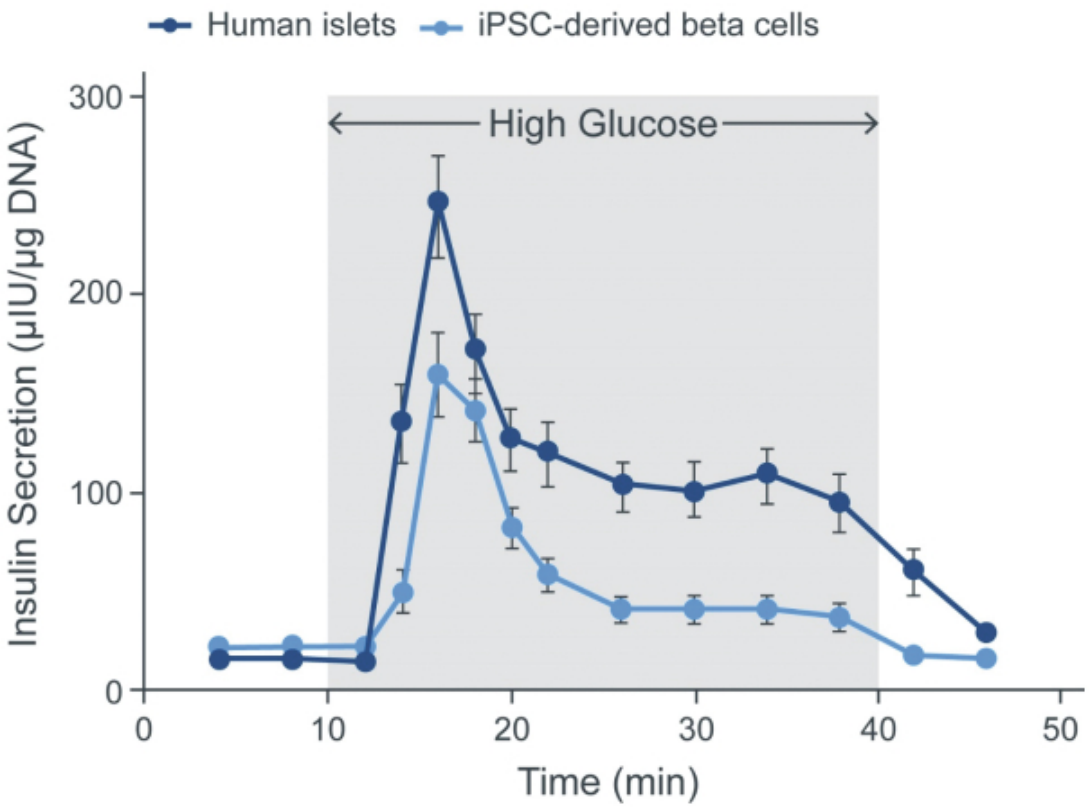
The goal of our beta cell hypoimmune program is to restore lifelong glucose control in T1DM patients by transplanting hypoimmune iPSC-derived beta cells, including beta cells. Our goal is to create a therapy that restores the body's normal beta cell mass, giving patients physiologically appropriate glucose sensing ability and insulin secretion. We believe this therapy could reduce, or even eliminate, hypoglycemia and hyperglycemia, potentially enabling less onerous and costly treatment, fewer complications, and longer life expectancy, resulting in a meaningfully improved quality of life.

We aim to develop a disruptive therapy that builds on lessons from pancreatic islet transplantation, recent advances in understanding pancreatic islet developmental biology, and our hypoimmune technology. Deriving beta cells from iPSCs has the potential to solve limitations associated with donor pancreases and improve the overall product quality and product consistency. iPSCs have the potential to create a virtually limitless supply of these cells. Our program uses proprietary differentiation protocols to generate mature beta cells with glucose control comparable to primary human islets, as evidenced by our animal studies. Finally, we intend to modify the genes of the iPSCs in order to apply our hypoimmune technology. If successful, the hypoimmune gene modifications will protect these cells from both auto-immune and allogeneic rejection by the patient's immune system. Hypoimmunity should also eliminate the need for physical separation of the beta cells from the rest of the body by a device or encapsulation technology, which may allow for tighter control of glucose by eliminating the lag time between glucose sensing and insulin secretion.

Preclinical Data

We are developing a proprietary protocol that will differentiate hypoimmune iPSCs into mature, glucose-sensitive, insulin-secreting beta cells based on licensed technology from Washington University in St. Louis. This technology enables differentiation of beta cells at a greater purity and with superior function compared to published stem cell-based protocols. The principal function of beta cells is to maintain steady levels of glucose in circulation. The beta cells sense when glucose levels rise in the bloodstream and release insulin in response. *In vitro*, our beta cells respond to glucose and robustly secrete insulin at an equivalent level to primary human islets, as depicted in the figure below.

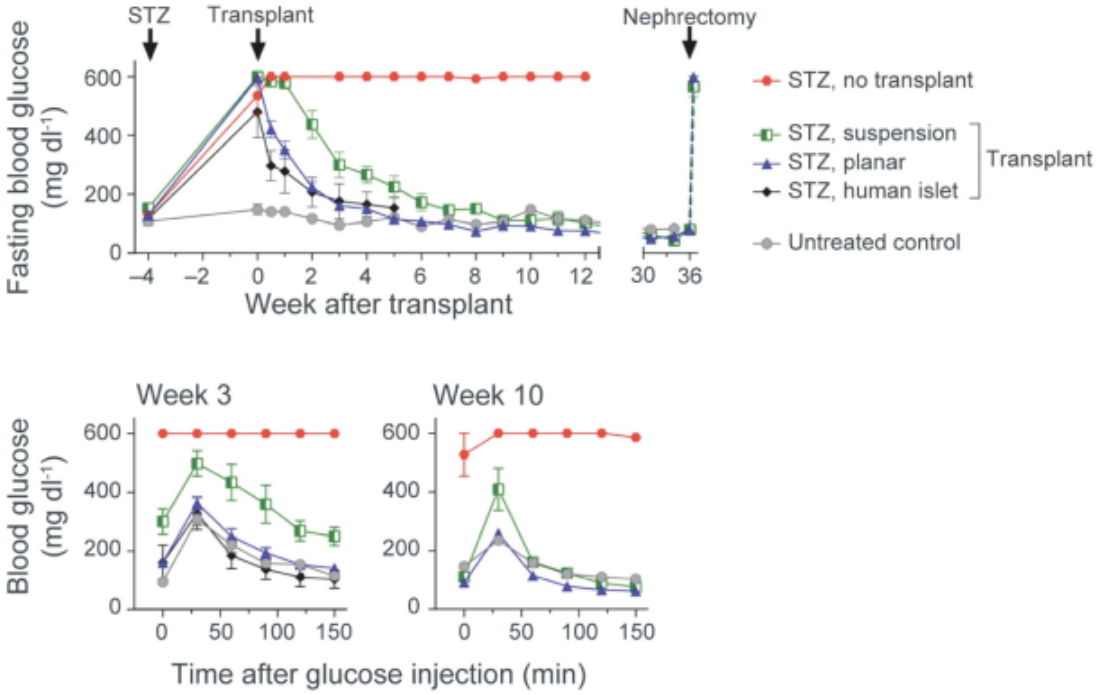
Human iPSC-Derived Beta Cells Exhibit Glucose-Induced Insulin Release



Human islets from cadaveric pancreases (gold standard) exhibit robust insulin secretion in response to an increase in glucose levels. Human iPSC-derived beta cells using technology licensed from Washington University in St. Louis show similar dynamics of insulin secretion to the cadaveric islets.

These stem cell-derived beta cells were tested in a mouse model of Type I diabetes induced by the beta cell toxin, streptozotocin. When transplanted into the kidney of the diabetic mice, these beta cells normalize glucose levels in an equivalent fashion to primary human islets. The diabetic glucose levels return when the grafts are surgically excised (nephrectomy). Similar to the human phenotype, diabetic mice cannot normalize circulating glucose levels following a glucose injection. Following transplantation of our beta cells, these mice rapidly normalized blood glucose in an equivalent fashion to both non-diabetic mice and diabetic mice that received human primary islet transplants.

***In vivo* Performance of iPSC-Derived Beta Cells in a Mouse Model of T1DM**



Top: Normalization of blood glucose levels after transplantation of cadaveric human islet cells or iPSC-derived islet cells obtained by planar or suspension differentiation (Washington University technology). Note the rapid normalization of blood glucose with cadaveric and stem cell-derived islets with the planar protocol, with slower normalization using the suspension protocol. In all groups, removal of the graft by nephrectomy re-induced diabetes, indicating the correction resulted from the transplant. STZ, streptozotocin, is a toxin for beta-islet cells that induces diabetes in animal models. Bottom: Normalization of blood glucose after glucose injection by transplantation of cadaveric islet cells or iPSC-derived islet cells. Note the more complete normalization using the planar protocol. Groups are defined by the same symbols shown in the middle panel. From Hogrebe et al, Nature Biotechnology 2020.

An important challenge for any beta cell program is protecting the pancreatic islet cells from the immune system, particularly given that T1DM patients already have a pre-existing immune response to the pancreatic beta cell. We believe we may have a differentiated ability to address this challenge given our hypoimmune technology. Importantly, data from the cross-over portion of our hypoimmune NHP study shown previously highlights the potential of the hypoimmune technology to prevent systemic immune activation even in the scenario where there are preexisting T cells and antibodies reactive to the cell.

Development Plan and Key Next Steps

Our next important milestone is to make beta cells from hypoimmune modified NHP iPSCs and transplant them into NHPs. These data should provide substantial insight into the potential of the hypoimmune edits to protect beta cells from allogeneic rejection. We are also working on our scaled manufacturing process to create a robust, consistent, and scaled therapy. Making the hypoimmune gene edits requires early investment in GMP iPSCs and GMP gene modification reagents. We are working through the process development and IND-enabling studies to allow for an IND filing for SC451 as early as .

GPC Program

Our GPC program aims to deliver healthy allogeneic GPCs, the precursors to both astroglia and myelin-producing oligodendrocytes. This program has the potential to treat myelin and glial-based disorders, which

represent a broad group of debilitating neurological disorders, such as multiple sclerosis and a number of neurodegenerative disorders, none of which have effective treatment alternatives. We intend to develop our stem cell derived GPC therapies for secondary progressive multiple sclerosis, Pelizaeus-Merzbacher disease other disorders of myelin, Huntington's disease, and other astrocytic diseases. Our goal is to file three INDs for SC379 as early as .

Background on Myelin and Glial Based Disorders

Glial cells are the support cells of the human CNS, within which they are the most abundant cells. The two major types of CNS-derived glial cells are oligodendrocytes—the cells that produce myelin, the insulating substance of the brain's white matter that enables neural conduction and astrocytes, the support cells of neurons and their synapses. These two kinds of glial cells arise from human GPCs (hGPCs), which are the major dividing cell type of the adult brain and are responsible for remyelination in the injured and demyelinated adult brain and spinal cord.

Diseases of glial cells are among the most prevalent and disabling conditions in neurology. These disorders include the disorders of oligodendrocyte loss and myelin failure—such as progressive multiple sclerosis, vascular white matter loss, and the childhood leukodystrophies – and the disorders of astrocytes, which include a number of neurodegenerative and psychiatric disorders, that include Huntington disease (HD), amyotrophic lateral sclerosis (ALS), and frontotemporal dementia (FTD), among others. What all these disorders have in common is a significant glial contribution to their pathogenesis, and a lack of disease-modifying treatment options.

Congenital Leukodystrophies. A number of hereditary disorders of oligodendrocyte loss or dysfunction are characterized by a failure in myelin synthesis or structural stability. Tens of thousands of children in the United States suffer from diseases of myelin loss. These include the metabolic demyelinations such as adrenoleukodystrophy; the lysosomal storage disorders, such as metachromatic leukodystrophy; the hypomyelinating diseases, such as Pelizaeus-Merzbacher disease; the myelinoclastic disorders, including vanishing white matter disease, and most commonly of all, cerebral palsy. The most prototypic example of this class of diseases is Pelizaeus-Merzbacher disease (PMD), an X-linked leukodystrophy most often manifesting in male infants and young boys, caused by mutations in the oligodendrocytic PLP1 gene, which results in widespread hypomyelination. There is no treatment for PMD, which is typically fatal in childhood. We intend to deliver intracerebral transplants of stem cell-derived GPCs to the brains of PMD patients, with the goal of replacing PLP1 mutant oligodendrocytes with healthy cells capable of producing normally compact myelin. Prevalence of PMD in the general population is estimated to be approximately 1 in 100,000 in the United States. While we are initially targeting PMD as our proof of concept, congenital leukodystrophies as a group affect a more significant population, or about 1 in 7,600 births.

Multiple Sclerosis (MS). MS is a debilitating disease characterized by both inflammatory myelinolysis and degenerative axonal loss. There are two major forms, the initial relapsing remitting form, known as RRMS, and its later progressive neurodegenerative phase designated secondary progressive MS (SPMS). RRMS is characterized by clearly defined attacks with new or increasing neurologic symptoms. In contrast, SPMS is characterized by progressive neurodegeneration with a loss of neurons, including those that were previously demyelinated during the RRMS phase of the disease. The demyelination occurs in a diffuse fashion throughout the adult brain and appears to reflect a loss of axonal support by local oligodendrocytes. The delivery of GPCs into such chronically demyelinated brain may offer tangible benefits through the oligodendrocytic engagement of axons, as well as by myelin repair. MS is highly prevalent, with estimates of up to 1.0 million in the United States, 600,000 in Europe, and 2.8 million patients globally. Approximately 85% of MS patients receive a diagnosis of RRMS initially while 15% of patients are diagnosed with primary progressive MS (PPMS). Up to a third of RRMS patients transition to secondary progressive MS within a decade if untreated, and most will progress to SPMS within 20-25 years of diagnosis. Success with a stem cell derived GPC product in SPMS, and especially with a hypoimmune product, could enable further expansion into the RRMS patient population.

Huntington's Disease (HD). HD is a neurodegenerative disorder in which glial pathology appears to make a significant causal contribution. It is an autosomal dominant disorder characterized by abnormally long CAG repeat expansions in the first exon of the Huntingtin gene. The encoded polyglutamine expansions of mutant huntingtin protein disrupt its normal functions and protein-protein interactions, ultimately yielding widespread neuropathology, most rapidly evident in the neostriatum. We have found that glial pathology is a major contributor to the functional deficits of HD and repairing the glial pathology has significant and positive effects in animal models. There are approximately 41,000 symptomatic Americans and more than 200,000 at-risk of inheriting HD. In Europe, there are approximately 50,000 patients with HD.

Current Treatment Landscape and Unmet Need

Congenital Leukodystrophies. There are no viable treatment options for these conditions, only supportive and palliative therapies for symptoms as they present.

MS. Current treatments for MS as are largely limited to treatments for RRMS; few treatments are approved for SPMS, and these have at best marginal efficacy in delaying disease progression; none are restorative. Currently approved treatments for RRMS may be divided into three broad categories of disease modifying therapies: (i) first line injectables (such as beta-interferons, Copaxone), (ii) newer oral agents (such as Tecfidera, Gilenya, Mayzent, Zeposia), and (iii) high-efficacy agents (such as Tysabri, Lemtrada, Ocrevus). Many neurologists have adopted anti-CD20 B-cell therapies like Ocrevus as a first line therapy in an effort to treat MS aggressively upfront. While these therapies are very potent immunosuppressive agents, there are significant associated side effects, including depletion of B-cells, which can result in increased risk of infections. Furthermore, the majority of therapeutics are only approved and effective in RRMS; while Ocrevus and Mayzent have been approved in progressive forms of MS, their efficacy in SPMS is limited to slowing disease progression. Despite many recently successful drug launches in the RRMS space, these drugs still only slow the progression of disease and aid in the recovery from attacks, and there remains no treatment that confers functional restoration or effective cure for this disease.

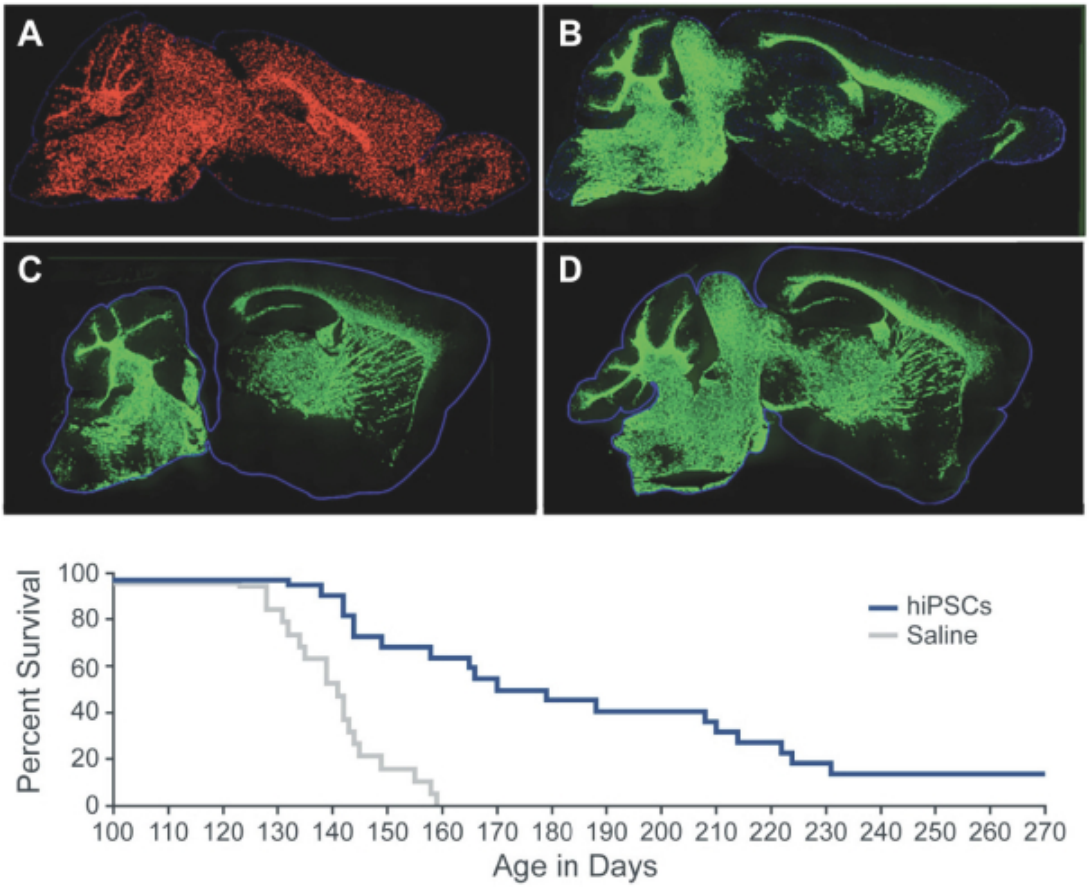
HD. Currently, there is no treatment to stop or reverse Huntington's disease. Treatment is limited to several medications that can help minimize symptoms, including the drug tetrabenazine, antipsychotic drugs, antidepressants, and tranquilizers.

Our GPC Program Approach

Our approach to treat myelin and neurodegenerative disorders is via the delivery of healthy allogeneic stem cell-derived GPCs. We have developed the methods for producing and isolating these cells from pluripotent stem cells and delivering them in the purity and quantities necessary for their replacement of endogenous diseased cells. We believe that both the myelin disorders and glial-based neurodegenerative conditions have compelling potential for our *ex vivo* therapy.

Preclinical Data

Congenital Leukodystrophies. The capacity of stem cell-derived GPCs for remyelination has been conducted in animal models of congenital hypomyelination. Our collaborators used newborn *shiverer* mice that have a genetic defect in myelin basic protein (MBP), resulting in their neurons being hypomyelinated and the mice having a shortened lifespan. When iPSC-derived hGPCs were transplanted into these mice, the cells spread widely throughout the brain, developing as astrocytes and oligodendrocytes. These oligodendrocytes generated mature myelin that effectively restored neuronal conductance and prolonged survival in the transplanted mice. We believe that these data suggest the feasibility of iPSC-derived hGPC implantation in treating childhood disorders of myelin formation and maintenance, as depicted in the figure below:

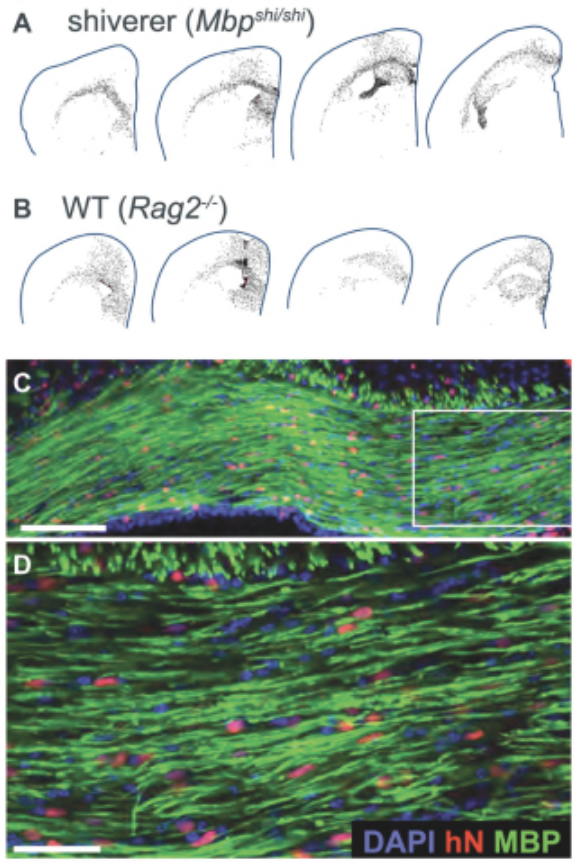


hGPCs myelinate widely to greatly extend the survival of hypomyelinated mice. A, Dot map indicating distribution of human iPSC-derived GPCs at 7 months of age, following neonatal engraftment in a shiverer mouse brain. Widespread colonization and chimerization of the host brains by iPSC-derived hGPCs is evident (human nuclear antigen, red). B, iPSC-derived hGPC-derived myelination in shiverer forebrain, at 7 months; section 1 mm lateral to A. Myelin basic protein (MBP)-immunoreactivity (green) is all human donor-derived. C, D. Myelination in sagittal sections taken at different mediolateral levels from 2 additional 7 month-old mice, each engrafted with iPSC-derived hGPCs at birth. E, Kaplan-Meier plot of survival of iPSC-OPC implanted (n=22) vs. saline-injected (n=19) control mice. Scale: A-B, 2 mm. Adapted from Wang, Cell SC 2013.

MS. Our prior studies established the ability of stem-cell derived hGPCs to myelinate the developing *shiverer* brain and rescue the afflicted mice; however, the experimental subjects were neonates, not adults. Until recently, it was unclear whether GPCs are able to migrate extensively in adult brain tissue, as would be required

for the repair of diffusely demyelinated adult brains. To explore whether the introduction of stem-cell derived hGPCs delivered directly into the adult brain could remyelinate axons in the setting of diffuse demyelination, as might be encountered clinically in multiple sclerosis and other causes of diffuse adult demyelination, our collaborators studied three different biologic models. First, it was shown that stem-cell derived hGPCs can disperse within and myelinate the brains of adult *shiverer* mice (as depicted in the figure below). Second, it was shown that neonatally-engrafted hGPCs engrafted as a neonate can generate new oligodendrocytes and remyelinate demyelinated axons after chemically induced demyelination. This result demonstrated the ability of already-resident hGPCs to remyelinate previously myelinated axons after a new demyelinating insult as an adult, as well as the ability of transplanted hGPCs to reside as a functional reservoir of new myelinogenic cells in the host brains. Third, it was shown that hGPCs transplanted into the adult brain after chemically induced demyelination can remyelinate denuded axons. These data indicate that transplanted hGPCs can disperse broadly and differentiate as myelinogenic cells in the adult brain, and that they are able to remyelinate demyelinated axons and white matter lesions of the brain after an insult as an adult.

hGPCs Mediate Robust Myelination After Transplantation into the Adult *Shiverer* Brain



Human GPCs proved both highly migratory and robustly myelinogenic, after delivery to the hypomyelinated adult shiverer x rag2-/- brain. A, By 19-20 weeks of age (mice were injected as post-weaning adults, at 4-6 wks) the injected cells had dispersed broadly throughout the forebrain white matter. B, hGPCs delivered to myelin wild-type rag2-/- mice distributed throughout both gray and white matter. C, Oligodendrocyte differentiation and myelinogenesis by donor hGPCs was robust, with myelination of brain regions that would typically be demyelinated in shiverer mice D, a higher power image of C shows the high proportion of donor cells in those brain regions. Note that DAPI marks all nuclei, hN marks the hGPCs, and MBP marks the remyelinated regions in C and D. From Windrem et al, Cell Reports 2020.

HD. Our collaborators explored the cellular basis for HD related glial pathology and identified significant defects in potassium channel and glutamate uptake mechanisms in HD glia, which appeared to account for both the glial pathology and its deleterious effects on synaptic function. Together, these studies indicated a critical role for glial pathology in the progression of HD and suggested the potential for glial cell replacement as a therapeutic strategy in HD, and more broadly, to other neurodegenerative diseases in which glial pathology might be causally contributory. It was confirmed in preclinical mouse studies that stem-cell derived hGPC transplant ameliorated both the neuronal and glial pathology of HD by restoring synaptic homeostasis and normal synaptic function to the most affected regions of the host brain.

The majority of the studies with human GPCs thus far have been xenogeneic grafts of human GPCs to neonatal or adult mice or rats (and in a small sample POC study limited to adult tissue-derived hGPCs, NHPs). Our collaborators have also performed studies with murine GPCs transplanted into both developing and adult mice, which have confirmed allogeneic GPC migration and integration. However, we have no assurance that human GPC engraftment of human brain will result in the widespread migration and colonization of host brain that is seen with xenogeneic grafts. To better model the human-to-human graft paradigm, our collaborators have therefore established a new model, whereby neonatal mice are first colonized with human hGPCs genetically tagged via CRISPR/Cas insertion of a fluorescent reporter, and then allowed to grow to adulthood. The human cells outcompete the resident mouse GPC population to largely humanize the host white matter. Human hGPCs tagged with a different color are then transplanted the already glial-humanized adult mice to assess the ability of the newly introduced human GPCs to compete with the human glia already resident in the host mouse brain. This model allows observation of the competitive interactions of the two separately tagged human GPC populations. The human-into-human grafts expanded and integrated well in their humanized host, with competitive interactions whose outcomes appear dictated by their respective cellular ages, disease phenotype, and metabolic efficiencies. As might be anticipated in the clinical setting of healthy cells being transplanted for the purpose of replacing lost or diseased hGPCs, the healthy donor cells outcompete both diseased and older cells to ultimately colonize the hosts. The recent establishment of this model, and its resultant data, have provided preclinical assurance of the fundamental premise of our approach, that healthy human donor cells can replace lost or diseased human cells *in vivo*. That said, this determination remains to be made in patients.

GMP Grade Stem Cell Derived hGPCs for Clinical Studies

A protocol to direct differentiation of human ESCs, as well as iPSCs, to hGPCs has been established. These hGPCs cells remain bipotential for astrocytes and oligodendrocytes, and they differentiate to either fate depending on local signaling.

This protocol has been transferred to a GMP facility in order to enable production of clinical grade cells for both safety and efficacy testing. These cells have been validated to robustly remyelinate *shiverer* mouse brains upon intracerebral transplantation. We plan to use these cells for our IND-enabling studies and initial clinical trial material.

Development Plan and Key Next Steps

Progression of SC379 to IND is planned to follow completion of definitive safety and toxicology studies. Of note, in our studies to date, now spanning several thousand mice engrafted with hGPCs using our differentiation protocols, we have observed no evidence of tumorigenesis. Definitive preclinical efficacy studies using the anticipated clinical product are also planned and will replicate studies that we have published. We have already held pre-IND meetings with the FDA for SPMS and HD. We expect to file IND applications for SC379 for SPMS, PMD, and HD beginning as early as .

Cardiomyocyte Program

Background on Heart Failure

Heart failure (HF) is a classic example of a disease of cell loss, ideally suited to the application of *ex vivo* engineered cells. The clear but ambitious goal of our program is to replace missing cells after a myocardial infarction, commonly known as a heart attack, in an attempt to restore heart function and improve outcomes for patients. HF is a life-threatening syndrome, and patients with HF have a mortality rate of 20-30% within one year of diagnosis and a mortality rate of around 50% within five years of diagnosis.

HF with reduced ejection fraction (HFrEF), is a severe form of HF where heart muscle is unable to contract, and therefore pump, adequately. HFrEF is most frequently a consequence of a loss of heart muscle cells (cardiomyocytes), following a myocardial infarction. In the United States, there were approximately 380,000 deaths associated with HF in 2018 according to the United States Centers for Disease Control and an overall prevalence of approximately 6 million people with HF, with similar numbers in Europe. The heart is one of the least regenerative organs in the human body, and when cardiomyocytes are lost following a heart attack, they are replaced by scar tissue, which results in further diminished pump function.

In general, HF has been a challenging area for drug and device development, including only one new drug, Entresto, approved in the last 20 years, and a limited number of devices introduced including electrical resynchronization therapy and implantation of left ventricular assistance devices (LVADs). These approaches provide only symptomatic relief and do not address the underlying loss of cardiomyocytes associated with HFrEF. As a result, HFrEF currently remains a progressive and deadly disease with a large unmet need worldwide.

To date, efforts to develop cell-based therapies to address this unmet need have provided little evidence of clinical benefit. Importantly, these attempts have typically utilized cells such as bone marrow-derived mononuclear cells and mesenchymal stromal cells where any potential benefit would be limited to paracrine mechanisms and not the direct replacement of lost cardiomyocytes.

Our cardiomyocyte program aims to directly regenerate the heart, by replacing lost cardiomyocytes with iPSC-derived cardiomyocytes, with the goal of restoring heart muscle and increasing ejection fraction, which is the percentage of blood the heart pumps with each heartbeat. Replacement of lost cardiomyocytes with iPSC-derived cardiomyocytes that engraft and function correctly has the potential to prevent or even reverse the progression of HFrEF.

Developing an ideal stem cell-derived cardiomyocyte therapy involves many steps, including:

- differentiating cardiomyocytes at scale that engraft upon transplantation, beat in synchrony with the host heart muscle, and improve heart function;
- engineering cardiomyocytes to avoid rejection due to the host immune response to the transplanted cells, without requiring immunosuppression; and
- addressing the risks associated with potential transient arrhythmias, or temporary abnormal heart beats, following transplantation.

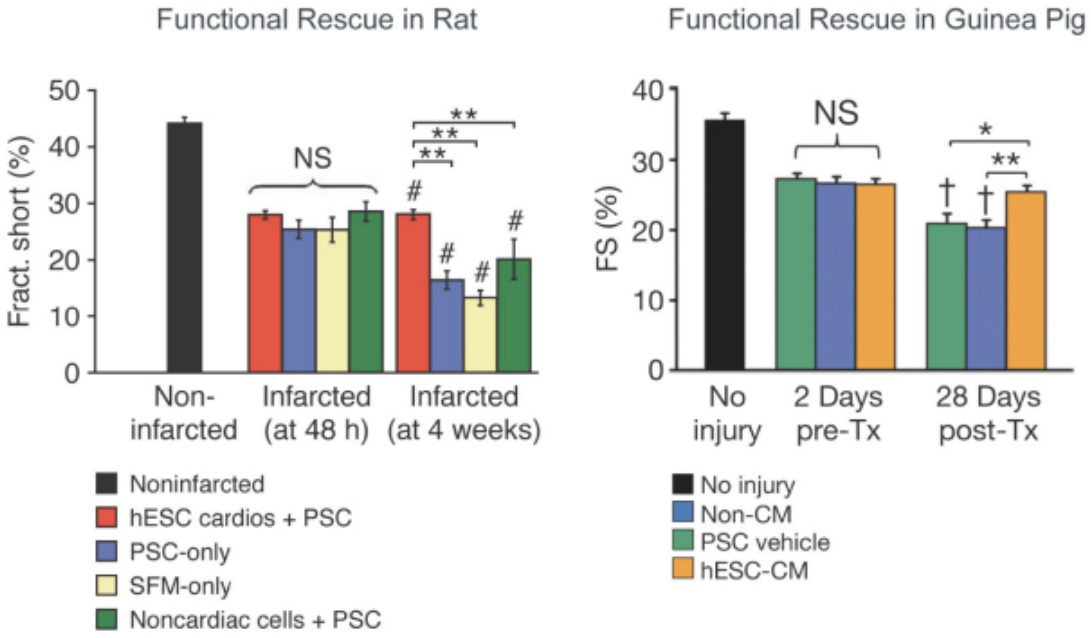
Differentiating Cardiomyocytes at Scale that Engraft, Beat Correctly and in Synchrony with the Host Heart Muscle, and Improve Host Heart Function

Scientists, including Dr. Chuck Murry, our Senior Vice President, CSO of Cell Therapy, have been working for over 20 years towards developing a regenerative therapy for HFrEF with the goal of transplanting cardiomyocytes derived from human pluripotent stem cells that engraft, function, and persist in the human heart *in vivo*. The groundwork for potential future clinical development has been laid by key breakthroughs such as the

ability to direct the differentiation of stem cells selectively into cardiomyocytes, including producing pharmaceutical grade cardiomyocytes at large scale in bioreactors, and the ability to transplant such cardiomyocytes to induce remuscularization of injured hearts.

Initial preclinical attempts to remuscularize the infarcted heart were unsuccessful due to death of the transplanted cells within a few days of delivery. None of the animals with failed engraftment showed improvement in cardiac function, indicating that engraftment is essential for functional improvement. Our collaborators developed a pro-survival cocktail that kept cells alive through the rigors of transplantation, allowing the cardiomyocytes to self-assemble into new muscle tissue and induce ingrowth of new blood vessels and connective tissue from the surrounding heart muscle. Once engraftment was successful, cardiac function improved. As our collaborators' capabilities to scale cell manufacturing increased, studies progressed from mice to rats to guinea pigs, all showing improved function:

Human ESC-Cardiomyocytes Improve Function in Injured Rat and Guinea Pig Hearts

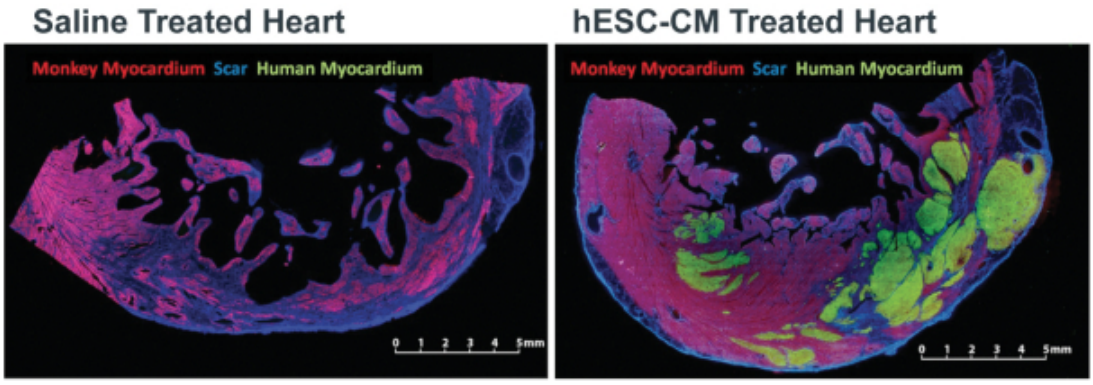


*Left panel: functional rescue in rat. All groups showed comparably reduced fractional shortening after infarction at 2 days pre-transplantation (Pre-Tx). At 28 days post-transplantation there was preservation of fractional shortening in animals receiving hESC-cardiomyocytes, with deterioration of function in all other groups. PSC, pro-survival cocktail. SFM, serum-free media. **p<0.01; # p<0.05 vs. 2 days Pre-Tx. Right panel: functional rescue in guinea pig. Following cardiac injury at 2 days before transplantation, all groups showed comparably reduced fractional shortening. At 28 days post-transplantation there was preservation of function in animals receiving hESC-cardiomyocytes (hESC-CM), with deterioration of function in other groups. *p<0.05. **p<0.01. †p<0.05 vs 2 days Pre-Tx. From Laflamme et al, Nature Biotechnology 2007 (left) and Shiba et al, Nature 2012 (right).*

Current methods demonstrate regeneration of the hearts of large animals including pigs and NHPs by transplanting human ESC-derived cardiomyocytes (hESC-CM).

The figure below shows low magnification microscopic images from NHP hearts that were infarcted and then received either hESC-CM or saline controls. The replacement of heart muscle by scar tissue is evident in the saline-treated heart, whereas human heart muscle has repopulated the infarct in the hESC-CM treated group.

Remuscularization of the Heart of an NHP by hESC-CM Transplantation



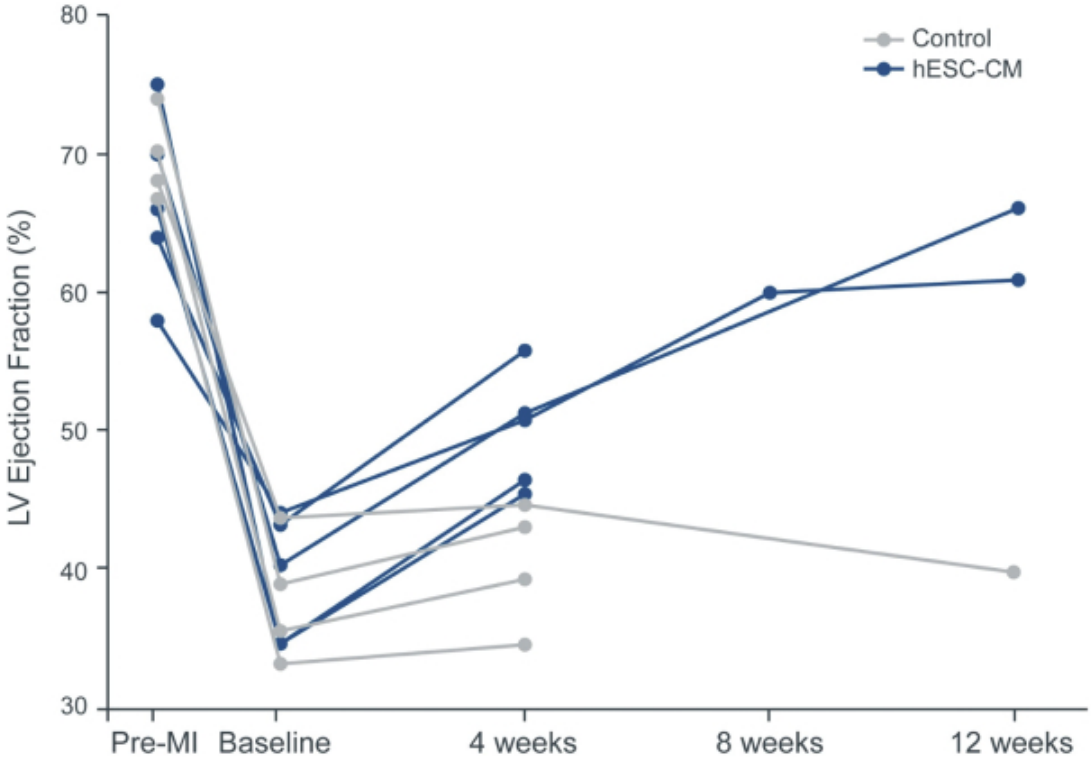
The saline-treated heart (left) shows infarct scar tissue (blue) replacing the myocardium lost to infarction. The hESC-CM treated heart (right) shows a large graft of human heart muscle (green) replacing the myocardium lost to infarction. From Liu et al, Nature Biotechnology 2018. Scale bar, 5 mm.

We conducted an experiment to help us understand the mechanism of action and learn whether the transplanted muscle beat in synchrony with the host heart muscle. hESC-CMs were genome-edited to express a protein that fluoresced green with each contraction, and their behavior was studied after transplantation into an infarcted macaque heart. hESC-CMs showed 1:1 synchrony with the host heart, indicating that the graft follows the heart's natural pacemaker, an essential result for heart regeneration.

A final question was whether this regeneration improves the function of the injured heart. To assess this, engrafted NHP hearts were studied by magnetic resonance imaging (MRI), the gold standard for assessing cardiac contractile function. As illustrated in the figure below, myocardial infarction induced a 25-point drop in left ventricular ejection fraction, the fraction of blood ejected from the heart with each beat.

Control animals receiving a saline injection showed no significant improvement at 4 or 12 weeks, as expected. In contrast, four weeks after receiving hESC-CMs, ejection fraction improved by approximately 10 points, and by 12 weeks, it had improved by a total of approximately 22 points. While the number of animals followed out 12 weeks is limited, cardiac remuscularization in this study restored ventricular function back into the normal range. In contrast, the current standard of care for myocardial infarction, including reperfusion via angioplasty, ACE inhibitors, and beta blockers, increases ejection fraction by approximately 6 points.

Restoration of Cardiac Function in NHPs by Transplantation of Human ESC-derived Cardiomyocytes (hESC-CM)



Myocardial infarction reduces ejection fraction (a measure of cardiac function), and there is no spontaneous recovery in control animals receiving a saline injection (gray). All animals receiving hESC-CM (blue) showed significant improvement by 4 weeks, and by 12 weeks after treatment, cardiac function was restored to the normal range.

In summary, structural data demonstrating extensive remuscularization of the infarcted heart in conjunction with physiologic and pharmacodynamic data provide evidence that the transplanted cardiomyocytes directly restore heart contractile function.

Engineering the cells to avoid rejection due to the host immune response to the transplanted cells

Initially, we plan to establish safety with first-in-human clinical trials of our cardiomyocyte cell therapy using immunosuppression to reduce the risk of a host immune response to allogeneic transplanted cells and the potential immune rejection. Our collaborators have studied immunosuppressive regimens in NHP by transplanting rhesus cardiomyocytes derived from stem cells into the hearts of mismatched recipient NHP. An immunosuppressive regimen was identified that keeps the allogeneic grafts alive long term and is considerably less toxic than regimens used for heart transplantation. However, an approach that obviates the need for an immunosuppression regimen has the potential to improve safety and patient eligibility. Therefore, as part of our program lifecycle we intend to switch to a hypoimmune stem cell-derived cardiomyocyte over time, as this should allow us to eliminate or reduce the immune suppression required for durable maintenance of these cells.

Addressing the risks associated with potential transient arrhythmias, or abnormal heart beats, following cell transplantation

The term engraftment arrhythmia refers to a transient period of unstable electrical activity that occurs in some species over approximately four weeks following cardiomyocyte transplantation. Engraftment arrhythmias were not observed in mice, rats, or guinea pigs, but they are observed in NHPs, where they cause mild symptoms, and farm pigs, where they cause more significant symptoms. The arrhythmias follow a stereotypical course, where they increase in frequency and duration, plateau for a variable period, and then wane until the heart has normal rhythm once again. Once the heart rhythm stabilizes, the arrhythmias seem to disappear permanently. We are planning to explore three ways to address engraftment arrhythmias: pharmaceutical interventions, genetic modifications to the cardiomyocytes, and adjusting the stage of differentiation of the cardiomyocytes. Because we do not yet know the impact of the potential for these arrhythmias in humans, we plan to do our first human studies in patients with an implanted left-ventricular assist device (LVAD) in order to mitigate any clinical sequalae if they emerge.

Development Plan and Key Next Steps

Our key milestones include completing GLP toxicology studies and additional efficacy and safety studies in NHPs and pigs, with the goal of filing an IND for SC187 as early as . We plan to begin clinical testing, starting with patients suffering from advanced heart failure who receive a LVAD as a bridge to heart transplantation. The goal of this initial study to assess the safety of stem-cell derived cardiomyocytes in humans. Based upon safety results of initial clinical studies, we may have the opportunity to explore this therapy in earlier-stage patients, including patients with acute heart failure after significant myocardial infarction.

SanaX

Despite the significant advances in the development of successful cell and gene therapies that have been made to date, there remain a number of fundamental limitations of existing technologies that prevent achieving the maximal breadth of application of these new therapeutic approaches. We wish to lead both the present and future of cell and gene therapy, and we are therefore committed to investing in research and other activities that will ensure a leadership position for the long-term. Towards this end, we have established SanaX as a distinct research arm.

In contrast to the industry's traditional research activities which are focused primarily on near-term product development using existing technologies, SanaX is devoted to finding solutions to the limitations of today's technology in order to expand the breadth of therapeutic opportunities. SanaX research efforts are aimed at making fundamental improvements to existing technologies and establishing new paradigms for gene and cell delivery that will ultimately lead to the development of completely new therapeutic modalities.

Truly novel technology development requires the unique ability to thoughtfully marry rigorous experimental science with specific technical goals. Often, fundamental biological problems must be understood in depth in order to define the pathway to a new technological and therapeutic capability. SanaX has established a unique physical and cultural environment with individuals that possess the requisite intellectual and technical capabilities essential for success. One characteristic of the SanaX research environment that we believe will be extremely valuable is a "nimbleness" that enables the team to immediately embrace new technical or scientific information and/or meet specific unanticipated therapeutic needs. In addition, several collaborative efforts with outside investigators possessing specific biological sector expertise have been established to enhance our internal efforts.

Current SanaX research activities are focused in several areas where we believe advances in technology are most critical. Some of these efforts include:

- evaluating the use of cells, rather than viruses, as delivery vehicles;

- re-purposing several different virus vector systems to expand the therapeutic payloads that may be delivered by the different viruses;
- developing novel approaches to the production of different viral vectors;
- developing novel methods for enabling the exogenous control of transgene expression via small molecule drugs;
- developing new paradigms for genetically manipulating specific arms of the immune response in order to engender immunological tolerance to specific antigens, cells, and organs; and
- COVID-19 related research focused on the delivery of specific anti-SARS-Cov-2 antibodies and the evaluation of novel direct anti-viral strategies.

Dr. Mulligan, our Executive Vice-Chairman and Head of SanaX, directly oversees the SanaX research effort. SanaX maintains an independent research budget in order to ensure that these longer-term, disruptive priorities are not sacrificed for near-term needs. Once SanaX develops an understanding of how a technology can translate into the clinic, a program will move from SanaX into our internal R&D and manufacturing organization or partnered externally.

Manufacturing Strategy and Approach

While the field of cell and gene therapy has had a number of successes with innovative therapies, the challenges of manufacturing at industrial scale have limited access for patients in need. As was the case during the initial development of recombinant biologics, an improvement to our ability to characterize these products will be essential to increasing patient access. It is especially critical to have an in-depth understanding of the impact of manufacturing processes on the product quality attributes and resulting clinical performance of the product.

From inception, we have recognized the key role manufacturing plays in enabling the access of these innovative engineered cells as medicines. Two areas of particular focus are product analytical and biological characterization, leading to a better definition of critical product attributes, as well as process understanding, leading to better control the impact of process parameters on these critical product attributes.

We have developed a manufacturing strategy that supports our vision of democratizing access with early investments in people, technology, and infrastructure:

- establishing a team with diverse, experienced talents with extensive knowledge of both the process and analytical sciences in the field of cell and gene therapy, as well as CMC product development expertise from preclinical to global commercialization;
- establishing multiple manufacturing platforms for our diverse portfolio; and
- establishing infrastructure from lab bench to a GMP manufacturing network and supply chain.

To support our *in vivo* and *ex vivo* development pipeline, we are initially establishing three manufacturing platforms: viral vector, allogeneic T cells, and PSC-derived.

While the three manufacturing platforms are very different in terms of the manufacturing process and supply chain, they also share some common challenges and opportunities. For example, product characterization and analytical development are critical, and these capabilities are fungible across platforms. In addition, we are focusing on some of the key areas in each of the platforms to enable scaled manufacturing. For the viral vector platform, we are starting early in the research phase with suspension culture process in bioreactors similar to protein biologics to maximize process yield and batch to batch process robustness at scale. Transfer to these bioreactors later in development can complicate product comparability assessments. For the allogeneic T cell

program, we are focusing on scaling the multiplex gene editing process and understanding of the impact of the variability of the starting material from healthy donors to on product quality. For stem-cell derived therapies, such as beta cells, cardiomyocytes, and glial progenitor cells, we are focusing on developing a scalable process and analytical technologies to characterize stability of the starting cells, end cell products, and critical product quality attributes.

To establish our manufacturing capability, we started with a non-GMP pilot plant for *in vivo* and *ex vivo* engineered cell platform processes with up to 200L bioreactor scale. This provides the infrastructure for process and technology development, technology transfer support, and production for non-GMP material such as GLP toxicology study material. In addition, we are taking a hybrid approach to establish our end-to-end supply chains for the three manufacturing platforms, leveraging a combination of internal manufacturing capability and external contract development and manufacturing organizations (CDMOs) for clinical supplies, in a staged manner:

- we will utilize CDMOs for GMP supplies initially to support the upcoming INDs and clinical supplies; and
- we intend to build the internal manufacturing facilities needed to support late-stage clinical trials and commercialization of therapies across our pipeline.

Competition

There are other companies that have stated that they are developing cell and gene therapies that may address oncology, diabetes, CNS disorders, and cardiovascular diseases. Some of these companies may have substantially greater financial and other resources than we have, such as larger research and development staff and well-established marketing and salesforces, or may operate in jurisdictions where lower standards of evidence are required to bring products to market. For example, we are aware that some of our competitors, including Novartis, Gilead, BMS, Novo Nordisk, Johnson & Johnson, Allogene, CRISPR Therapeutics, Precision Biosciences, Caribou, Fate Therapeutics, Century Therapeutics, Bluebird Bio, Orchard Therapeutics, Aruvant, Sanofi Pasteur, Editas, Beam, Viacyte, Vertex, Eli Lilly, Astellas, and Bayer might be conducting large-scale clinical trials for therapies that could be competitive with our *ex vivo* and *in vivo* programs. Among companies pursuing *ex vivo* and *in vivo* cell engineering, we believe we are substantially differentiated by our robust intellectual property portfolio, extensive research, rigorous and objective approach, and multidisciplinary capabilities.

Intellectual Property

We strive to protect and enhance the proprietary technology, inventions, and improvements that are commercially important to our business, including seeking, maintaining, and defending patent rights, whether developed internally or licensed from our collaborators or other third parties. Our policy is to seek to protect our proprietary position by, among other methods, filing patent applications in the United States and in jurisdictions outside of the United States related to our proprietary technology, inventions, improvements, and product candidates that are important to the development and implementation of our business. We also rely on trade secrets and know-how relating to our proprietary technology and product candidates, continuing innovation, and in-licensing opportunities to develop, strengthen, and maintain our proprietary position in the field of cell and gene therapy. We additionally plan to rely on data exclusivity, market exclusivity, and patent term extensions when available, and plan to seek and rely on regulatory protection afforded through orphan drug designations. Our commercial success may depend in part on our ability to obtain and maintain patent and other proprietary protection for our technology, inventions, and improvements; to preserve the confidentiality of our trade secrets; to maintain our licenses to use intellectual property owned by third parties; to defend and enforce our proprietary rights, including our patents; and to operate without infringing on the valid and enforceable patents and other proprietary rights of third parties.

We have in-licensed and developed numerous patents and patent applications, which include claims directed to compositions, methods of use, processes, dosing and formulations, and possess substantial know-how and trade secrets relating to the development and commercialization of our cell engineering platforms and related product candidates, including related manufacturing processes. As of September 30, 2020, our in-licensed and owned patent portfolio consists of approximately 26 licensed U.S. issued patents, approximately 44 licensed U.S. pending patent applications, and approximately 12 owned U.S. pending patent applications, as well as approximately 11 licensed patents issued in jurisdictions outside of the United States, approximately 123 licensed patent applications pending in jurisdictions outside of the United States (including approximately 24 licensed pending Patent Cooperation Treaty (PCT) applications), and approximately three owned patent applications pending in jurisdictions outside of the United States (including approximately three owned pending PCT applications) that, in many cases, are counterparts to the foregoing U.S. patents and patent applications. The patents and patent applications outside of the United States in our portfolio are held primarily in Europe, Canada, Japan, and Australia. For information related to our in-licensed intellectual property, see the subsection titled under "—Key Intellectual Property Agreements."

As for the product candidates and related manufacturing processes we develop and commercialize, in the normal course of business, we intend to pursue, when possible, composition, method of use, process, dosing and formulation patent protection. We may also pursue patent protection with respect to manufacturing and drug development processes and technology and with respect to our technology platform. When available to expand market exclusivity, our strategy is to obtain, or license additional intellectual property related to current or contemplated development platforms, core elements of technology and/or product candidates.

Individual patents extend for varying periods of time, depending upon the date of filing of the patent application, the date of patent issuance, and the legal term of patents in the countries in which they are obtained. Generally, patents issued for applications filed in the United States are effective for 20 years from the earliest nonprovisional filing date. In the United States, a patent's term may be lengthened by patent term adjustment, which compensates a patentee for administrative delays by the Unites States Patent and Trademark Office (USPTO) in examining and granting a patent, or may be shortened if a patent is terminally disclaimed over an earlier filed patent or delays on the part of a patentee. In addition, in certain instances, the patent term of a U.S. patent that covers an FDA-approved drug may also be eligible to be extended to recapture a portion of the term effectively lost as a result of the FDA regulatory review period. The restoration period cannot be longer than five years and the total patent term, including the restoration period, must not exceed 14 years following FDA approval, however there is no guarantee that the applicable authorities, including the FDA in the United States, will agree with our assessment of whether such extensions should be granted, and if granted, the length of such extensions. Similar provisions are available in Europe and other foreign jurisdictions to extend the term of a patent that covers an approved drug. The duration of patents outside of the United States varies in accordance with provisions of applicable local law, but typically is also 20 years from the earliest non-provisional filing date. Our patents issued as of September 30, 2020, will expire on dates ranging from 2023 to 2037. If patents are issued on our patent applications pending as of September 30, 2020, the resulting patents are projected to expire on dates ranging from 2023 to 2041. However, the actual protection afforded by a patent varies on a product-by-product basis, from country-to-country, and depends upon many factors, including the type of patent, the scope of its coverage, the availability of regulatory-related extensions, the availability of legal remedies in a particular country, and the validity and enforceability of the patent.

In some instances, we submit patent applications directly with the USPTO as provisional patent applications. Provisional applications for patents were designed to provide a lower-cost first patent filing in the United States. Corresponding non-provisional patent applications must be filed not later than 12 months after the provisional application filing date. The corresponding non-provisional application benefits in that the priority date(s) of the patent application is/are the earlier provisional application filing date(s), and the patent term of the finally issued patent is calculated from the later non-provisional application filing date. This system allows us to obtain an early priority date, add material to the patent application(s) during the priority year, obtain a later start to the patent term and to delay prosecution costs, which may be useful in the event that we decide not to pursue

examination in an application. While we intend to timely file nonprovisional patent applications relating to our provisional patent applications, we cannot predict whether any such patent applications will result in the issuance of patents that provide us with any competitive advantage.

We file U.S. nonprovisional applications and PCT applications that claim the benefit of the priority date of earlier filed provisional applications, when applicable. The PCT system allows a single application to be filed within 12 months of the original priority date of the patent application, and to designate all of the 153 PCT member states in which national patent applications can later be pursued based on the international patent application filed under the PCT. The PCT searching authority performs a patentability search and issues a non-binding patentability opinion which can be used to evaluate the chances of success for the national applications in foreign countries prior to having to incur the filing fees. Although a PCT application does not issue as a patent, it allows the applicant to seek protection in any of the member states through national-phase applications. At the end of the period of two and a half years from the first priority date of the patent application, separate patent applications can be pursued in any of the PCT member states either by direct national filing or, in some cases by filing through a regional patent organization, such as the European Patent Organization. The PCT system delays expenses, allows a limited evaluation of the chances of success for national/regional patent applications and enables substantial savings where applications are abandoned within the first two and a half years of filing.

For all patent applications, we determine claiming strategy on a case-by-case basis. Advice of counsel and our business model and needs are always considered. We file patents containing claims for protection of all useful applications of our proprietary technologies and any products, as well as all new applications and/or uses we discover for existing technologies and products, assuming these are strategically valuable. We continuously reassess the number and type of patent applications, as well as the pending and issued patent claims, to help ensure that maximum coverage and value are obtained for our processes, and compositions, given existing patent office rules and regulations. Further, claims may be modified during patent prosecution to meet our intellectual property and business needs.

We recognize that the ability to obtain patent protection and the degree of such protection depends on a number of factors, including the extent of the prior art, the novelty and non-obviousness of the invention, and the ability to satisfy the enablement requirement of the patent laws. In addition, the coverage claimed in a patent application can be significantly reduced before the patent is issued, and its scope can be reinterpreted or further altered even after patent issuance. Consequently, we may not obtain or maintain adequate patent protection for any of our future product candidates or for our technology platform. We cannot predict whether the patent applications we are currently pursuing will issue as patents in any particular jurisdiction or whether the claims of any issued patents will provide sufficient proprietary protection from competitors. Any patents that we hold may be challenged, circumvented or invalidated by third parties.

The patent positions of companies like ours are generally uncertain and involve complex legal and factual questions. No consistent policy regarding the scope of claims allowable in patents in the field of cell and gene therapy has emerged in the United States. The patent situation outside of the United States is even more uncertain. Changes in either the patent laws or their interpretation in the United States and other countries may diminish our ability to protect our inventions and enforce our intellectual property rights, and more generally could affect the value of our intellectual property. In particular, our ability to stop third parties from making, using, selling, offering to sell, or importing products that infringe our intellectual property will depend in part on our success in obtaining and enforcing patent claims that cover our technology, inventions, and improvements. With respect to both licensed and company-owned intellectual property, we cannot be sure that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications filed by us in the future, nor can we be sure that any of our existing patents or any patents that may be granted to us in the future will be commercially useful in protecting our products and the methods used to manufacture those products. Moreover, even our issued patents do not guarantee us the right to practice our technology in relation to the commercialization of our products. The area of patent and other intellectual property rights in biotechnology is an evolving one with many risks and uncertainties, and third parties may have blocking patents that could be

used to prevent us from commercializing our patented product candidates and practicing our proprietary technology. It is uncertain whether the issuance of any third-party patent would require us to alter our development or commercial strategies, or our products or processes, obtain licenses or cease certain activities. Our breach of any license agreements or our failure to obtain a license to proprietary rights required to develop or commercialize our future products may have a material adverse impact on us. If third parties prepare and file patent applications in the United States that also claim technology to which we have rights, we may have to participate in interference or derivation proceedings in the USPTO to determine priority of invention. Our issued patents and those that may issue in the future may be challenged, invalidated, or circumvented, which could limit our ability to stop competitors from marketing related products or limit the length of the term of patent protection that we may have for our product candidates. In addition, the rights granted under any issued patents may not provide us with protection or competitive advantages against competitors with similar technology. Furthermore, our competitors may independently develop similar technologies. For these reasons, we may have competition for our product candidates. Moreover, because of the extensive time required for development, testing and regulatory review of a potential product, it is possible that, before any particular product candidate can be commercialized, any related patent may expire or remain in force for only a short period following commercialization, thereby reducing any advantage of the patent. Our commercial success will also depend in part on not infringing upon the proprietary rights of third parties. Patent disputes are sometimes interwoven into other business disputes.

As of September 30, 2020, our registered trademark portfolio currently contains approximately 20 registered trademarks and pending trademark applications, consisting of approximately two pending trademark applications in the United States, and approximately 18 pending trademark applications in the following countries through both national filings and under the Madrid Protocol: Australia, Canada, China, European Union, India, Japan, Republic of Korea, Singapore, and Switzerland.

We may also rely, in some circumstances, on trade secrets to protect our technology. However, trade secrets are difficult to protect. We seek to protect our technology and product candidates, in part, by entering into confidentiality agreements with those who have access to our confidential information, including our employees, contractors, consultants, collaborators, and advisors. We also seek to preserve the integrity and confidentiality of our proprietary technology and processes by maintaining physical security of our premises and physical and electronic security of our information technology systems. Although we have confidence in these individuals, organizations, and systems, agreements or security measures may be breached and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or may be independently discovered by competitors. To the extent that our employees, contractors, consultants, collaborators, and advisors use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions. For this and more comprehensive risks related to our proprietary technology, inventions, improvements and products, see the subsection titled “Risk Factors —Risks Related to Intellectual Property and Information Technology.”

Key Intellectual Property Agreements

The following describes the key agreements by which we have acquired and maintained certain technology related to our *in vivo* and *ex vivo* cell engineering platforms and therapeutic programs.

In Vivo Cell Engineering Platform

Cobalt Acquisition

In February 2019, we acquired all of the outstanding equity interests in Cobalt Biomedicine, Inc. (Cobalt), a privately-held early-stage biotechnology company founded by a Flagship Labs innovation team within Flagship Pioneering led by Dr. Geoffrey von Maltzahn developing a fusogen technology platform to specifically and consistently deliver diverse payloads—including DNA, RNA, and proteins—to targeted cells *in vivo*, in

consideration of the issuance of 145,766,384 shares of our Series A-2 convertible preferred stock, valued at $136.0 million. Of the 145,766,384 shares of Series A-2 convertible preferred stock issued, 48,588,795 shares were contingent on the achievement of a pre-specified development milestone, which was achieved in July 2019. We also agreed to pay contingent consideration of up to an aggregate of $500.0 million upon the achievement of certain pre-specified development milestones and a success payment of up to $500.0 million (the Cobalt Success Payment), which we may elect to pay in cash or in stock. The payout of the Cobalt Success Payment will only be paid if, at pre-determined valuation measurement dates, our value is equal to or exceeds three times our implied value based on the per share value of our Series B convertible preferred stock at issuance, which equates to $12.00 per share, and we have an active program based on the fusogen technology in a clinical trial pursuant to an IND, or have filed for, or received approval for, a BLA or NDA. The valuation measurement dates for the Cobalt Success Payments are triggered by an arms' length equity financing, or an IPO, and periodically thereafter. An additional valuation measurement date is triggered upon a change of control when at least one company product utilizing technology acquired from Cobalt is the subject of an active research program. As a result of the Cobalt transaction, we obtained licenses to various technologies and intellectual property rights that relate to the development of our fusogen technology and related fusosome programs, including exclusive license agreements with Flagship Pioneering Innovations V, Inc. (Flagship) and La Societe Pulsalys (Pulsalys), as well as several exclusive options to enter into exclusive license agreements, including one such option with The Regents of the University of California acting through The Technology Development Group of the University of California, Los Angeles (UCLA), with whom we later entered into an exclusive license agreement.

License Agreement with Flagship

In February 2016, Cobalt entered into an agreement (the Flagship Agreement), with Flagship, as amended in February 2019, pursuant to which (i) Cobalt irrevocably and unconditionally assigned to Flagship all of its right, title and interest in and to certain foundational intellectual property developed by Flagship Pioneering, Inc. (Flagship Management) during the exploration and/or proto-company phase of Cobalt prior to its spin-out from Flagship (the Managerial Agreement) as set forth in the Flagship Agreement (such foundational intellectual property, the Fusogen Foundational IP) and (ii) Cobalt obtained an exclusive, worldwide, royalty-bearing, sublicensable, transferable license from Flagship under such Fusogen Foundational IP to develop, manufacture and commercialize any product or process or component thereof, the development, manufacturing and commercialization of which would infringe at least one valid claim of Fusogen Foundational IP absent the license granted under the Flagship Agreement (Fusogen Products) in the field of human therapeutics during the term of the Flagship Agreement. In addition, Flagship irrevocably and unconditionally assigned to Cobalt all of its right, title and interest in and to any and all patents claiming any inventions conceived (i) solely by Flagship Management or jointly by Flagship Management and Cobalt, (ii) after Cobalt's spinout from Flagship, and (iii) as a result of activities conducted pursuant the Managerial Agreement or other participation of Flagship Management in Cobalt's affairs, but excluding Fusogen Foundational IP. We utilize the rights granted by Flagship under the Flagship Agreement in our fusogen platform and related therapeutic product candidates. The license granted to Fusogen Foundational IP is contingent upon Cobalt's compliance with its obligations under the Flagship Agreement. Under the Flagship Agreement, Cobalt also granted Flagship a non-exclusive, worldwide, royalty-free, fully paid, sublicensable license to practice the Fusogen Foundational IP within the field of human therapeutics solely to perform under the Managerial Agreement.

Pursuant to the Flagship Agreement, Cobalt is obligated to pay, on a Fusogen Product-by-Fusogen product and jurisdiction-by-jurisdiction basis, royalties in the low single-digit percentage on net sales of Fusogen Products. The Flagship Agreement will terminate on the last to expire royalty term, which is determined on a Fusogen Product-by-Fusogen Product and jurisdiction-by-jurisdiction basis, and is the earlier of (i) the expiration of the last valid claim of any Fusogen Foundational IP covering such Fusogen Product or (ii) the date on which the last applicable additional milestone payment has been made in accordance with that certain merger agreement under which we acquired Cobalt, which we expect to be in 2039. Upon expiration of the royalty term with respect to a Fusogen Product in any jurisdiction and payment in full of all amounts owed under the Flagship Agreement for such Fusogen Product, the license granted to us will automatically convert into a non-exclusive,

fully paid up license for such Fusogen Product in such jurisdiction. We have the right to terminate the Flagship Agreement in its entirety for convenience upon 60 days of written notice. Either party may terminate the Flagship Agreement upon a material breach by the other party that is not cured within 30 days after receiving written notice. Also, Flagship may terminate (i) upon 30 days' written notice if we cease to carry on our business with respect to the rights granted in the Flagship Agreement, (ii) upon written notice if we experience an event of bankruptcy, or (iii) immediately upon written notice if we challenge the validity, patentability, or enforceability of any Fusogen Foundational IP or participate in any such challenge.

Sublicense Agreement with Pulsalys

In August 2018, Cobalt entered into an exclusive sublicense agreement (the Pulsalys Agreement), with Pulsalys, as amended and assigned by Cobalt to us in May 2020, pursuant to which we obtained an exclusive, worldwide, sublicensable license from Pulsalys of the exclusive license rights granted to Pulsalys by École normale supérieure de Lyon (ENS Lyon) on behalf of itself and Institut National de la Santé et de la Recherche Médicale (Inserm), Centre National de la Recherche Scientifique (CNRS) and Université Claude Bernard Lyon 1 (collectively, the Co-Owners) under certain patent rights relating to methods to selectively modulate the activity of distinct subtypes of immune cells using engineered virus-like particles. In addition, Pulsalys grants us the first right to negotiate an exclusive license to patent rights covering certain improvements to the licensed patent rights and which are owned or held by Pulsalys. We utilize the rights granted under the Pulsalys Agreement in our *in vivo* fusogenic platform and related fusosome programs. We are obligated to use commercially reasonable efforts to develop and commercialize the licensed products, which efforts will be demonstrated by the achievement of the following diligence milestones: (i) minimum annual spend of $1.0 million for each of five years after the effective date and (ii) IND filing within five years of the effective date. Under the Pulsalys Agreement, the Co-Owners will retain the right to practice the licensed patent rights for non-commercial research purposes, alone or in collaboration with third parties.

Pursuant to the Pulsalys Agreement, Cobalt paid Pulsalys an upfront fee of 18,000 EUR. We are required to pay an annual license maintenance fee of 18,000 EUR until the first commercial sale of a licensed product. We are also required to pay Pulsalys up to an aggregate of 575,000 EUR upon the achievement of certain clinical and regulatory milestones for each of the first three distinct licensed products. In addition, we are obligated to pay an annual royalty in the low single-digit percentage on net sales of the licensed products, with the royalty rate being subject to reduction upon certain events. Lastly, we are obligated to pay annual fees in the low single-digit percentage on certain sublicense income.

The Pulsalys Agreement will terminate, country-by-country and licensed product-by-licensed product basis, upon the last to expire valid claim within the licensed patent rights covering the making, the using, the sale and the import of such licensed product in such country, or any patent term extension or supplementary protection certificate thereof covering the sale of such licensed product in the country, which we expect to be in 2037. We also have the right to terminate the Pulsalys Agreement in its entirety upon notice if we determine, in our sole discretion, that continued pursuit of development of the licensed patent rights is not feasible or desirable in the context of (i) resources available to us or due to external factors such as competition, market forces, access or license to other reasonably useful intellectual property, or (ii) change of direction of our business focus. Either party may terminate the Pulsalys Agreement upon a material breach by the other party that is not cured within 90 days after receiving written notice. Pulsalys may terminate the Pulsalys Agreement (i) in the case of the cessation of business, dissolution or voluntary liquidation of us, (ii) if we challenge the validity of the licensed patents, provided that such termination will be with respect to the claims within the licensed patents that are the subject of the challenge, or (iii) in full or in part, if we fail to achieve the diligence milestones and if the parties have not extended such milestones after good faith negotiations, and subject to our ability to cure such failure within 90 days after notice of the same.

License Agreement with UCLA

In March 2019, we entered into a license agreement (the UCLA Agreement) with UCLA, upon the exercise of an option originally granted by UCLA to Cobalt in April 2018. Under the UCLA Agreement, UCLA granted us an exclusive, sublicensable, transferable (subject to certain conditions) license in the licensed territory in the field of human therapeutics under certain patent rights relating to certain virus envelope pseudotyped lentiviruses and methods of their use to (i) research, make, have made, use, sell, offer for sale, have sold and import licensed products and (ii) practice licensed methods for the purposes of researching, manufacturing, and using licensed products but not to perform services for a fee. The licensed territory under the UCLA Agreement is all countries of the world in which the licensed patent rights have or will be filed. UCLA agreed not to grant any rights under the licensed patents regarding licensed methods to third parties without first offering us an opportunity to remove the restrictions regarding the use of licensed methods to perform services for a fee. In addition, we agreed not to commercialize any licensed product that is not administered directly to a patient for therapeutic purposes without first negotiating with UCLA for possible development milestones, royalties, or other payments applicable to such licensed products. We utilize the rights granted under the UCLA Agreement in our *in vivo* fusogenic platform and related fusosome programs. We are obligated to use commercially reasonable and diligent efforts to (i) develop licensed products, (ii) market licensed products, and (ii) manufacture and sell licensed products in quantities sufficient to meet the market demands. We are also required to satisfy certain development and commercial milestones with respect to at least one licensed product that is administered directly to a patient for therapeutic purposes.

The license granted pursuant to the UCLA Agreement is subject to certain rights retained by the California Institute for Regenerative Medicine (CIRM) and the U.S. government, including a non-exclusive, royalty-free license granted to the U.S. government in accordance with 35 U.S.C. §200-212. If CIRM exercises its rights under Title 17, California Code of Regulations, Section 100600, and the scope of our exclusive license under the UCLA Agreement is impacted, then our financial obligations therein will be reduced by 50%. Otherwise, rights retained by CIRM do not limit our ability to pursue our programs and product candidates. In addition, UCLA retains the right to (i) use the licensed patent rights for educational and research purposes and research sponsored by commercial entities, (ii) publicly disclose research results, (iii) use the licensed patent rights to offer and perform clinical diagnostic and prognostic care solely within the University of California system, and (iv) allow other non-profit and academic institutions to use the licensed patent rights for educational and research purposes and research sponsored by commercial entities, as well as to publicly disclose research results.

Pursuant to the UCLA Agreement, we paid UCLA an upfront license issue fee of $25,000. We also reimbursed UCLA its past patent costs, and there is a continuing obligation to reimburse UCLA for its patent costs during the term of the UCLA Agreement. For licensed products that are administered directly to a patient for therapeutic purposes, we are required to pay UCLA up to an aggregate of (i) $825,000 upon the achievement of certain pre-specified development milestones for each of the first three such licensed products and (ii) $15.0 million upon the achievement of certain pre-specified commercial milestones for such licensed products. In addition, we are obligated to pay an annual license maintenance fee beginning on the first anniversary of the UCLA Agreement until the first commercial sale. The license maintenance fee for the first anniversary will be $10,000 and subsequently will increase by $10,000 per anniversary up to a maximum annual license maintenance fee of $100,000. We are also required to pay, on a country-by-country basis, earned royalty in the low single-digit percentage on net sales of the licensed products, with the royalty rate being subject to reduction upon certain events. Under the UCLA Agreement, we are obligated to pay a minimum annual royalty of $100,000 beginning with the first full calendar year after the first commercial sale, and the minimum annual royalty will be credited against the earned royalty made during the same calendar year. If any claim within the licensed patent rights is held invalid or unenforceable in a final decision by a court of competent jurisdiction, all royalty obligations with respect to that claim or any claim patentably indistinct from it will expire as of the date of that final decision. No royalties will be collected or paid on licensed products sold to the U.S. government to the extent required by law, and we will have to reduce the amount charged for licensed products distributed to the U.S. government by the amount of the royalty that otherwise would have been paid. Furthermore, we are

obligated to pay UCLA tiered fees on a percentage of certain sublicense income in the low single-digit to low double-digit percentage range. Lastly, if we challenge the validity of any licensed patent rights, we agree to pay UCLA all royalties and other amounts due in view of our activities under the UCLA Agreement during the period of challenge. If we fail such challenge, we are required to pay two times the royalty rate paid during the period of such challenge for the remaining term of the UCLA Agreement and all of UCLA's legal verifiable out-of-pocket fees and costs incurred in defending such challenge, including attorney's fees.

The UCLA Agreement will terminate on the later of the life of the last-to-expire patent or last to be abandoned patent application in the licensed patent rights, which we expect to be in 2033. We also have the right to terminate the UCLA Agreement in its entirety or with respect to any portion of the licensed patent rights for any reason upon 90 days prior written notice to UCLA. UCLA may terminate the UCLA Agreement upon a material breach by us that is not cured within 90 days after receiving written notice. If the breach is incapable of being cured within such period, then UCLA will consider our efforts to avoid, and to take reasonable steps to cure, such breach when determining whether to terminate the UCLA Agreement. Also, UCLA has the right and option, at its sole discretion, to either terminate the UCLA Agreement or reduce our exclusive license to a non-exclusive license if we fail to (i) exercise commercially reasonable and diligent efforts to develop, market, manufacture and sell licensed products, or (ii) achieve certain development milestones set forth in the UCLA Agreement, subject to our ability to extend such milestones in accordance with terms set forth in the UCLA Agreement. Upon termination of the UCLA Agreement by us, we may continue to sell any previously manufactured licensed products for 180 days after the effective date of termination. Upon termination of the UCLA Agreement by UCLA for our failure to reimburse UCLA for certain patent costs after the applicable cure period, we may continue to sell all previously made licensed products for 180 days after the effective date of the notice of termination; however, this right is not available if the UCLA Agreement is terminated for any other causes.

Ex Vivo Cell Engineering Platform

License Agreement with Harvard

In March 2019, we entered into a license agreement, as amended in June 2019, (the Harvard Agreement) with the President and Fellows of Harvard College (Harvard), pursuant to which we obtained an exclusive, worldwide, sub-licensable license under certain patent rights controlled by Harvard to make, have made, use, offer for sale, sell, have sold and import (i) products and services covered by the patent rights and (ii) products containing stem cells, pluripotent cells or cells derived from modified stem cells or pluripotent cells with certain specified genetic modifications ((i) and (ii) together, Harvard Products) or otherwise practice under and exploit the licensed patent rights, for the treatment of disease in humans or, in the case of certain other patent rights, for applications that involve the use of cells derived *ex vivo* from stem cells in the treatment of disease in humans. We also obtained a non-exclusive, sub-licensable license under certain other patent rights in the United States, and a non-exclusive, sub-licensable, worldwide license under know-how pertaining to the licensed patent rights, to make, have made, use, offer for sale, sell, have sold and import the Harvard Products, or otherwise practice under and exploit the licensed patent rights and know-how, for the treatment of disease in humans. We have the option to obtain such non-exclusive rights in additional jurisdictions if Harvard is successful in obtaining the right to grant such from the third-party co-owner of such patent rights. We utilize these license rights in our *ex vivo* cell engineering program relying on our hypoimmune technology.

We are obligated to use commercially reasonable efforts to develop Harvard Products in accordance with a written development plan, to market the Harvard Products following receipt of regulatory approval and to achieve certain specified development and regulatory milestones within specified time periods, as such period may be extended, for at least two Harvard Products.

The licenses granted pursuant to the Harvard Agreement are subject to certain rights retained by Harvard and the rights of the U.S. government. The retained rights of Harvard pertain only to the ability of Harvard and

other not-for-profit research organizations to conduct academic research, educational and scholarly activities, and do not limit our ability to pursue our programs and product candidates. We agreed that we will not use any of the licensed patent rights for human germline modification, including intentionally modifying the DNA of human embryos or human reproductive cells.

Pursuant to the Harvard Agreement, we paid Harvard an upfront fee of $3.0 million, and we issued 8,977,650 shares of our Series A-2 convertible preferred stock to Harvard as partial consideration for the licenses granted in the Harvard Agreement. Additionally, we paid $6.0 million to Harvard in connection with the issuance of shares of our Series B convertible preferred stock. We are required to pay Harvard annual license maintenance fees of $25,000 for 2019, $50,000 for 2020 and $100,000 for each calendar year thereafter for the remainder of the term. We are required to pay Harvard up to an aggregate of $15.2 million per Harvard Product upon the achievement of certain pre-specified development and regulatory milestones for up to a total of five Harvard Products, or an aggregate total of $76.0 million for all five Harvard Products. These milestone payments would double if we undergo a change of control. We are also obligated to pay, on a product-by-product and country-by-country basis, royalties in the low single-digit percentage range on quarterly net sales of Harvard Products covered by licensed patent rights, and a lower single-digit percentage royalty on quarterly net sales of Harvard Products not covered by licensed patent rights. The royalty rates with respect to Harvard Products covered by licensed patent rights are also subject to specified and capped reductions for loss of market exclusivity and for payments owed to third parties with respect to patent rights which cover Harvard Products in the territory. We are also obligated to pay Harvard a percentage of certain sublicense income ranging from high single-digit to low double-digit percentage range. We are obligated to pay success payments up to a potential amount of $175.0 million based on increases in the fair value of our Series A convertible preferred stock at pre-specified valuation dates including an equity financing prior to an IPO of more than $25.0 million, the one year anniversary of an IPO, and periodically thereafter, an asset sale, merger, stock sale and the last day of the term of the success payments.

The Harvard Agreement will expire on the expiration of the last to expire valid claim within the licensed patent rights or, if later, at the end of the final royalty term, which is determined on a Harvard Product-by- Harvard Product and country-by-country basis, and is the later of (i) the date on which the last valid claim within the licensed patent rights covering such Harvard Product in such country, (ii) expiry of regulatory exclusivity for such Harvard Product in such country expires, or (iii) ten years from the first commercial sale of such Harvard Product in such country, which we expect to be in 2039. We also have the right to terminate the Harvard Agreement in its entirety for any reason upon 45 days' prior written notice to Harvard. Either party may terminate the Harvard Agreement upon a material breach by the other party that is not cured within 60 days after receiving written notice. Harvard may terminate the Harvard Agreement upon giving written notice in the event of our bankruptcy, insolvency or similar proceedings. If we terminate the Harvard Agreement for convenience, the obligations to pay milestones and royalties with respect to Harvard Products that are not then covered by licensed patent rights will survive for the remainder for the applicable royalty term. If the Harvard Agreement is terminated for any reason, then sublicensees other than our affiliates or sublicensees in material default or at fault for the termination have the right to enter into a direct license from Harvard on substantially the same non-economic terms and on economic terms providing for the payment to Harvard of the consideration that would otherwise have been payable if the Harvard Agreement and the sublicense were not terminated.

License Agreement with UCSF

In January 2019, we entered into a license agreement (the UCSF Agreement), with The Regents of the University of California (The Regents) acting through its Office of Technology Management, University of California San Francisco (UCSF) pursuant to which we obtained an exclusive license to inventions related to immunoengineered pluripotent cells and derivatives claimed in U.S. and international patents and patent applications (UCSF Patent Rights) by The Regents. The license is to make, have made, use, sell, offer for sale and import licensed products that are covered by such UCSF Patent Rights, provide licensed services, practice licensed methods and otherwise practice under the UCSF Patent Rights, for use in humans only, in the United

States and other countries where The Regents is not prohibited by applicable law from granting such UCSF Patent Rights. We have the right to sublicense our rights granted under the UCSF Agreement to third parties subject to terms and conditions. We utilize these license rights in our *ex vivo* cell engineering platform program relying on our hypoimmune technology.

We are obligated, directly or through affiliates or sub-licensees, to use commercially reasonable efforts to develop, manufacture and sell one or more licensed product and licensed services and to bring one or more licensed products or licensed services to market. We are required to use commercially reasonable efforts to obtain all necessary governmental approvals in each country where licensed products or licensed services are manufactured, used, sold, offered for sale, or imported. We are required to spend at least $30.0 million towards research, development and commercialization of licensed products within five years after the closing of Series A-2 convertible preferred stock financing. In addition, we are required to achieve certain specified development and regulatory milestones within specified time periods. We have the ability to extend the time periods for achievement of development and regulatory milestones under certain terms set forth in the UCSF Agreement, including payment of extension fees. If we are unable to complete any of the specified milestones by the completion date, or extended completion date, for such milestone, then The Regents has the right and option to either terminate the Agreement, subject to our ability to cure the applicable breach, or convert our exclusive license to a non-exclusive license.

The Regents reserves and retains the right to make, use and practice the invention and any related technology and to make and use any products and to practice any process that is the subject of the UCSF Patent Rights (and to grant any of the foregoing rights to other educational and non-profit institutions) for educational and non-commercial research purposes, including publications and other communication of other research results. This does not limit our ability to pursue our programs and product candidates.

Pursuant to the UCSF Agreement, we paid an upfront license fee of $100,000, and we issued The Regents 2,950,061 shares of our Series A-2 convertible preferred stock. We are required to pay license maintenance fees ranging from $10,000 on the first anniversary of the date of the UCSF Agreement to $40,000 on the sixth anniversary and continuing annually thereafter. This fee shall not be due if we are selling or exploiting licensed products or licensed services and paying an earned royalty to The Regents on net sales of such licensed products or licensed service. We are required to pay The Regents up to an aggregate of $2.45 million per licensed product upon the achievement of certain pre-specified development and regulatory milestones for the first 5 licensed products and half such amount for the second 5 licensed products, for an aggregate total of $18.4 million in development and regulatory milestone payments. Additionally, we are required to pay The Regents up to an aggregate of $0.5 million per licensed product upon the achievement of certain commercial milestones for the first 5 licensed products and half such amount for the second 5 licensed products, for an aggregate total of $3.75 million in commercial milestone payments. With respect to each licensed product, licensed service or licensed method, we are obligated to pay on a country-by-country basis, tiered royalties in the low single-digit percentage on net sales. The royalty rates are subject to specified capped reductions for payments owed to unaffiliated third parties in consideration for patent rights, or patent rights together with know-how, in order to practice licensed methods or to make, have made, use sell, offer to sell or import licensed products or licensed services. We are required to pay to The Regents a minimum annual royalty of $100,000 beginning with the year of the first sale of licensed product or licensed service and ending upon the expiration of the last UCSF Patent Right. This will be credited against any earned royalty due for the upcoming twelve-month period for which the minimum payment was made, and pro-rated. We are also obligated to pay The Regents a percentage of certain non-royalty sublicense income ranging from the low double-digit to mid-twenty percentage range.

The UCSF Agreement will expire on expiration or abandonment of the last valid claims within the UCSF Patent Rights licensed under hereunder, which we expect to be in 2040. The Regents has the right to terminate the Agreement if we fail to cure or discontinue a material breach within 60 days of receiving a notice of default. We also have the right to terminate the UCSF Agreement in its entirety or under certain UCSF Patent Rights on a country-by country basis at any time by providing 60 days' notice of termination to The Regents. The UCSF

Agreement will automatically terminate in the event of our bankruptcy that is not dismissed within a specified time period. The Regents may immediately terminate the Agreement upon written notice if we file a non-defensive patent challenge. The termination of the UCSF Agreement will not relieve us of obligations to pay any fees, royalties or other payments owed to The Regents at the time of such termination or expiration, including the right to receive earned royalties. If the UCSF Agreement is terminated for any reason, then, upon the request of any sublicensee, The Regents will enter into a direct license from The Regents to such sublicensee on the same terms as the UCSF Agreement, taking into account any difference in license scope, territory and duration of sublicense grant, provided that such sublicensee is not at the time of such termination in breach of its sublicensing agreement and is not at the time of such termination an opposing party in any legal proceeding against The Regents.

2019 Exclusive License Agreement with Washington University

In November 2019, we entered into a license agreement (the 2019 WU Agreement) with Washington University, pursuant to which we obtained an exclusive sublicensable, non-transferable, worldwide license under certain Washington University patent rights related to genetically engineered hypoimmunogenic stem cells to research, develop, make, have made and sell products the manufacture, use, sale or import of which by us or our sublicensees would, in the absence of the 2019 WU Agreement, infringe, at least one valid claim of the licensed patent rights (WU Hypoimmune Products).

We are obligated to use commercially reasonable efforts to (i) develop, manufacture, promote and sell WU Hypoimmune Products and (ii) to achieve certain development, regulatory and commercial diligence milestones within specified time periods. We have the ability to extend the time periods for achievement of such milestones under certain terms set forth in the 2019 WU Agreement, including payment of extension fees.

Washington University retains the right to make, have made, use and import WU Hypoimmune Products in fields relating to diagnosis, prevention and treatment of human disease or disorders for research, education purposes, including collaboration with other nonprofit entities but excluding any commercial purposes, and such retained rights do not limit our ability to pursue our programs and product candidates. Washington University retains all rights not granted to us under the patents. In addition, the 2019 WU Agreement is subject to certain rights retained by the U.S. government, including the requirement that licensed products sold in the U.S. be substantially manufactured in the U.S.

Pursuant to the 2019 WU Agreement, we paid Washington University an upfront fee of $75,000. We are required to pay Washington University up to $100,000 in license maintenance fees on each anniversary of the 2019 WU Agreement's effective date, until the first commercial sale of a WU Hypoimmune Product. Upon the achievement of certain development and, regulatory milestones, we are required to pay Washington University up to an aggregate of $2.0 million per WU Hypoimmune Product for the first three WU Hypoimmune Products, for an aggregate total of $6 million. Additionally, upon the achievement of certain commercial milestones, we are required to pay Washington University up to an aggregate of $2.5 million per WU Hypoimmune Product for the first three WU Hypoimmune Products, for an aggregate total of $7.5 million. We are also obligated to pay royalties at a low single-digit percentage on annual net sales, subject to a minimum amount payable in advance. The minimum annual royalty for the first anniversary of the effective date following the first commercial sale will be $100,000 and subsequently will increase up to a maximum minimum annual royalty of $750,000 on the fourth anniversary of the effective date following the first commercial sale. The royalties are payable provided there is at least one valid claim of licensed patent rights present in the country of manufacture or sale. The royalty rates are also subject to specified and capped reduction upon certain other events. Furthermore, we are obligated to pay Washington University a percentage of certain non-royalty sublicense income ranging from the lower double-digit percentage range.

The term of the 2019 WU Agreement continues until the last day that at least one valid claim to the licensed patent rights exists, which we expect to be in 2038. We also have the right to terminate the 2019 WU Agreement

in its entirety, for any reason upon 90 days prior written notice to Washington University. If we terminate the 2019 WU Agreement for convenience, we are required to pay Washington University the any license maintenance fee, applicable milestone payments and the minimum amounts of royalties, in each case due and owing, during the 90-day notice period. Either party may terminate the 2019 WU Agreement upon a material breach by the other party that is not cured within 30 days after receiving written notice. Washington University may terminate the 2019 WU Agreement upon giving written notice within 30 days of our failure to achieve a diligence milestone (subject to good faith negotiation mechanisms and our ability to extend the milestones with payment of fees) or our bankruptcy. Following expiration or termination, all license rights granted to us in the 2019 WU Agreement will terminate.

2020 License Agreement with Washington University

In September 2020, we entered into an exclusive license agreement (the 2020 WU Agreement) with Washington University for certain patent rights relating to the methods and compositions of generating cells of endodermal lineage and beta cells and uses thereof. Under the 2020 WU Agreement, we obtained an exclusive, worldwide, non-transferable and royalty-bearing license under the patent rights to research, develop, make, have made, sell, offer for sale, have sold, use, have used, export and import licensed products the manufacture, use, sale or import of which by us or our sublicensees would, in the absence of the 2020 WU Agreement, infringe, at least one valid claim of the licensed patent rights, solely in fields relating to diagnosis, prevention and treatment of human disease or disorders. We utilize these license rights in our *ex vivo* cell engineering platform program relying on our hypoimmune technology, including our beta cell program.

We are obligated to use commercially reasonable efforts to (i) develop, manufacture, promote and sell licensed products and (ii) to achieve certain development, regulatory and commercial diligence milestones within specified time periods. We have the ability to extend the time periods for achievement of such milestones under certain terms set forth in the 2020 WU Agreement, including payment of extension fees.

Washington University retains the right to use the licensed patent rights to make, have made, use, and import licensed products worldwide in fields relating to diagnosis, prevention and treatment of human disease or disorders for research and educational purposes, including collaboration with other nonprofit entities, but expressly excluding any commercial purposes and such retained rights do not limit our ability to pursue our programs and product candidates. In addition, the 2020 WU Agreement is subject to certain rights retained by the U.S. government, including the requirement that licensed products sold in the U.S. be substantially manufactured in the U.S.

Pursuant to the 2020 WU Agreement, we paid Washington University an upfront license issue fee of $150,000. We are required to pay annual license maintenance fees on each anniversary of the 2020 WU Agreement's effective date, until the first commercial sale of a licensed product. The license maintenance fee for the first and second anniversaries of the effective date will be $25,000 and subsequently will increase by $25,000 per two anniversaries up to a maximum annual license maintenance fee of $100,000. We are also required to pay Washington University up to an aggregate of $2.0 million upon the achievement of certain pre-specified development and regulatory milestones per licensed product for the first three licensed products, for an aggregate total of $6 million. Additionally, we are required to pay Washington University up to an aggregate of $4.5 million upon the achievement of certain pre-specified commercial milestones per licensed product for the first three licensed products, for an aggregate total of $13.5 million. We are also required to pay, for each licensed product made or sold by or for us worldwide, earned royalty at a low single-digit percentage on net sales of the licensed products, with the royalty rate being subject to specified and capped reduction upon certain events. Under the 2020 WU Agreement, we are obligated to pay a minimum annual royalty commencing with the first anniversary of the effective date following the first commercial sale of the licensed product, which will be paid as an advance against the earned royalties paid to Washington University over the ensuing 12 month period. The minimum annual royalty for the first anniversary of the effective date following the first commercial sale will be $100,000 and subsequently will increase up to a maximum minimum annual royalty of $750,000 on the

fourth anniversary of the effective date following the first commercial sale. The royalties are payable provided there is at least one valid claim of the licensed patent rights present in the country of manufacture or sale. Furthermore, we are obligated to pay Washington University a percentage of certain non-royalty sublicense income ranging from the lower double-digit percentage range.

The 2020 WU Agreement will expire upon the last to expire valid claim in the licensed patent rights, which we expect to be in 2038. We also have the right to terminate the 2020 WU Agreement for any reason upon 90 days prior written notice to Washington University. Washington University may terminate the 2020 WU Agreement upon a material breach by us that is not cured within 30 days after receiving written notice. In addition, Washington University may terminate the 2020 WU Agreement (i) upon 30 days written notice if we fail to achieve certain development, regulatory or commercial diligence milestones and are unable to resolve Washington University's concerns through good faith negotiations in accordance with the 2020 WU Agreement, (ii) upon our bankruptcy or insolvency, or (iii) if an order is made or a notice issued convening a meeting of shareholders to consider the passing of a resolution of our winding up or a resolution is passed for our winding up (in each case, other than for the purpose of amalgamation or reconstruction). If the 2020 WU Agreement terminates prior to the expiration of the last-to-expire licensed patent rights, we agree (i) to promptly discontinue the exportation of licensed products, (ii) to promptly discontinue the manufacture, sale and distribution of the licensed products, (iii) to promptly destroy all licensed products in inventory, and (iv) not to manufacture, sell or distribute licensed products until the expiration of the applicable last-to-expire licensed patent rights.

Oscine Acquisition

In September 2020, we acquired Oscine Corporation (Oscine), a privately-held early-stage biotechnology company pursing a glial progenitor *ex vivo* cell engineering program, in exchange for $8.5 million in cash, net of certain expenses. Of the total purchase price, $7.6 million was an upfront cash payment, and $0.9 million was set aside (the Oscine Holdback Amount) to satisfy certain general representations and warranties as set forth in the stock purchase agreement. We had originally entered into a collaboration, license and option to purchase agreement with Oscine in November 2018. That agreement was terminated upon the closing of the acquisition of Oscine. As part of the Oscine acquisition we also agreed to pay additional amounts of up to an aggregate of $225.8 million upon achievement of certain pre-specified development and commercial milestones, which we may pay in cash or in shares of our common stock subject to certain conditions. As a result of the Oscine acquisition, we entered into, or obtained and amended, licenses to various technologies related to our glial progenitor *ex vivo* cell-based therapy program, including a license agreement with University of Rochester and a seed bank supply agreement with Hadasit Medical Research Services and Development Ltd.

License Agreement with University of Rochester

Effective as of the closing of the Oscine acquisition, we entered into an amended and restated exclusive license agreement (the Rochester Agreement) with the University of Rochester, which amended and restated a prior license agreement between Oscine and its affiliates and the University of Rochester and assigned Oscine's rights in the obligations in the license agreement to us. Under the Rochester Agreement we obtained an exclusive, royalty-bearing, sublicensable, worldwide license under certain patents, and a non-exclusive, royalty-free license under know-how, to research, develop import, make, have made, use, sell, offer to sell, commercialize and otherwise exploit cell-based therapies for the treatment of human central nervous system disease and disorders. We utilize these license rights in our glial progenitor cell-based therapy program. We granted the University of Rochester a license to practice any patent rights that cover inventions in the field of cell-based therapies for human central nervous system diseases and disorders, which inventions are first conceived and reduced to practice solely by Dr. Steven Goldman acting in his capacity as our employee, or jointly with any of our employees reporting to Dr. Goldman, solely for Dr. Goldman or any of his lab members at the University of Rochester to practice such patent rights within Dr. Goldman's laboratory at the University of Rochester solely for internal academic research purposes. University of Rochester granted us an automatic royalty-free non-exclusive license, and the option to obtain exclusive rights, to any patent rights or inventions

conceived or reduced to practice by Dr. Goldman or members of his laboratory at the University of Rochester within a certain timeframe in connection with the internal academic research license granted by us to the University of Rochester. We are obligated to use commercially reasonable efforts to proceed with the commercial exploitation of the patents, to create a reasonable supply of licensed products to meet demand, and to adhere to a specified commercial development plan for development of stem cells therapy products, with pre-specified development milestones, including obtaining government approvals to market at least one licensed product, and to market such product within twelve months of receiving such approval.

The licenses granted pursuant to the Rochester Agreement are subject to certain rights retained by the University of Rochester and the rights of the U.S. government. The retained rights of the University of Rochester pertain only to its ability to conduct internal academic research other than clinical research and for teaching, education and other non-commercial research activities, in publications related to its scientific research and findings, and for any other non-clinical and non-commercial purpose that is not inconsistent with the rights granted to us under the Rochester Agreement. These retained rights do not limit our ability to pursue our programs and product candidates.

Pursuant to the Rochester Agreement, we will pay minimum annual royalties beginning in January 2023. Such payments will be $20,000 in 2023, escalating to $50,000 in 2025 and then to $70,000 in 2028 and beyond. The minimum annual royalty payment is creditable against tiered royalties in the low single-digit percentage range on annual net sales. The royalty rates are also subject to reduction upon certain other events. We are also required to pay University of Rochester up to an aggregate of $950,000 upon the achievement of certain pre-specified development and commercial milestones for each licensed product. We are also required to pay a tiered mid-single digit to mid-double digit percentage of revenue arising from any sublicenses granted by us to third parties.

The Rochester Agreement will terminate on the last to expire of the licensed patents, which we expect to be in 2038. We also have the right to terminate the Rochester Agreement in its entirety for any reason upon 90 days' prior written notice to the University of Rochester. The University of Rochester may terminate the Rochester Agreement upon material breach by us that is not cured within 30 days of receiving written notice, or immediately in the event of our bankruptcy. The University of Rochester may also terminate the Rochester Agreement, or at its sole discretion terminate the exclusivity of the license granted, upon our failure to meet its diligence obligations that is not cured within 90 days or such longer reasonable time at the University of Rochester's discretion an subject to a good faith negotiation mechanism included in the Rochester Agreement.

Supply Agreement with Hadasit Medical Research Services and Development Ltd.

In July 2018, Oscine Therapeutics (U.S.) Inc., an affiliate of Oscine, entered into a supply agreement (the Hadasit Agreement) with Hadasit Medical Research Services and Development Ltd. (Hadasit), pursuant to which Oscine obtained a quantity of seed bank cells and accompanying regulatory information on a non-exclusive basis for the sole purpose of developing, manufacturing and selling cell therapy products for the treatment or prevention of central nervous system disorders in humans, which cell therapy products are derived using our proprietary differentiation technology from a certain human ESC line provided by Hadasit under the Hadasit Agreement. We utilize these cells and information in our glial progenitor cell program. Concurrently with our acquisition of Oscine in September 2020, the Hadasit Agreement was assigned by Oscine Therapeutics (U.S.) Inc. to Oscine and we amended the Hadasit Agreement effective as of the closing of the Oscine acquisition.

Pursuant to the Hadasit Agreement, Oscine Therapeutics (U.S.) Inc. paid Hadasit an upfront fee of $24,000. We are required to pay Hadasit up to an aggregate of $1.1 million upon the achievement of certain development milestones for the first product. We are also obligated to pay tiered royalties in the low single-digit percentage range on annual net sales of the relevant products worldwide, which obligation shall commence upon the first commercial sale of a relevant product and shall expire after 15 years on a product-by-product and country-by-country basis. The royalty rates are also subject to reduction upon certain other events.

The Hadasit Agreement will continue until terminated in accordance with its terms. Hadasit may terminate the Hadasit Agreement upon giving 30 days' written notice if the Company fails to make any payment due and does not cure the remedy within 30 days' notice, or upon 60 days' written notice if the Company ceases to use the seed bank cells for the development and manufacture of its products, subject to our ability to dispute Hadasit's claim and resolution of such dispute in accordance with a process set forth in the Hadasit Agreement. Either party may terminate the Hadasit Agreement upon a material breach by the other party that is not cured within 60 days after receiving written notice, or upon giving written notice in the event of the other party's bankruptcy.

Cytocardia Acquisition

In November 2019, we acquired Cytocardia, Inc. (Cytocardia), a privately-held early-stage biotechnology company developing *ex vivo* cell engineering programs focused on replacement of damaged heart cells, in exchange for $8.0 million in cash, net of certain indebtedness and expenses, of which $6.8 million was an upfront cash payment, and $1.2 million was set aside (Cytocardia Holdback Amount) to satisfy certain general representations and warranties as set forth in the stock purchase agreement. We also agreed to pay additional amounts of up to an aggregate of $75.0 million upon the achievement of certain pre-specified development milestones and up to an aggregate of $65.0 million in pre-specified commercial milestones. As a result of that transaction, we obtained licenses to various intellectual property and technologies, including intellectual property and technology related to our cardiomyocyte program that we rely on for development of our cardiac cell therapy product candidates. These included a license agreement with the University of Washington.

University of Washington

In October 2018, Cytocardia entered into an exclusive start-up license agreement (the Cytocardia-UW Agreement), with the University of Washington (UW), pursuant to which Cytocardia obtained an exclusive license under certain patents relating to stem cell-derived cardiomyocytes and heart regeneration owned solely by UW or jointly by UW and the University of Cambridge for which UW has the sole right to control the protection and licensing pursuant an inter-institutional agreement between UW and the University of Cambridge. We amended the Cytocardia-UW Agreement in November 2019, concurrently with the closing of our acquisition of Cytocardia. The scope of the license is to make, have made, use, offer to sell, sell, offer to lease or lease, import, or otherwise offer to dispose of products worldwide (i) for any use, with respect to certain specified licensed patents, (ii) for the production of cardiomyocytes having an atrial/ventricular phenotype, with respect to other specified licensed patents, and (iii) heart regeneration therapy, with respect to other specified licensed patents. Additionally, UW granted Cytocardia a non-exclusive, worldwide license to use certain related know-how, clinical trial information and program materials. Cytocardia may sublicense the exclusively licensed rights under the Cytocardia-UW Agreement. Cytocardia may also sublicense its rights in non-exclusively licensed rights, but only for the purpose of using them in conjunction with exclusively licensed rights. We utilize intellectual property in our cardiomyocyte program. For a period of 12 months after the effective date of the Cytocardia-UW Agreement, UW agreed to provide reasonable written notice to Cytocardia of any improvements to the licensed patents upon notice to UW.

Cytocardia has the option to add such improvements to the licensed patents. Pursuant to the Cytocardia-UW Agreement, Cytocardia is required to use its commercially reasonable efforts, consistent with sound and reasonable business practices and judgment, to commercialize the licensed rights and to make and sell licensed products as soon as practicable and to maximize sales thereof. We are also obligated to achieve specified development, regulatory and commercial milestones within specified time periods.

Inventions covered in the licensed patents have arisen, in whole or in part, from federally supported research by the U.S. federal government and the licenses granted pursuant to the Cytocardia-UW Agreement are subject to certain rights of the U.S. government. UW has retained for itself as well as for Cambridge University and for any other not-for-profit academic research institution, an irrevocable, nonexclusive right to practice the licensed rights for academic research, instructional, or any other academic or non-commercial purpose. UW has retained

for itself an irrevocable, nonexclusive license to practice licensed rights for clinical purposes. Cambridge University has also retained for itself an irrevocable, nonexclusive license to practice certain rights co-owned with UW for clinical purposes.

Pursuant to the Cytocardia-UW Agreement, Cytocardia will pay to UW a low single-digit royalty on net sales of products, with the royalty rate being subject to specified and capped reduction upon certain events. Cytocardia will pay minimum annual fees for the term of the Cytocardia-UW Agreement to be creditable against running royalty payments for the preceding calendar year on a noncumulative basis. These minimum annual fees are due following the second anniversary of the effective date of the Cytocardia-UW Agreement and continue during the term of the Cytocardia-UW Agreement, ranging from $5,000 up to $50,000 for the years following the second anniversary of the first commercial sale of an FDA-approved licensed product. Cytocardia will also pay to UW non-cumulative, non-creditable, and non-refundable development milestone payments of up to $175,000 and commercial milestone payments of up to $700,000, for the first licensed product to achieve each such event. Furthermore, we are obligated to pay UW a percentage of certain non-royalty sublicense income ranging from the low single-digits to middle double-digit percentage range, depending on the stage of development at the time of execution of the sublicense agreement.

The Cytocardia-UW Agreement will expire, without further action by the parties, when all valid claims of the licensed patents have expired, and Cytocardia has sold all licensed products manufactured prior to the expiration of such valid claims, which we expect to be in 2040. UW may terminate the Cytocardia-UW Agreement if Cytocardia (i) permanently ceases operations, (ii) voluntarily files or has filed against it a petition under applicable bankruptcy or insolvency laws that Cytocardia fails to have released within 30 days after filing, (iii) proposes any dissolution, composition, or financial reorganization with creditors or if a receiver, trustee, custodian, or similar agent is appointed, (iv) makes a general assignment for the benefit of creditors, (v) if Cytocardia challenges the validity of the licensed patents or (vi) if Cytocardia breaches its material obligations under the Cytocardia-UW Agreement and does not cure such breach within 60 days. Cytocardia may terminate the Cytocardia-UW Agreement at any time by delivering to UW a written notice of termination at least 60 days prior to the effective date of termination. In addition, Cytocardia may propose to terminate certain of its licensed rights hereunder by delivering to UW a written notice of termination accompanied by a proposed written amendment to this Agreement at least 60 days prior to the effective date of termination of such licensed rights.

Government Regulation

The FDA and other regulatory authorities at federal, state, and local levels, as well as in foreign countries, extensively regulate, among other things, the research, development, testing, manufacture, quality control, import, export, safety, effectiveness, labeling, packaging, storage, distribution, record keeping, approval, advertising, promotion, marketing, post-approval monitoring, and post-approval reporting of biologics such as those we are developing. We, along with third-party contractors, will be required to navigate the various preclinical, clinical and commercial approval requirements of the governing regulatory agencies of the countries in which we wish to conduct studies or seek approval or licensure of our product candidates. The process of obtaining regulatory approvals and the subsequent compliance with applicable federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources.

U.S. Biologics Regulation

In the United States, biological products are subject to regulation under the Federal Food, Drug, and Cosmetic Act, the Public Health Service Act, and other federal, state, local and foreign statutes and regulations. The process required by the FDA before biologics may be marketed in the United States generally involves the following:

- completion of preclinical laboratory tests and animal studies performed in accordance with the FDA's Good Laboratory Practice requirements (GLPs);

- submission to the FDA of an Investigational new drug application (IND), which must become effective before clinical trials may begin;
- approval by an institutional review board (IRB), or ethics committee at each clinical site before the trial is commenced;
- performance of adequate and well-controlled human clinical trials to establish the safety, purity and potency of the proposed biologic product candidate for its intended purpose;
- preparation of and submission to the FDA of a biologics license application (BLA), after completion of all pivotal clinical trials;
- satisfactory completion of an FDA Advisory Committee review, if applicable;
- a determination by the FDA within 60 days of its receipt of a BLA to file the application for review;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities at which the proposed product is produced to assess compliance with current Good Manufacturing Practices (cGMP), and to assure that the facilities, methods and controls are adequate to preserve the biological product's continued safety, purity and potency and, if applicable, to assess compliance with the FDA's current Good Tissue Practice (cGTP) requirements for the use of human cellular and tissue products, and of selected clinical investigation sites to assess compliance with Good Clinical Practices (GCPs); and
- FDA review and approval of the BLA to permit commercial marketing of the product for particular indications for use in the United States.

Prior to beginning the first clinical trial with a product candidate in the United States, we must submit an IND to the FDA. An IND is a request for authorization from the FDA to administer an investigational new drug to humans. The central focus of an IND submission is on the general investigational plan and the protocol(s) for clinical studies. The IND also includes results of animal and *in vitro* studies assessing the toxicology, pharmacokinetics, pharmacology, and pharmacodynamic characteristics of the product; chemistry, manufacturing, and controls information; and any available human data or literature to support the use of the investigational product. An IND must become effective before human clinical trials may begin. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises safety concerns or questions about the proposed clinical trial. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before the clinical trial can begin. Submission of an IND therefore may or may not result in FDA authorization to begin a clinical trial.

In addition to the IND submission process, under the National Institutes of Health (NIH), Guidelines for Research Involving Recombinant DNA Molecules, or the NIH Guidelines, supervision of human gene transfer trials includes evaluation and assessment by an institutional biosafety committee (IBC), a local institutional committee that reviews and oversees research utilizing recombinant or synthetic nucleic acid molecules at that institution. The IBC assesses the safety of the research and identifies any potential risk to public health or the environment, and such review may result in some delay before initiation of a clinical trial. While the NIH Guidelines are not mandatory unless the research in question is being conducted at or sponsored by institutions receiving NIH funding of recombinant or synthetic nucleic acid molecule research, many companies and other institutions not otherwise subject to the NIH Guidelines voluntarily follow them.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with GCPs, which include the requirement that all research subjects provide their informed consent for their participation in any clinical study. Clinical trials are conducted under protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. A separate submission to the existing IND must

be made for each successive clinical trial conducted during product development and for any subsequent protocol amendments. Furthermore, an independent IRB for each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial begins at that site, and must monitor the study until completed. Regulatory authorities, the IRB or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk or that the trial is unlikely to meet its stated objectives. Some studies also include oversight by an independent group of qualified experts organized by the clinical study sponsor, known as a data safety monitoring board, which provides authorization for whether or not a study may move forward at designated check points based on access to certain data from the study and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy. There are also requirements governing the reporting of ongoing clinical studies and clinical study results to public registries.

For purposes of BLA approval, human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- Phase 1—The investigational product is initially introduced into healthy human subjects or patients with the target disease or condition. These studies are designed to test the safety, dosage tolerance, absorption, metabolism and distribution of the investigational product in humans, the side effects associated with increasing doses, and, if possible, to gain early evidence on effectiveness.
- Phase 2—The investigational product is administered to a limited patient population with a specified disease or condition to evaluate the preliminary efficacy, optimal dosages and dosing schedule and to identify possible adverse side effects and safety risks. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.
- Phase 3—The investigational product is administered to an expanded patient population to further evaluate dosage, to provide statistically significant evidence of clinical efficacy and to further test for safety, generally at multiple geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the investigational product and to provide an adequate basis for product approval.

In some cases, the FDA may require, or companies may voluntarily pursue, additional clinical trials after a product is approved to gain more information about the product. These so-called Phase 4 studies may also be made a condition to approval of the BLA. Concurrent with clinical trials, companies may complete additional animal studies and develop additional information about the biological characteristics of the product candidate, and must finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, must develop methods for testing the identity, strength, quality and purity of the final product. Additionally, appropriate packaging must be selected and tested, and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

BLA Submission and Review by the FDA

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development, nonclinical studies and clinical trials are submitted to the FDA as part of a BLA requesting approval to market the product for one or more indications. The BLA must include all relevant data available from preclinical and clinical studies, including negative or ambiguous results as well as positive findings, together with detailed information relating to the product's chemistry, manufacturing, controls, and proposed labeling, among other things. Data can come from company-sponsored clinical studies intended to test the safety and effectiveness of a use of the product, or from a number of alternative sources, including studies initiated by independent investigators. The submission of a BLA requires payment of a substantial application user fee to the FDA, unless a waiver or exemption applies.

Within 60 days following submission of the application, the FDA reviews a BLA submitted to determine if it is substantially complete before the FDA accepts it for filing. The FDA may refuse to file any BLA that it deems incomplete or not properly reviewable at the time of submission and may request additional information. In this event, the BLA must be resubmitted with the additional information. Once a BLA has been accepted for filing, the FDA's goal is to review standard applications within ten months after the filing date, or, if the application qualifies for priority review, six months after the FDA accepts the application for filing. In both standard and priority reviews, the review process may also be extended by FDA requests for additional information or clarification. The FDA reviews a BLA to determine, among other things, whether a product is safe, pure and potent and the facility in which it is manufactured, processed, packed or held meets standards designed to assure the product's continued safety, purity and potency. The FDA may also convene an advisory committee to provide clinical insight on application review questions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

Before approving a BLA, the FDA will typically inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP and adequate to assure consistent production of the product within required specifications. For a product candidate that is also a human cellular or tissue product, the FDA also will not approve the application if the manufacturer is not in compliance with cGTPs. These are FDA regulations that govern the methods used in, and the facilities and controls used for, the manufacture of human cells, tissues, and cellular and tissue based products (HCT/Ps) which are human cells or tissue intended for implantation, transplant, infusion, or transfer into a human recipient. The primary intent of the GTP requirements is to ensure that cell and tissue based products are manufactured in a manner designed to prevent the introduction, transmission and spread of communicable disease. FDA regulations also require tissue establishments to register and list their HCT/Ps with the FDA and, when applicable, to evaluate donors through screening and testing. Additionally, before approving a BLA, the FDA will typically inspect one or more clinical sites to assure compliance with GCP. If the FDA determines that the application, manufacturing process or manufacturing facilities are not acceptable, it will outline the deficiencies in the submission and often will request additional testing or information. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

After the FDA evaluates a BLA and conducts inspections of manufacturing facilities where the investigational product and/or its drug substance will be produced, the FDA may issue an approval letter or a Complete Response Letter (CRL). An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications. A CRL will describe all of the deficiencies that the FDA has identified in the BLA, except that where the FDA determines that the data supporting the application are inadequate to support approval, the FDA may issue the CRL without first conducting required inspections, testing submitted product lots, and/or reviewing proposed labeling. In issuing the CRL, the FDA may recommend actions that the applicant might take to place the BLA in condition for approval, including requests for additional information or clarification. The FDA may delay or refuse approval of a BLA if applicable regulatory criteria are not satisfied, require additional testing or information and/or require post-marketing testing and surveillance to monitor safety or efficacy of a product.

If regulatory approval of a product is granted, such approval will be granted for particular indications and may entail limitations on the indicated uses for which such product may be marketed. For example, the FDA may approve the BLA with a Risk Evaluation and Mitigation Strategy (REMS), to ensure the benefits of the product outweigh its risks. A REMS is a safety strategy implemented to manage a known or potential serious risk associated with a product and to enable patients to have continued access to such medicines by managing their safe use, and could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. The FDA also may condition approval on, among other things, changes to proposed labeling or the development of adequate controls and specifications. Once approved, the FDA may withdraw the product approval if compliance with pre- and

post-marketing requirements is not maintained or if problems occur after the product reaches the marketplace. The FDA may require one or more Phase 4 post-market studies and surveillance to further assess and monitor the product's safety and effectiveness after commercialization, and may limit further marketing of the product based on the results of these post-marketing studies.

Expedited development and review programs

The FDA offers a number of expedited development and review programs for qualifying product candidates. For example, the fast track program is intended to expedite or facilitate the process for reviewing new products that are intended to treat a serious or life-threatening disease or condition and demonstrate the potential to address unmet medical needs for the disease or condition. Fast track designation applies to the combination of the product and the specific indication for which it is being studied. The sponsor of a fast track product has opportunities for more frequent interactions with the applicable FDA review team during product development and, once a BLA is submitted, the product candidate may be eligible for priority review. A fast track product may also be eligible for rolling review, where the FDA may consider for review sections of the BLA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the BLA, the FDA agrees to accept sections of the BLA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the BLA.

A product candidate intended to treat a serious or life-threatening disease or condition may also be eligible for breakthrough therapy designation to expedite its development and review. A product candidate can receive breakthrough therapy designation if preliminary clinical evidence indicates that the product candidate, alone or in combination with one or more other drugs or biologics, may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. The designation includes all of the fast track program features, as well as more intensive FDA interaction and guidance beginning as early as Phase 1 and an organizational commitment to expedite the development and review of the product candidate, including involvement of senior managers.

Any marketing application for a drug or biologic submitted to the FDA for approval, including a product candidate with a fast track designation and/or breakthrough therapy designation, may be eligible for other types of FDA programs intended to expedite the FDA review and approval process, such as priority review and accelerated approval. A product candidate is eligible for priority review if it is designed to treat a serious or life-threatening disease or condition, and if approved, would provide a significant improvement in safety or effectiveness compared to available alternatives for such disease or condition. For original BLAs, priority review designation means the FDA's goal is to take action on the marketing application within six months of the 60-day filing date (as compared to ten months under standard review).

Additionally, product candidates studied for their safety and effectiveness in treating serious or life-threatening diseases or conditions may receive accelerated approval upon a determination that the product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. As a condition of accelerated approval, the FDA will generally require the sponsor to perform adequate and well-controlled post-marketing clinical studies to verify and describe the anticipated effect on irreversible morbidity or mortality or other clinical benefit. Products receiving accelerated approval may be subject to expedited withdrawal procedures if the sponsor fails to conduct the required post-marketing studies or if such studies fail to verify the predicted clinical benefit. In addition, the FDA currently requires as a condition for accelerated approval pre-approval of promotional materials, which could adversely impact the timing of the commercial launch of the product.

In 2017, the FDA established a new regenerative medicine advanced therapy (RMAT), designation as part of its implementation of the 21st Century Cures Act. The RMAT designation program is intended to fulfill the

21st Century Cures Act requirement that the FDA facilitate an efficient development program for, and expedite review of, any drug or biologic that meets the following criteria: (i) the drug or biologic qualifies as a RMAT, which is defined as a cell therapy, therapeutic tissue engineering product, human cell and tissue product, or any combination product using such therapies or products, with limited exceptions; (ii) the drug or biologic is intended to treat, modify, reverse, or cure a serious or life-threatening disease or condition; and (iii) preliminary clinical evidence indicates that the drug or biologic has the potential to address unmet medical needs for such a disease or condition. RMAT designation provides all the benefits of breakthrough therapy designation, including more frequent meetings with the FDA to discuss the development plan for the product candidate and eligibility for rolling review and priority review. Product candidates granted RMAT designation may also be eligible for accelerated approval on the basis of a surrogate or intermediate endpoint reasonably likely to predict long-term clinical benefit, or reliance upon data obtained from a meaningful number of clinical trial sites, including through expansion of trials to additional sites.

Fast track designation, breakthrough therapy designation, priority review, accelerated approval, and RMAT designation do not change the standards for approval but may expedite the development or approval process. Even if a product candidate qualifies for one or more of these programs, the FDA may later decide that the product no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

Orphan drug designation and exclusivity

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic intended to treat a rare disease or condition, defined as a disease or condition with a patient population of fewer than 200,000 individuals in the United States, or a patient population greater than 200,000 individuals in the United States and when there is no reasonable expectation that the cost of developing and making available the drug or biologic in the United States will be recovered from sales in the United States for that drug or biologic. Orphan drug designation must be requested before submitting a BLA. After the FDA grants orphan drug designation, the generic identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA.

If a product that has orphan drug designation subsequently receives the first FDA approval for a particular active ingredient for the disease for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications, including a full BLA, to market the same biologic for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity or if the FDA finds that the holder of the orphan drug exclusivity has not shown that it can assure the availability of sufficient quantities of the orphan drug to meet the needs of patients with the disease or condition for which the drug was designated. Orphan drug exclusivity does not prevent the FDA from approving a different drug or biologic for the same disease or condition, or the same drug or biologic for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the BLA application user fee.

A designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. In addition, orphan drug exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or, as noted above, if a second applicant demonstrates that its product is clinically superior to the approved product with orphan exclusivity or the manufacturer of the approved product is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition.

Post-approval requirements

Biologics are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to record-keeping, reporting of adverse experiences, periodic reporting, product sampling and distribution, and advertising and promotion of the product. After approval, most changes to the approved

product, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There also are continuing, annual program fees for any marketed products. Biologic manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP, which impose certain procedural and documentation requirements up. Changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP and impose reporting requirements. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance.

The FDA may withdraw approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical studies to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters, or untitled letters;
- clinical holds on clinical studies;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of product license approvals;
- product seizure or detention, or refusal to permit the import or export of products;
- consent decrees, corporate integrity agreements, debarment or exclusion from federal healthcare programs;
- mandated modification of promotional materials and labeling and the issuance of corrective information;
- the issuance of safety alerts, Dear Healthcare Provider letters, press releases and other communications containing warnings or other safety information about the product; or
- injunctions or the imposition of civil or criminal penalties.

The FDA closely regulates the marketing, labeling, advertising and promotion of biologics. A company can make only those claims relating to safety and efficacy, purity and potency that are approved by the FDA and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. Physicians may prescribe legally available products for uses that are not described in the product's labeling and that differ from those tested and approved by the FDA. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer's communications on the subject of off-label use of their products.

Biosimilars and reference product exclusivity

The Affordable Care Act, signed into law in 2010, includes a subtitle called the Biologics Price Competition and Innovation Act (BPCIA), which created an abbreviated approval pathway for biological products that are

biosimilar to or interchangeable with an FDA-licensed reference biological product. The FDA has issued several guidance documents outlining an approach to review and approval of biosimilars.

Biosimilarity, which requires that there be no clinically meaningful differences between the biological product and the reference product in terms of safety, purity, and potency, can be shown through analytical studies, animal studies, and a clinical study or studies. Interchangeability requires that a product is biosimilar to the reference product and the product must demonstrate that it can be expected to produce the same clinical results as the reference product in any given patient and, for products that are administered multiple times to an individual, the biologic and the reference biologic may be alternated or switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic. However, complexities associated with the larger, and often more complex, structures of biological products, as well as the processes by which such products are manufactured, pose significant hurdles to implementation of the abbreviated approval pathway that are still being worked out by the FDA.

Under the BPCIA, an application for a biosimilar product may not be submitted to the FDA until four years following the date that the reference product was first licensed by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first licensed. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a full BLA for the competing product containing that applicant's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of its product. The BPCIA also created certain exclusivity periods for biosimilars approved as interchangeable products. At this juncture, it is unclear whether products deemed "interchangeable" by the FDA will, in fact, be readily substituted by pharmacies, which are governed by state pharmacy law.

A biological product can also obtain pediatric market exclusivity in the United States. Pediatric exclusivity, if granted, adds six months to existing exclusivity periods and patent terms. This six-month exclusivity, which runs from the end of other exclusivity protection or patent term, may be granted based on the voluntary completion of a pediatric study in accordance with an FDA-issued "Written Request" for such a study. The BPCIA is complex and continues to be interpreted and implemented by the FDA. In addition, government proposals have sought to reduce the 12-year reference product exclusivity period. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of recent litigation. As a result, the ultimate impact, implementation, and impact of the BPCIA is subject to significant uncertainty.

Other Healthcare Laws

Pharmaceutical companies are subject to additional healthcare regulation and enforcement by the federal government and by authorities in the states and foreign jurisdictions in which they conduct their business and may constrain the financial arrangements and relationships through which we research, as well as, sell, market and distribute any products for which we obtain marketing approval. Such laws include, without limitation, federal and state anti-kickback, fraud and abuse, false claims, data privacy and security and physician and other health care provider transparency laws and regulations. If our significant operations are found to be in violation of any of such laws or any other governmental regulations that apply, they may be subject to penalties, including, without limitation, administrative, civil and criminal penalties, damages, fines, disgorgement, the curtailment or restructuring of operations, integrity oversight and reporting obligations, exclusion from participation in federal and state healthcare programs and imprisonment.

Coverage and Reimbursement

Sales of any product depend, in part, on the extent to which such product will be covered by third-party payors, such as federal, state, and foreign government healthcare programs, commercial insurance and managed healthcare organizations, and the level of reimbursement for such product by third-party payors. Decisions regarding the extent of coverage and amount of reimbursement to be provided are made on a plan-by-plan basis.

These third-party payors are increasingly reducing reimbursements for medical products, drugs and services. In addition, the U.S. government, state legislatures and foreign governments have continued implementing cost-containment programs, including price controls, restrictions on coverage and reimbursement and requirements for substitution of generic products. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit sales of any product. Decreases in third-party reimbursement for any product or a decision by a third-party payor not to cover a product could reduce physician usage and patient demand for the product and also have a material adverse effect on sales.

Healthcare Reform

In March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, each as amended, collectively known as the ACA, was enacted, which substantially changed the way healthcare is financed by both governmental and private insurers, and significantly affected the pharmaceutical industry. The ACA contains a number of provisions, including those governing enrollment in federal healthcare programs, reimbursement adjustments and changes to fraud and abuse laws. For example, the ACA:

- increased the minimum level of Medicaid rebates payable by manufacturers of brand name drugs from 15.1% to 23.1% of the average manufacturer price;
- required collection of rebates for drugs paid by Medicaid managed care organizations;
- required manufacturers to participate in a coverage gap discount program, under which they must agree to offer 70 percent point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D; and
- imposed a non-deductible annual fee on pharmaceutical manufacturers or importers who sell "branded prescription drugs" to specified federal government programs.

Since its enactment, there have been judicial and Congressional challenges to certain aspects of the ACA, and we expect there will be additional challenges and amendments to the ACA in the future. For example, on March 2, 2020 the United States Supreme Court granted the petitions for writs of certiorari to review the U.S. Court of Appeals for the 5th Circuit ruling that the individual mandate was unconstitutional and to determine the constitutionality of the ACA in its entirety. Other legislative changes have been proposed and adopted since the ACA was enacted, including aggregate reductions of Medicare payments to providers of 2% per fiscal year, which was temporarily suspended from May 1, 2020 through December 31, 2020 due to the COVID-19 pandemic, and reduced payments to several types of Medicare providers. Moreover, there has recently been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries, proposed and enacted legislation and executive orders issued by the President designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. It is also possible that additional governmental action is taken in response to the COVID-19 pandemic. Individual states in the United States have also become increasingly active in implementing regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

Facilities

Washington

Our corporate headquarters are located in Seattle, Washington, where we lease approximately 25,898 square feet of office and laboratory space pursuant to a lease agreement which was executed in November 2018 and

expires in December 2026. We also lease approximately 22,188 square feet of space which we intend to build out into laboratory space, pursuant to a sublease agreement which commenced in September 2020 and expires in April 2028.

California

We occupy approximately 66,075 square feet of research and development, laboratory, and office space in South San Francisco, California, pursuant to a lease agreement which commenced in November 2018 for 32,978 square feet and was amended to include an additional 33,097 of square feet in December 2019, and expires in April 2030.

Massachusetts

We lease approximately 24,386 square feet of research and development, laboratory, and office space pursuant to the lease agreement executed in September 2018 and expiring in June 2027, and sublease an additional 31,563 square feet of similar space in an adjacent building in Cambridge, Massachusetts pursuant to a lease agreement executed in January 2020 and expiring in February 2028.

We believe that our existing facilities are sufficient for our near-term needs but expect to need additional space as we grow. We believe that suitable additional alternative spaces will be available in the future on commercially reasonable terms, if required.

Employees and Human Capital Resources

As of September 30, 2020, we had 240 employees, 186 of whom were primarily engaged in research and development activities. A total of 152 employees have an advanced degree. None of our employees are represented by a labor union or party to a collective bargaining agreement. We consider our relationship with our employees to be good.

Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing and integrating our existing and additional employees. The principal purposes of our equity incentive plans are to attract, retain and motivate selected employees, consultants and directors through the granting of stock-based compensation awards and cash-based performance bonus awards.

Research and Development

Total research and development expenses were $9.0 million for the period of July 13, 2018 (inception) through December 31, 2018, $119.4 million for the year ended December 31, 2019, and $153.8 million for the nine months ended September 30, 2020.

Legal Proceedings

We are not currently a party to any material legal proceedings. From time to time, we may, however, in the ordinary course of business face various claims brought by third parties, and we may, from time to time, make claims or take legal actions to assert our rights, including intellectual property rights as well as claims relating to employment matters and the safety or efficacy of our products. Any of these claims could subject us to costly litigation, and, while we generally believe that we have adequate insurance to cover many different types of liabilities, our insurance carriers may deny coverage, may be inadequately capitalized to pay on valid claims, or our policy limits may be inadequate to fully satisfy any damage awards or settlements. If this were to happen, the payment of any such awards could have a material adverse effect on our operations, cash flows and financial position. Additionally, any such claims, whether or not successful, could damage our reputation and business.

MANAGEMENT

Executive Officers, Directors, and Significant Employees

The following table sets forth information regarding our executive officers, directors, and significant employees as of September 30, 2020:

Executive Officers	Age	Position
Steven D. Harr, M.D.	50	President, Chief Executive Officer, and Director
Richard Mulligan, Ph.D.	66	Head of SanaX and Executive Vice-Chairman
Christian Hordo	38	Senior Vice President, Chief Business Officer
Nathan Hardy	45	Senior Vice President, Chief Financial Officer
James J. MacDonald	46	Executive Vice President, General Counsel, and Corporate Secretary
Non-Employee Directors		
Joshua H. Bilenker, M.D.	49	Director
Hans Bishop	56	Chairman of the Board
Douglas Cole, M.D.	60	Director
Robert Nelsen	57	Director
Alise S. Reicin, M.D.	60	Director
Michelle Seitz	55	Director
Geoffrey von Maltzahn, Ph.D.	40	Director
Mary Agnes (Maggie) Wilderotter	65	Director
Patrick Yang, Ph.D.	72	Director
Significant Employees		
Robin Andrulevich	55	Executive Vice President, Chief People Officer
Terry Fry, M.D.	54	Senior Vice President, Head of T Cell Therapeutics
Steven Goldman, M.D., Ph.D.	63	Senior Vice President, Head of CNS Therapy
Stacey Ma, Ph.D.	50	Executive Vice President, Head of Technical Operations
Chuck Murry, M.D., Ph.D.	60	Senior Vice President, Chief Scientific Officer of Cell Therapy
Ed Rebar, Ph.D.	53	Senior Vice President, Chief Technology Officer
Sonja Schrepfer, M.D., Ph.D.	45	Senior Vice President, Head of Hypoimmune Platform

Executive Officers

Steven D. Harr, M.D. has served as our President and Chief Executive Officer since September 2018 and has served as a member of our board of directors (Board) since October 2018. Dr. Harr was Chief Financial Officer and Head of Corporate Development at Juno Therapeutics (Juno), a biopharmaceutical company developing cancer immunotherapies, from April 2014 until its acquisition by Celgene in March 2018. At Juno he was responsible for the overall financial and operational strategy of the company. Prior to Juno, Dr. Harr was Managing Director and Head of Biotechnology Investment Banking at Morgan Stanley, a public multinational investment bank and financial services company, from May 2010 until April 2014, and prior to his investment banking role was the Lead Biotech Research Analyst and Co-head of Global Healthcare Research. Dr. Harr was a member of the board of directors of Loxo Oncology, a biopharmaceutical company, from November 2016 until its acquisition by Eli Lilly in February 2019. Dr. Harr was also a co-founder and member of the board of directors of JW Therapeutics, a cell therapy company in China, from February 2016 to June 2018. Dr. Harr has served on the board of Repertoire Immune Medicines, a biotechnology company, since March 2020. Dr. Harr

obtained a B.A. in Economics from the College of the Holy Cross in 1993 and an M.D. from The Johns Hopkins University School of Medicine in 1998. Dr. Harr was a resident in internal medicine at the University of California, San Francisco from 1998 to 2000. We believe Dr. Harr is qualified to serve on our Board because of his extensive management and leadership experience with biopharmaceutical and life sciences companies.

Richard Mulligan, Ph.D. has served as the Head of SanaX and Executive Vice-Chairman of our Board of Directors since November 2018. Dr. Mulligan is currently the Mallinckrodt Professor of Genetics, Emeritus, at Harvard Medical School, and has been Visiting Scientist at the Massachusetts Institute of Technology since March 2017. Dr. Mulligan currently serves on the board of directors of Biogen Inc., a public biotechnology company. From 1996-2013, Dr Mulligan served as the Mallinckrodt Professor of Genetics at Harvard and Director of the Harvard Gene Therapy Initiative. Prior to that, he was Professor of Molecular Biology at the Massachusetts Institute of Technology, and a member of the Whitehead Institute for Biomedical Research. From May 2013 to December 2016, Dr. Mulligan was Founding Partner and Senior Managing Director of Sarissa Capital Management LP, a registered investment advisor, and from March 2017 to October 2018 he served as Portfolio Manager at Icahn Capital LP. We believe Dr. Mulligan is qualified to serve on our Board because of his extensive experience in the biotechnology and life sciences industries and his substantial academic experience.

Christian Hordo has served as our Senior Vice President, Chief Business Officer since October 2018. Prior to Sana, Mr. Hordo served Juno as Vice President, Myeloma Program Lead from January 2017 to October 2018 and before that as Vice President, Head of Business Development from March 2015 to April 2018. At Juno Mr. Hordo built a team and led negotiations on multiple successfully executed transactions, including the broad strategic collaboration with Celgene. Prior to Juno, Mr. Hordo served in various roles at Genentech, most recently as Project Team Leader from December 2013 to February 2015. Christian obtained his M.B.A. from Harvard Business School, graduating with high distinction as a Baker Scholar, a M.Sc. in medical genetics and microbiology from the University of Toronto, and a B.S. in psychology at McGill University.

Nathan Hardy has served as our Senior Vice President, Chief Financial Officer since September 2018. From August 2017 to June 2018, Mr. Hardy served as the Vice President of Finance at Juno where he led the Business, Financial Planning and Treasury organizations. Mr. Hardy worked at Amgen Inc., a biopharmaceutical company, from February 2007 to August 2017, and served in a variety of senior finance and operations leadership positions, culminating as the Executive Director and Head of Corporate Finance. At Juno and Amgen, Mr. Hardy led resource allocation activities across the organizations, helped drive large-scale business transformation at Amgen, and was part of various acquisitions and divestitures. Prior to Amgen, Mr. Hardy held various finance positions at General Electric Co. and Sprint Corporation, a public telecommunications company. Mr. Hardy obtained a B.S. in finance from the University of Utah and an M.B.A. from the University of Notre Dame.

James J. MacDonald has served as our Executive Vice President, General Counsel, and Corporate Secretary since September 2018. Prior to Sana, Mr. MacDonald was Senior Vice President and Chief Intellectual Property Officer at Juno from March 2014 to May 2018, where he was responsible for all worldwide intellectual property activities, including strategy, development, transactions, litigation and counseling. From March 2009 to March 2014, Mr. MacDonald held both legal and business roles at Tessera, Inc. (a subsidiary of Xperi Corporation) and its affiliates, a technology company, and most recently was Executive Vice President of Intellectual Property & Business Development, responsible for business development, licensing and litigation. Prior to Tessera, Mr. MacDonald held senior roles at BigBand Networks, a provider of platforms for broadband multimedia services (acquired by ARRIS Group), and Tumbleweed Communications, a secure internet communication solutions company (acquired by Axway), practiced law at Wilson Sonsini Goodrich & Rosati PC in Palo Alto, California, and was a research and development engineer at The Procter & Gamble Company. Mr. MacDonald obtained a J.D. from Vanderbilt University Law School and a B.S. in chemical engineering from Stanford University.

Non-Employee Directors

Joshua H. Bilenker, M.D. has served as a member of our Board since December 2020. He has served as head of Loxo Oncology, Inc. at Eli Lilly and Company since December 2019 and served as Chief Executive Officer of Loxo Oncology, a public biopharmaceutical company, from July 2013 until the acquisition of Loxo Oncology by Eli Lilly in February 2019. Dr. Bilenker joined Aisling Capital LLC in April 2006, and has served as an Operating Partner since November 2013. Previously, Dr. Bilenker served as a Medical Officer in the Office of Oncology Drug Products at the FDA from August 2004 to April 2006. Dr. Bilenker serves on the board of Gossamer Bio, Inc., a public biopharmaceutical company, and previously served on the board of directors of a number of public companies including Loxo Oncology from July 2013 until the acquisition of Loxo Oncology by Eli Lilly, ViewRay, Inc. from January 2008 to June 2017, T2 Biosystems, Inc. from August 2011 to January 2017 and Roka Bioscience, Inc. from January 2012 to March 2015. Dr. Bilenker formerly served as a board member of the NCCN Foundation and BioEnterprise. Dr. Bilenker obtained an M.D. from the Johns Hopkins School of Medicine and an A.B. in English from Princeton University. We believe Dr. Bilenker is qualified to serve on our Board because of his extensive experience and service as a director or officer of, and as an investor in, public biopharmaceutical and life sciences companies.

Hans E. Bishop has served as a member of our Board since October 2018. Mr. Bishop has more than 30 years of experience in the biotechnology industry and has served as the Chief Executive Officer of GRAIL, Inc., a healthcare company, since June 2019. Mr. Bishop founded Juno in July 2013 and served as President and Chief Executive Officer until the company was acquired by Celgene in March 2018. Prior to Juno, Mr. Bishop served as Executive in Residence at Warburg Pincus, a multinational private equity firm. Earlier in his career, Mr. Bishop served as Executive Vice President and Chief Operating Officer for Dendreon, Inc., a public biopharmaceutical company developing cancer immunotherapies. Prior to Dendreon Mr. Bishop served as President of Specialty Medicine at Bayer Healthcare, a multinational pharmaceutical and life sciences company, and before that served as Senior Vice President of Global Commercial Operations at Chiron Corporation, a multinational biotechnology company, where he was also Vice President and General Manager of European Biopharmaceuticals. He currently serves as a director of Agilent Technologies, a public instrumentation manufacturing company; Lyell Immunopharma, a cellular therapy company; and JW Therapeutics. Mr. Bishop obtained a B.A. in chemistry from Brunel University in London. We believe Mr. Bishop is qualified to serve on our Board because of his extensive management experience with the pharmaceutical and biotechnology industries and his significant academic training.

Douglas Cole, M.D. has served as a member of our Board since April 2020. Dr. Cole joined Flagship Pioneering, which conceives, creates, resources and develops first-in-category life sciences companies, in 2001, and is currently a Managing Partner focused on life science investments. Dr. Cole currently serves on the board of directors of Denali Therapeutics, Foghorn Therapeutics and a number of private companies. In the past five years, Dr. Cole served on the boards of directors of Quanterix Corporation and Editas Medicine. Dr. Cole received his M.D. from the University of Pennsylvania School of Medicine and his B.A. in English from Dartmouth College. We believe Dr. Cole is qualified to sit on our board of directors given his substantial experience as an investor in emerging biopharmaceutical and life sciences companies as well as his experience serving on the boards of directors of multiple public and private biopharmaceutical companies.

Alise S. Reicin, M.D. has served as a member of our Board since December 2020. Dr. Reicin served as President, Global Clinical Development at Celgene Corporation, a public pharmaceutical company, from November 2018 to December 2019. Prior to Celgene, she served as Head of Global Clinical Development at EMD Serono, a pharmaceutical company, from May 2015 to October 2018 and prior to that served as Vice President, Program Leadership Oncology at Merck and Co., a public pharmaceutical company. Dr. Reicin serves on the board of directors of Homology Medicines, Inc., a public clinical stage biopharmaceutical company. Dr. Reicin obtained an M.D. from Harvard Medical School and a B.A. in Biochemistry from Barnard College of Columbia University. We believe Dr. Reicin is qualified to serve on our Board because of her extensive clinical expertise and leadership experience with biopharmaceutical companies.

Michelle Seitz has served as a member of our Board since December 2020. Ms. Seitz has served as Chairman and Chief Executive Officer of Russell Investments, a global investment solutions provider, since September 2017. Previously, Ms. Seitz worked in various positions at William Blair, a global investment banking and wealth management firm, from February 1996 to August 2017, most recently serving as the Chief Executive of William Blair Investment Management, Chairman and President of William Blair Funds, and as a Board Member from June 2001 to August 2017. Ms. Seitz currently serves on the board of directors of the Washington Roundtable and on the Dean's Council of Kelley School of Business at Indiana University. Ms. Seitz is a past director of the Financial Accounting Foundation, providing oversight of FASB and GASB. Ms. Seitz obtained a B.S. in accounting from the Indiana University Kelley School of Business and her Chartered Financial Analyst designation in 1990. We believe Ms. Seitz is qualified to serve on our Board because of her extensive finance and industry experience and her experience serving boards of directors.

Geoffrey von Maltzahn, Ph.D. is a co-founder of Sana Biotechnology and has served as a member of our Board since February 2019. Dr. von Maltzahn is a General Partner at Flagship Pioneering focusing on innovation and company origination and has been with Flagship since November 2009. Dr. von Maltzahn led a Flagship Labs innovation team at Flagship Pioneering in founding Cobalt Biomedicine, where he served as its CEO and a board member, until it merged with Sana Biotechnology in February 2019. Dr. von Maltzahn currently serves as CEO and director of Tessera Therapeutics and co-CEO of Generate Biomedicines. Previously, Dr. von Maltzahn served as Kaleido's Chief Executive Officer from 2015 to 2017 and serves on the company's board of directors. Dr. von Maltzahn also serves as the Chief Innovation Officer and a director of Indigo Agriculture, Inc., an agriculture biotechnology company he co-founded in 2013 as part of Flagship Pioneering's Flagship Labs innovation foundry. Dr. von Maltzahn was a co-founder of Seres Therapeutics, Inc. in 2010, and he served as Chief Technology Officer at Seres until 2012. Dr. von Maltzahn was awarded a Ph.D. in biomedical engineering and medical physics from MIT, a M.S. in bioengineering from the University of California, San Diego, and an S.B. in chemical engineering from MIT. We believe Dr. von Maltzahn is qualified to serve on our Board due to his extensive experience co-founding and leading numerous biotechnology companies.

Robert Nelsen has served as a member of our Board since October 2018. Mr. Nelsen has served as co-founder and Managing Director of ARCH Venture Partners, a venture capital firm focused on early-stage technology companies, since 1994, and has played a significant role in the early sourcing, financing and development of more than 30 biopharmaceutical companies. Mr. Nelsen currently serves on the board of directors of several public biotechnology and biopharmaceutical companies including Beam Therapeutics, Denali Therapeutics Inc., Hua Medicine, Karuna Therapeutics, Unity Biotechnology, Inc., Vir Biotechnology and several private companies, including Apex Neuro, Brii Biosciences, Inc., Encoded Genomics, Gideon Health, GRAIL, Inc., Insitro, Lyell Immunopharma, Inc., Maze Therapeutics, Inc., Nutcracker Therapeutics, Inc., Prime Medicine, and SciNeuro Pharmaceuticals. Mr. Nelsen previously served on the board of directors of several public biotechnology and biopharmaceutical companies including Adolor Corporation, Agios Pharmaceuticals, Bellerophon Therapeutics, Fate Therapeutics, Illumina, Inc., Juno, KYTHERA Biopharmaceuticals, Inc., NeurogesX, Inc., Sage Therapeutics, Sienna Biopharmaceuticals, Inc., and Syros Pharmaceuticals. He also previously served as Trustee of the Fred Hutchinson Cancer Research Center, and as a director of the National Venture Capital Association. Mr. Nelsen obtained an M.B.A. from the University of Chicago Booth School of Business and a B.S. with majors in economics and biology from the University of Puget Sound. We believe Mr. Nelsen is qualified to serve on our Board because of his venture capital and industry experience, his extensive experience serving boards of directors of public biotechnology companies and his significant academic experience.

Mary Agnes (Maggie) Wilderotter has served as a member of our Board since May 2020. Ms. Wilderotter has served as the Chief Executive Officer and Chairman of the Grand Reserve Inn, a luxury resort and vineyard, since August 2016. From November 2004 to April 2016, Ms. Wilderotter served in a number of roles at Frontier Communications Corporation, a public telecommunications company, including as Executive Chairman of the board of directors from April 2015 to April 2016, Chairman and Chief Executive Officer from January 2006 to April 2015, and President, Chief Executive Officer and director from 2004 to 2006. Ms. Wilderotter currently

serves on the board of directors of Lyft, Inc., a public multinational ridesharing company; Costco Wholesale Corporation, a public wholesale retailer; Hewlett Packard Enterprise Company, a public enterprise information technology company; and Chairman of DocuSign, Inc., a public digital transaction management services company. Ms. Wilderotter has served on many public company boards of directors, and in the past five years, was a director of Cadence Design Systems, Inc., an electronic design automation software and engineering services company; Xerox Corporation, a document management technology solutions company; DreamWorks Animation SKG, Inc., an entertainment company; The Procter & Gamble Company, a consumer goods company; and Juno. Ms. Wilderotter obtained a B.A. in Economics from the College of the Holy Cross and two honorary degrees from Stevens Institute of Technology and the University of Rochester. We believe Ms. Wilderotter is qualified to serve on our Board because of her extensive leadership experience in technology and serving as a director of public companies.

Patrick Y. Yang, Ph.D. has served as a member of our Board since October 2018. Dr. Yang served as Executive Vice President and Special Advisor of Juno from September 2017 to January 2019. From January 2010 to March 2013, Dr. Yang served as Executive Vice President and Global Head of Technical Operations for F. Hoffmann-La Roche Ltd. (Roche), a healthcare company, where he was responsible for the company's pharmaceutical process development, engineering, quality, technical regulatory, supply chain, and all manufacturing plants. Before joining Roche, Dr. Yang worked for Genentech, a biotechnology company; Merck & Co., a public pharmaceutical company; General Electric Co., a public industrial company; and Life Systems, Inc., a medical equipment and distribution company; during which time he developed significant experience with pharmaceuticals and biotechnology manufacturing, engineering, technology, and supply chain management. Dr. Yang served on the board of directors of Tesoro Corporation, a public independent petroleum refining and marketing company, from December 2010 to October 2018. He currently serves on the board of Amyris, Inc., a public biotechnology company, and PharmaEssentia, a biopharmaceutical company, and serves as Chairman at AbGenomics, a biopharmaceutical company; Acepodia, a biotechnology company; and Archigen Biotech, a biopharmaceutical company. Dr. Yang obtained a B.S. in Engineering from the National Chiaotung University in Taiwan, a M.Sc. in Electrical Engineering from the University of Cincinnati and a Ph.D. in engineering from the Ohio State University. We believe Dr. Yang is qualified to serve on our Board because of his extensive background and expertise in the biotechnology industry and his previous and current experience serving as a director of various public companies.

Significant Employees

Robin Andrulevich has served as our Executive Vice President and Chief People Officer since September 2018. Ms. Andrulevich is also a Founder of 9Lives HR Consulting, which provides consulting services, and has served as a Principal Consultant for the company since November 2011. Prior to Sana, Ms. Andrulevich worked at Juno as Senior Vice President, People from October 2014 to April 2018. Ms. Andrulevich currently serves as a Director of Life Science Washington, a non-profit association providing support to life science entrepreneurs and start-up companies, and has held this role since December 2017. Ms. Andrulevich studied human rights at Columbia University and obtained a B.A. in communications science from the University of Connecticut.

Terry Fry, M.D. has served as our Senior Vice President, Head of T Cell Therapeutics since August 2020. From February 2018 to August 2020 Dr. Fry was Professor of Pediatrics, Hematology and Immunology at the University of Colorado Anschutz Medical Campus and held the Robert and Kathleen Clark Endowed Char in Pediatric Cancer Therapeutics at the Children's Hospital in Colorado, where he was responsible for building the cell therapy program and CAR T translational research lab. From August 2010 to January 2018 Dr. Fry was the Head of the Hematologic Malignancies Section in the Pediatric Oncology Branch of the National Cancer Institutes. Dr. Fry obtained an M.D. from Georgetown University and a B.A. in biology at Colgate University.

Steven Goldman, M.D., Ph.D. has served as our Senior Vice President, Head of CNS Therapy since October 2020. Dr. Goldman has also served as Professor of Neurology since September 2003, Chairman of the Department of Neurology between September 2008 and August 2018, and Chief of the Division of Cell and Gene

Therapy since September 2003 at the University of Rochester Medical Center. Prior to that he was the Nathan Cummings Professor of Neurology at Cornell University Medical Center, where he was employed from July 1988 through August 2003. Additionally, he has served as Co-Director of Rochester's Center for Translational Neuromedicine since July 2007; this center is a joint enterprise with the University of Copenhagen Faculty of Health and Medical Sciences, whose faculty he joined part-time as a Professor of Neuroscience and Neurology in March 2014. Previously, Dr. Goldman served as a voting member of the U.S. Food and Drug Administration's (FDA's) Cellular, Tissue, and Gene Therapy Advisory Committee from July 2010 to June 2014. Dr. Goldman completed his internship in internal medicine and residency in neurology at New York Hospital-Cornell Medical Center and the Memorial Sloan-Kettering Cancer Center in June 1988. Dr. Goldman obtained a Ph.D. in cellular neurobiology from Rockefeller University, an M.D. from Cornell University, and a B.A. in Biology and Psychology from the University of Pennsylvania.

Stacey Ma, Ph.D. has served as our Executive Vice President and Head of Technical Operations since March 2019. Prior to Sana, Dr. Ma held various roles at Genentech/Roche from July 1996 to March 2019. Most recently, Dr. Ma worked as the Global Head of Pharma Technical Innovation & MSAT from February 2018 to March 2019 and as Global Head of IMP Quality, Pharma Technical Development from May 2015 to February 2018. Dr. Ma is an American Institute for Medical and Biological Engineering (AIMBE) fellow and has co-chaired many international scientific conferences and workshops related to CMC development strategies, including several co-sponsored by the FDA, European Medicines Agency and Chinese Food and Drug Administration. Dr. Ma obtained a B.S. in chemical engineering from the University of Minnesota and a Ph.D., M.Phil. and M.S. in chemical engineering from Yale University.

Chuck Murry, M.D., Ph.D. has served as our Senior Vice President of Cardiac Cell Therapy Research since November 2019 and as our Chief Scientific Officer for Cell Therapy since May 2020. Dr. Murry joined the University of Washington faculty in 1996 and has worked a professor since 2004. He founded the University of Washington's Center for Cardiovascular Biology in 2005 and co-founded the Institute for Stem Cell and Regenerative Medicine in 2008. Dr. Murry is an elected fellow of the American Association for the Advancement of Science, the Association of American Physicians, the American Institute for Medical and Biological Engineering, and the Washington State Academy of Sciences. Dr. Murry is currently a member of the Board of Directors and serves on the Clinical Translation Committee of the International Society for Stem Cell Research. Dr. Murry obtained a B.S. in chemistry from the University of North Dakota, and an M.D. and a Ph.D. in Medicine and Pathology from Duke University. Dr. Murry completed his residency in diagnostic and experimental pathology at the University of Washington.

Edward Rebar, Ph.D. has served as our Senior Vice President and Chief Technology Officer since March 2020. Dr. Rebar worked at Sangamo Therapeutics, Inc., a public biotechnology company, from July 1998 to April 2020, to develop the company's zinc finger protein platform for therapeutic applications in genome editing, gene regulation and cell engineer. Dr. Rebar held roles of increasing responsibility at Sangamo Therapeutics, Inc., including most recently as Chief Technology Officer. Dr. Rebar was a post-doctoral fellow at the University of California, Berkeley, from 1997 to 1998. Dr. Rebar obtained a B.S. in biochemistry from Rutgers University and a Ph.D. in biophysics and structural biology from MIT.

Sonja Schrepfer, M.D., Ph.D. has served as our Senior Vice President, Head of the Hypoimmune Platform since February 2019. Dr. Schrepfer has been a professor at the University of California, San Francisco (UCSF) in the Department of Surgery since December 2015. Dr. Schrepfer is also currently advisor of the Central Ethics Commission for Stem Cell Research in Germany. From October 2017 to October 2018 she served as founder of Phoenics Inc., a startup company on immune editing. In February 2009, Dr. Schrepfer became the youngest Heisenberg Professor in Medicine in Germany and led the Stem Cell Immunology program at the University of Hamburg until her recruitment to UCSF in 2015. Previously, from January 2007 to February 2009, she was Faculty at Stanford University School of Medicine, where she founded the Transplant and Stem Cell Immunobiology laboratory. Dr. Schrepfer obtained an M.D., a Doctoral Thesis from the University of Wuerzburg, received cardiac and transplant surgery training from the Universities Munich and Hamburg, a Ph.D. in immunology from the University of Hamburg, and received Postdoctoral training from Stanford University.

Family Relationships

There are no family relationships among any of our executive officers or directors.

Board Structure and Composition

Director Independence

Our board of directors currently consists of eleven members. Our board of directors has determined that all of our directors, other than Drs. Harr and Mulligan, qualify as independent directors in accordance with the Nasdaq Stock Market LLC (Nasdaq), Marketplace Rules, or the Nasdaq Listing Rules. Drs. Harr and Mulligan are not considered independent by virtue of their positions as executive officers of the Company. Under the Nasdaq Listing Rules, the definition of independence includes a series of objective tests, such as that the director is not, and has not been for at least three years, one of our employees and that neither the director nor any of his or her family members has engaged in various types of business dealings with us. In addition, as required by the Nasdaq Listing Rules, our board of directors has made a subjective determination as to each independent director that no relationships exists that, in the opinion of our board of directors, would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. In making these determinations, our board of directors reviewed and discussed information provided by the directors and us with regard to each director's relationships as they may relate to us and our management.

Classified Board of Directors

In accordance with our amended and restated certificate of incorporation, which will be effective immediately prior to the completion of this offering, our board of directors will be divided into three classes with staggered three-year terms. At each annual general meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Our directors will be divided among the three classes as follows:

- The Class I directors will be , and , and their terms will expire at the annual meeting of stockholders to be held in 2022;
- The Class II directors will be , and , and their terms will expire at the annual meeting of stockholders to be held in 2023; and
- The Class III directors will be , and , and their terms will expire at the annual meeting of stockholders to be held in 2024.

We expect that any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. The division of our board of directors into three classes with staggered three-year terms may delay or prevent a change of our management or a change in control.

Voting Arrangements

The election of the members of our board of directors is currently governed by the amended and restated voting agreement that we entered into with certain holders of our common stock and convertible preferred stock and the related provisions of our amended and restated certificate of incorporation. Pursuant to our amended and restated voting agreement and amended and restated certificate of incorporation, our current directors were elected as follows:

- Mr. Nelsen and Ms. Wilderotter were elected as the designees of ARCH Venture Partners;
- Drs. Cole and von Maltzahn were elected as the designees of Flagship Pioneering;
- Mr. Bishop was elected and designated by the holders of a majority of our common stock;

- Dr. Harr was elected and designated as our then serving and current Chief Executive Officer; and
- Ms. Seitz was elected as the designee of F-Prime, which designation rights had been delegated to the Board; and
- Drs. Bilenker, Mulligan, Reicin and Yang were elected and designated by the holders of a majority of our common stock and convertible preferred stock.

Our amended and restated voting agreement will terminate and the provisions of our current amended and restated certificate of incorporation by which our directors were elected will be amended and restated in connection with this offering. After this offering, the number of directors will be fixed by our board of directors, subject to the terms of our amended and restated certificate of incorporation and amended and restated bylaws that will become effective immediately prior to the completion of this offering. Each of our current directors will continue to serve as a director until the election and qualification of his or her successor, or until his or her earlier death, resignation or removal.

Leadership Structure of the Board

Our amended and restated bylaws and corporate governance guidelines provide our board of directors with flexibility to combine or separate the positions of Chairman of the board of directors and Chief Executive Officer. Mr. Bishop currently serves as the Chairman of the Board.

Our board of directors has concluded that our current leadership structure is appropriate at this time. However, our board of directors will continue to periodically review our leadership structure and may make such changes in the future as it deems appropriate.

Role of Board in Risk Oversight Process

Risk assessment and oversight are an integral part of our governance and management processes. Our board of directors encourages management to promote a culture that incorporates risk management into our corporate strategy and day-to-day business operations. Management discusses strategic and operational risks at regular management meetings, and conducts specific strategic planning and review sessions during the year that include a focused discussion and analysis of the risks facing us. Throughout the year, senior management reviews these risks with the board of directors at regular board meetings as part of management presentations that focus on particular business functions, operations or strategies, and presents the steps taken by management to mitigate or eliminate such risks.

Our board of directors does not have a standing risk management committee, but rather administers this oversight function directly through our board of directors as a whole, as well as through various standing committees of our board of directors that address risks inherent in their respective areas of oversight. While our board of directors is responsible for monitoring and assessing strategic risk exposure, our audit committee is responsible for overseeing our major financial risk exposures and the steps our management has taken to monitor and control these exposures. The audit committee also approves or disapproves any related person transactions. Our nominating and corporate governance committee monitors the effectiveness of our corporate governance guidelines. Our compensation committee assesses and monitors whether any of our compensation policies and programs has the potential to encourage excessive risk-taking.

Board Committees

Our board of directors has three standing committees: the audit committee; the compensation committee; and the nominating and governance committee. Each committee is governed by a charter that will be available on our website following completion of this offering.

Audit Committee

Effective as of the date the registration statement of which this prospectus forms a part is declared effective by the SEC, the members of our audit committee will consist of , , and . will be the chairperson of our audit committee. The composition of our audit committee meets the requirements for independence under the current Nasdaq listing standards and Rule 10A-3 of the Exchange Act. Each member of our audit committee is financially literate. In addition, our board of directors has determined that is an "audit committee financial expert" within the meaning of the SEC rules. This designation does not impose on such directors any duties, obligations, or liabilities that are greater than are generally imposed on members of our audit committee and our board of directors. Our audit committee is directly responsible for, among other things:

- appointing, retaining, compensating, and overseeing the work of our independent registered public accounting firm;
- assessing the independence and performance of the independent registered public accounting firm;
- reviewing with our independent registered public accounting firm the scope and results of the firm's annual audit of our financial statements;
- overseeing the financial reporting process and discussing with management and our independent registered public accounting firm the financial statements that we will file with the SEC;
- pre-approving all audit and permissible non-audit services to be performed by our independent registered public accounting firm;
- reviewing policies and practices related to risk assessment and management;
- reviewing our accounting and financial reporting policies and practices and accounting controls, as well as compliance with legal and regulatory requirements;
- reviewing, overseeing, approving, or disapproving any related-person transactions;
- reviewing with our management the scope and results of management's evaluation of our disclosure controls and procedures and management's assessment of our internal control over financial reporting, including the related certifications to be included in the periodic reports we will file with the SEC; and
- establishing procedures for the confidential anonymous submission of concerns regarding questionable accounting, internal controls, or auditing matters, or other ethics or compliance issues.

Compensation Committee

Effective as of the date the registration statement of which this prospectus forms a part is declared effective by the SEC, the members of our compensation committee will consist of , , and . will be the chairperson of our compensation committee. Each of , , and is a non-employee director, as defined by Rule 16b-3 promulgated under the Exchange Act and meets the requirements for independence under the current Nasdaq listing standard. Our compensation committee is responsible for, among other things:

- reviewing and approving the compensation of our executive officers, including reviewing and approving corporate goals and objectives with respect to compensation;
- authority to act as an administrator of our equity incentive plans;
- reviewing and approving, or making recommendations to our board of directors with respect to, incentive compensation and equity plans;
- reviewing and recommending that our board of directors approve the compensation for our non-employee board members; and
- establishing and reviewing general policies relating to compensation and benefits of our employees.

Nominating and Governance Committee

Effective as of the date the registration statement of which this prospectus forms a part is declared effective by the SEC, the members of our nominating and governance committee will consist of , , and . will be the chairperson of our nominating and governance committee. , , and meet the requirements for independence under the current Nasdaq listing standards. Our nominating and governance committee is responsible for, among other things:

- identifying and recommending candidates for membership on our board of directors, including the consideration of nominees submitted by stockholders, and on each of the board's committees;
- reviewing and recommending our corporate governance guidelines and policies;
- reviewing proposed waivers of the code of business conduct and ethics for directors and executive officers;
- overseeing the process of evaluating the performance of our board of directors; and
- assisting our board of directors on corporate governance matters.

Code of Business Conduct and Ethics

In connection with this offering, our board of directors will adopt a code of business conduct and ethics that applies to all of our employees, officers, and directors, including our Chief Executive Officer, Chief Financial Officer, and other executive and senior financial officers. Upon completion of this offering, the full text of our code of business conduct and ethics will be posted on the investor relations section of our website. We intend to disclose future amendments to our code of business conduct and ethics, or any waivers of such code, on our website or in public filings.

Compensation Committee Interlocks and Insider Participation

None of our executive officers has served as a member of a compensation committee (or if no committee performs that function, the board of directors) of any other entity that has an executive officer serving as a member of our board of directors.

EXECUTIVE AND DIRECTOR COMPENSATION

This section discusses the material components of the executive compensation program for our named executive officers (NEOs) who are named in the subsection titled "—2020 Summary Compensation Table." In 2020, our NEOs and their positions were as follows:

- Steven D. Harr, M.D., *President and Chief Executive Officer*;
- Richard Mulligan, Ph.D., *Executive Vice-Chairman and Head of SanaX*; and
- Christian Hordo, *Senior Vice President and Chief Business Officer*.

This discussion may contain forward-looking statements that are based on our current plans, considerations, expectations and determinations regarding future compensation programs. Actual compensation programs and policies that we implement following the completion of this offering may differ materially from the currently planned programs summarized in this discussion.

As an "emerging growth company" as defined in the JOBS Act, we are not required to include a Compensation Discussion and Analysis section and have elected to comply with the scaled disclosure requirements applicable to emerging growth companies.

Summary Compensation Table

The following table sets forth information concerning the compensation awarded to or earned by our NEOs during our fiscal year ended December 31, 2020.

2020 SUMMARY COMPENSATION TABLE

Name and Principal Position	Year	Salary ($)	Bonus ($)	Stock Awards ($)	Option Awards ($)(1)	Non- Equity Incentive Plan Compensation ($)(2)	All Other Compensation ($)(3)	Total ($)
Steven D. Harr, M.D. President and Chief Executive Officer	2020							
Richard Mulligan, Ph.D. Executive Vice-Chairman and Head of SanaX(4)	2020							
Christian Hordo Senior Vice President and Chief Business Officer	2020							

(1) The amounts shown represent the grant date fair values of option awards granted in 2020 as computed in accordance with Financial Accounting Standards Board (FASB) Accounting Standard Codification (ASC) Topic 718. See Note 13, Stock-based compensation to our condensed consolidated financial statements included elsewhere in this prospectus for a discussion of the assumptions used in the calculation of these amounts.

(2) Amounts represent the annual performance-based cash bonuses earned by our named executive officers based on the achievement of certain corporate performance objectives and individual performance during 2020. These amounts were paid to the named executive officers in early 2021. Please see the descriptions of the annual performance bonuses paid to our named executive officers under "2020 Bonuses" below.

(3) Amount comprised of $ of principal and interest accrued on a promissory note we forgave in November 2020.
(4) Dr. Mulligan served as a consultant to us prior to becoming employed as our Head of SanaX in April 2020. Amount reported in the salary column for Dr. Mulligan includes $ paid as a monthly retainer while providing consulting services, and the amount in the bonus column for Dr. Mulligan includes $ paid as a discretionary bonus in connection with consulting services provided in 2020.

Narrative to Summary Compensation Table

2020 Salaries

The named executive officers receive a base salary to compensate them for services rendered to our company. The base salary payable to each named executive officer is intended to provide a fixed component of compensation reflecting the executive's skill set, experience, role and responsibilities.

For 2020, Dr. Harr's annual base salary was $535,000 and Mr. Hordo's annual base salary was $350,200. Until April 23, 2020, Dr. Mulligan served as a consultant and was paid a monthly retainer of $33,333. Our board of directors established Dr. Mulligan's annual base salary at $450,000 in connection with his commencement of employment with us.

2020 Bonuses

We maintain an annual performance-based cash bonus program in which each of our named executive officers participated in 2020. Each of our named executive officers' target bonus is expressed as a percentage of base salary which can be achieved by meeting corporate goals at target level. The 2020 annual bonuses for Dr. Harr, Dr. Mulligan and Mr. Hordo were targeted at 50%, 40% and 35% of their respective annual base salaries, pro-rated, in the case of Dr. Mulligan, for his partial year of employment.

For 2020, our named executive officers were eligible to earn annual cash bonuses based on the achievement of certain corporate performance objectives approved by our board of directors and its compensation committee, as well as individual performance for Dr. Mulligan and Mr. Hordo. In early 2021, our board of directors and its compensation committee reviewed and approved the achievement of our 2020 corporate goals at %. Based on this level of achievement and adjustments for individual 2020 performance for Dr. Mulligan and Mr. Hordo, our named executive officers were paid at the following percentages of their targeted amounts: Dr. Harr: %; Dr. Mulligan: %; and Mr. Hordo: %.

Until April 23, 2020, Dr. Mulligan served as a consultant to us and was eligible to earn a discretionary fee of up to 40% of his monthly retainer. In March 2020, we paid Dr. Mulligan a discretionary fee based on our board of director's assessment of Dr. Mulligan's service as a consultant.

Equity Compensation

We have granted stock options to our employees, including our named executive officers, in order to attract and retain them, as well as to align their interests with the interests of our stockholders. In order to provide a long-term incentive, these stock options generally vest over four years subject to continued service to the company.

In January 2020, we granted to Dr. Harr and Mr. Hordo an option to purchase 2,360,000 and 550,000 shares of our common stock, respectively, which vest as to 25% of the shares underlying the options on February 14, 2021 and as to 1/48th of the shares underlying the options monthly thereafter, subject to continued service.

In April 2020, in connection with his commencement of employment with us, we granted to Dr. Mulligan an option to purchase 450,000 shares of common stock, which vests as to 25% of the shares underlying the option on April 23, 2021 and as to 1/48th of the shares underlying the option monthly thereafter, subject to continued service.

In November 2020, we granted to Dr. Harr, Dr. Mulligan and Mr. Hordo an option to purchase 4,474,892, 800,000 and 800,000 shares of our common stock, respectively, which vest as to 25% of the shares underlying the options on February 15, 2022 and as to 1/48th of the shares underlying the options monthly thereafter, subject to continued service.

In connection with this offering, we have adopted the 2021 Incentive Award Plan, referred to below as the 2021 Plan, in order to facilitate the grant of cash and equity incentives to directors, employees (including our named executive officers) and consultants of our company and certain of its affiliates and to enable us to obtain and retain services of these individuals, which is essential to our long-term success. The 2021 Plan became effective on the date immediately prior to the date the registration statement relating to this offering became effective. For additional information about the 2021 Plan, please see the section titled "Equity Incentive Plans" below.

Other Elements of Compensation

Retirement Plans

We maintain a tax-qualified 401(k) retirement savings plan for our employees, including our named executive officers, who satisfy certain eligibility requirements. Our named executive officers are eligible to participate in the 401(k) plan on the same terms generally as other eligible, full-time employees. U.S. Internal Revenue Code of 1986 (The Code) allows eligible employees to defer a portion of their compensation, within prescribed limits, on a pre-tax basis through contributions to the 401(k) plan. We believe that providing a vehicle for tax-deferred retirement savings though our 401(k) plan adds to the overall desirability of our executive compensation package and further incentivizes our employees, including our named executive officers, in accordance with our compensation policies. We have not made any employer contributions under our 401(k) plan since inception.

Employee Benefits and Perquisites

Health and Welfare Plans and Perquisites. All of our current named executive officers are eligible to participate in our employee benefit plans, including our medical, dental, vision, disability and life insurance plans, in each case on the same basis as all of our other employees. We generally do not provide perquisites or personal benefits to our named executive officers.

No Tax Gross-Ups

We do not make gross-up payments to cover our named executive officers' personal income taxes that may pertain to any of the compensation or perquisites paid or provided by our company.

Outstanding Equity Awards at Fiscal Year End

The following table sets forth information concerning the number of shares of common stock underlying outstanding equity incentive awards for each named executive officer as of December 31, 2020.

	Option Awards					Stock Awards	
Name	Vesting Commencement Date(1)	Number of Securities Underlying Unexercised Options Exercisable (#)	Number of Securities Underlying Unexercised Options Unexercisable (#)	Option Exercise Price ($)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)(2)	Market Value of Shares or Units of Stock That Have Not Vested ($)(3)
Steven D. Harr, M.D.							
Richard Mulligan, Ph.D.							
Christian Hordo							

(1) Except as otherwise noted, each option vests as to 25% of the shares initially underlying the option on the first anniversary of the vesting commencement date and as to 1/48th of the shares initially underlying the option each month thereafter until fully vested on the fourth anniversary of the vesting commencement date, subject to continued service to us through the applicable vesting date.
(2) Constitute shares acquired upon exercise of stock purchase rights that remain subject to repurchase at their original purchase price upon a termination of service. The repurchase right lapses in equal monthly installments through the fourth anniversary of the vesting commencement date, subject to continued service to us.
(3) Amounts are calculated by multiplying the number of shares shown in the table by $, the estimated fair market value of our common stock as of December 31, 2020.

Executive Compensation Arrangements

Below is a description of the material terms of each employment contract, agreement, plan or arrangement that provides for the employment of and payments to our NEOs (including such payments to be made at, following or in connection with the resignation, retirement or other termination of an NEO, or following a change in control).

Steven D. Harr, M.D.

In September 2018 we entered into an offer letter with Steven D. Harr, M.D., providing for at-will employment, an annual base salary, and eligibility to participate in our employee benefit plans. In addition, Dr. Harr is eligible to earn an annual cash bonus targeted at 50% of his base salary.

Under Dr. Harr's offer letter, upon a termination without cause or resignation for good reason, other than during the three months prior to a change in control and ending 12 months after the change in control, Dr. Harr is entitled to receive (i) 12 months of his base salary and target bonus and (ii) reimbursement for continued health, vision, and dental coverage through COBRA for a period of twelve months, subject Dr. Harr providing us a general release of claims. On the day of any such termination or resignation, we may enter into a consulting agreement with Dr. Harr for a period of twelve months that provides for (i) annual consulting fees equal to his annual base salary in effect at the time of the termination or resignation, (ii) continued vesting of equity awards held by him for a period of 12 months, and (iii) the right to exercise any vested stock options held by him for a period of 90 days following the term of the consulting agreement.

In the event Dr. Harr's employment with us is terminated by us without cause or he resigns for good reason during the period commencing 3 months prior to a change in control and ending 12 months after a change in control, Dr. Harr is entitled to receive (i) his base salary in effect at the time of termination for a period of 18 months and 1.5 times his target annual bonus, (ii) reimbursement for COBRA coverage for a period of 18 months and (iii) accelerated vesting of all equity awards held by him, subject to Dr. Harr providing a general release of claims against us.

If Dr. Harr is terminated due to his death, his estate or beneficiary shall be entitled to any unpaid bonus for a year prior to the year of termination and a pro rata annual bonus for the year of termination, in each case, to be paid as soon as administratively practicable following the date of such termination.

Richard Mulligan, Ph.D.

In April 2020, we entered into an offer letter with Richard Mulligan, Ph.D., providing for at-will employment, an annual base salary, and eligibility to participate in our employee benefit plans. In addition, Dr. Mulligan is eligible to earn an annual cash bonus targeted at 40% of his base salary.

Under Dr. Mulligan's offer letter, upon Dr. Mulligan's termination of employment by us for other than cause or his resignation for good reason, in each case outside of the period commencing 3 months prior to a change in control and ending 12 months after a change in control, he is entitled to receive (i) nine months of base salary and 75% of his target bonus and (ii) reimbursement for COBRA coverage for a period of nine months, subject to Dr. Mulligan providing a general release of claims against us.

Prior to his employment with us, Dr. Mulligan served as a consultant to us pursuant to a consulting agreement. Under the consulting agreement, Dr. Mulligan was paid a monthly retainer of $33,333 and was eligible for a discretionary fee of up to 40% of the retainer paid to him based on our board of director's assessment of his performance under the consulting agreement.

Christian Hordo

On November 9, 2018, we entered into an offer letter with Christian Hordo, providing for at-will employment, an annual base salary, and eligibility to participate in our employee benefit plans. In addition, Christian Hordo is eligible to earn an annual cash bonus targeted at 35% of his base salary.

Under Mr. Hordo's offer letter, upon Mr. Hordo's termination of employment by us for other than cause or his resignation for good reason, in each case outside of the period commencing 3 months prior to a change in control and ending 12 months after a change in control, he is entitled to receive (i) nine months of base salary and 75% of his target bonus and (ii) reimbursement for COBRA coverage for a period of nine months, subject to Mr. Hordo providing a general release of claims against us.

Change in Control Severance Plan

Each of Dr. Mulligan and Mr. Hordo are eligible to participate in our change in control severance plan. Under the change in control severance plan, in the event the executive's employment with us is terminated by us without cause or he resigns for good reason during the period commencing 3 months prior to a change in control and ending 12 months after a change in control, the executive is entitled to receive (i) his base salary in effect at the time of termination for a period of 12 months and 1 times his target annual bonus, (ii) reimbursement for COBRA coverage for a period of 12 months and (iii) accelerated vesting of all equity awards held by him, subject to the executive providing a general release of claims against us.

Director Compensation

2020 Director Compensation Program

Historically, our directors have not received compensation for their service. The following table contains information concerning the compensation of our non-employee and non-investor directors in 2020:

Name(1)	Fees Earned or Paid in Cash ($)	Stock Awards ($)(2)	Option Awards ($)(2)	All Other Compensation ($)	Total ($)

(1) Steven D. Harr, M.D., our President and Chief Executive Officer, and Richard Mulligan, Ph.D, our Executive Vice-Chairman and Head of SanaX, are not included in this table as they are employees of the company. All compensation paid to Drs. Harr and Mulligan for the period they served as directors during 2020 is reflected in the section titled "—Summary Compensation Table."

(2) The amounts shown represent the grant date fair values of option awards granted in 2020 as computed in accordance with FASB ASC Topic 718. See Note 13, Stock-based compensation to our condensed consolidated financial statements included elsewhere in this prospectus for a discussion of the assumptions used in the calculation of these.

We intend to approve and implement a compensation program for our non-employee directors that we expect will consist of annual retainer fees and long-term equity awards. Directors who are also full-time officers or employees of our company will receive no additional compensation for serving as directors.

Incentive Compensation Plans

The following summarizes the material terms of the 2021 Incentive Award Plan and the 2021 Employee Stock Purchase Plan, which will be the long-term incentive compensation plans in which our directors and named executive officers are eligible to participate following the consummation of this offering, the 2019 Restricted Stock Unit Plan, and the 2018 Equity Incentive Plan, under which we have previously made periodic grants of equity and equity-based awards to our directors and named executive officers.

2021 Incentive Award Plan

We intend to adopt the 2021 Plan, which will be effective on the date immediately prior to the date our registration statement relating to this offering becomes effective. The principal purpose of the 2021 Plan is to attract, retain and motivate selected employees, consultants and directors through the granting of stock-based compensation awards and cash-based performance bonus awards. The material terms of the 2021 Plan, as it is currently contemplated, are summarized below.

Share Reserve. Under the 2021 Plan, shares of our common stock will be initially reserved for issuance pursuant to a variety of stock-based compensation awards, including stock options, stock appreciation rights, or SARs, restricted stock awards, restricted stock unit awards, performance bonus awards, performance stock unit awards, dividend equivalents, or other stock or cash based awards. The number of shares initially reserved for issuance or transfer pursuant to awards under the 2021 Plan will be increased by (i) the number of shares represented by awards outstanding under our 2018 Plan, or 2018 Plan Awards, that become available for issuance under the counting provisions described below following the effective date and (ii) an annual increase on the first day of each fiscal year beginning in 2022 and ending in 2031, equal to the lesser of (A) % of the shares of stock outstanding (on an as converted basis) on the last day of the immediately preceding fiscal year and (B) such smaller number of shares of stock as determined by our board of directors; provided, however, that no more than shares of stock may be issued upon the exercise of incentive stock options.

The following counting provisions will be in effect for the share reserve under the 2021 Plan:

- to the extent that an award (including a 2018 Plan Award) expires, lapses or is terminated, converted into an award in respect of shares of another entity in connection with a spin-off or other similar event, exchanged for cash, surrendered, repurchased, canceled, in any case, in a manner that results in us acquiring the underlying shares at a price not greater than the price paid by the participant or not issuing the underlying shares, such unused shares subject to the award at such time will be available for future grants under the 2021 Plan;
- to the extent shares are tendered or withheld to satisfy the grant, exercise price or tax withholding obligation with respect to any award under the 2021 Plan or 2018 Plan Award, such tendered or withheld shares will be available for future grants under the 2021 Plan;
- to the extent shares subject to stock appreciation rights are not issued in connection with the stock settlement of stock appreciation rights on exercise thereof, such shares will be available for future grants under the 2021 Plan;
- the payment of dividend equivalents in cash in conjunction with any outstanding awards or 2018 Plan Awards will not be counted against the shares available for issuance under the 2021 Plan; and
- shares issued in assumption of, or in substitution for, any outstanding awards of any entity acquired in any form of combination by us or any of our subsidiaries will not be counted against the shares available for issuance under the 2021 Plan.

In addition, the sum of the grant date fair value of all equity-based awards and the maximum that may become payable pursuant to a cash-based award to any individual for services as a non-employee director during any calendar year may not exceed $1,500,000 for the individual’s first year of service and $750,000 for each year thereafter.

Administration. The compensation committee of our board of directors is expected to administer the 2021 Plan unless our board of directors assumes authority for administration. The board of directors may delegate its powers to a committee, which, to the extent required to comply with Rule 16b-3, is intended to be comprised of "non-employee directors" for purposes of Rule 16b-3 under the Exchange Act. The 2021 Plan provides that the board or compensation committee may delegate its authority to grant awards other than to individuals subject to Section 16 of the Exchange Act or officers or directors to whom authority to grant awards has been delegated.

Subject to the terms and conditions of the 2021 Plan, the administrator has the authority to select the persons to whom awards are to be made, to determine the number of shares to be subject to awards and the terms and conditions of awards, and to make all other determinations and to take all other actions necessary or advisable for the administration of the 2021 Plan. The administrator is also authorized to adopt, amend or rescind rules relating to administration of the 2021 Plan. Our board of directors may at any time remove the compensation committee as the administrator and revest in itself the authority to administer the 2021 Plan. The full board of directors will administer the 2021 Plan with respect to awards to non-employee directors.

Eligibility. Awards under the 2021 Plan may be granted to individuals who are then our officers, employees or consultants or are the officers, employees or consultants of certain of our subsidiaries. Such awards also may be granted to our directors. However, only employees of our company or certain of our subsidiaries may be granted incentive stock options, or ISOs.

Awards. The 2021 Plan provides that the administrator may grant or issue stock options, SARs, restricted stock, restricted stock units, performance bonus awards, performance stock units, other stock- or cash-based awards and dividend equivalents, or any combination thereof. Each award will be set forth in a separate agreement with the person receiving the award and will indicate the type, terms and conditions of the award.

- *Nonstatutory Stock Options*, or NSOs, will provide for the right to purchase shares of our common stock at a specified price which may not be less than fair market value on the date of grant, and usually will become exercisable (at the discretion of the administrator) in one or more installments after the grant date, subject to the participant's continued employment or service with us and/or subject to the satisfaction of corporate performance targets and individual performance targets established by the administrator. NSOs may be granted for any term specified by the administrator that does not exceed ten years.
- *Incentive Stock Options*, or ISOs, will be designed in a manner intended to comply with the provisions of Section 422 of the Code and will be subject to specified restrictions contained in the Code. Among such restrictions, ISOs must have an exercise price of not less than the fair market value of a share of common stock on the date of grant, may only be granted to employees, and must not be exercisable after a period of ten years measured from the date of grant. In the case of an ISO granted to an individual who owns (or is deemed to own) at least 10% of the total combined voting power of all classes of our capital stock, the 2021 Plan provides that the exercise price must be at least 110% of the fair market value of a share of common stock on the date of grant and the ISO must not be exercisable after a period of five years measured from the date of grant.
- *Restricted Stock* may be granted to any eligible individual and made subject to such restrictions as may be determined by the administrator. Restricted stock, typically, may be forfeited for no consideration or repurchased by us at the original purchase price if the conditions or restrictions on vesting are not met. In general, restricted stock may not be sold or otherwise transferred until restrictions are removed or expire. Purchasers of restricted stock, unlike recipients of options, will have voting rights and will have the right to receive dividends, if any, prior to the time when the restrictions lapse, however, extraordinary dividends will generally be placed in escrow, and will not be released until restrictions are removed or expire.
- *Restricted Stock Units* may be awarded to any eligible individual, typically without payment of consideration, but subject to vesting conditions based on continued employment or service or on

performance criteria established by the administrator. Like restricted stock, restricted stock units may not be sold, or otherwise transferred or hypothecated, until vesting conditions are removed or expire. Unlike restricted stock, stock underlying restricted stock units will not be issued until the restricted stock units have vested, and recipients of restricted stock units generally will have no voting or dividend rights prior to the time when vesting conditions are satisfied.

- *Stock Appreciation Rights*, or SARs, may be granted in connection with stock options or other awards, or separately. SARs granted in connection with stock options or other awards typically will provide for payments to the holder based upon increases in the price of our common stock over a set exercise price. The exercise price of any SAR granted under the 2021 Plan must be at least 100% of the fair market value of a share of our common stock on the date of grant. SARs under the 2021 Plan will be settled in cash or shares of our common stock, or in a combination of both, at the election of the administrator.
- *Performance Bonus Awards and Performance Stock Units* are denominated in cash or shares/unit equivalents, respectively, and may be linked to one or more performance or other criteria as determined by the administrator.
- *Other Stock or Cash Based Awards* are awards of cash, fully vested shares of our common stock and other awards valued wholly or partially by referring to, or otherwise based on, shares of our common stock. Other stock or cash based awards may be granted to participants and may also be available as a payment form in the settlement of other awards, as standalone payments and as payment in lieu of base salary, bonus, fees or other cash compensation otherwise payable to any individual who is eligible to receive awards. The administrator will determine the terms and conditions of other stock or cash based awards, which may include vesting conditions based on continued service, performance and/or other conditions.
- *Dividend Equivalents* represent the right to receive the equivalent value of dividends paid on shares of our common stock and may be granted alone or in tandem with awards other than stock options or SARs. Dividend equivalents are converted to cash or shares by such formula and such time as determined by the administrator. In addition, dividend equivalents with respect to an awards subject to vesting will either (i) to the extent permitted by applicable law, not be paid or credited or (ii) be accumulated and subject to vesting to the same extent as the related award.

Any award may be granted as a performance award, meaning that the award will be subject to vesting and/or payment based on the attainment of specified performance goals.

Change in Control. In the event of a change in control, unless the administrator elects to terminate an award in exchange for cash, rights or other property, or cause an award to accelerate in full prior to the change in control, such award will continue in effect or be assumed or substituted by the acquirer, provided that any performance-based portion of the award will be subject to the terms and conditions of the applicable award agreement. In the event the acquirer refuses to assume or replace awards granted, prior to the consummation of such transaction, awards issued under the 2021 Plan (other than any portion subject to performance-based vesting) will be subject to accelerated vesting such that 100% of such awards will become vested and exercisable or payable, as applicable. The administrator may also make appropriate adjustments to awards under the 2021 Plan and is authorized to provide for the acceleration, cash-out, termination, assumption, substitution or conversion of such awards in the event of a change in control or certain other unusual or nonrecurring events or transactions.

Adjustments of Awards. The administrator has broad discretion to take action under the 2021 Plan, as well as make adjustments to the terms and conditions of existing and future awards, to prevent the dilution or enlargement of intended benefits and facilitate necessary or desirable changes in the event of certain transactions and events affecting our common stock, such as stock dividends, stock splits, mergers, acquisitions, consolidations and other corporate transactions. In addition, in the event of certain non-reciprocal transactions with our stockholders known as “equity restructurings,” the administrator will make equitable adjustments to the 2021 Plan and outstanding awards.

Amendment and Termination. The administrator may terminate, amend or modify the 2021 Plan at any time and from time to time. However, we must generally obtain stockholder approval to the extent required by applicable law, rule or regulation (including any applicable stock exchange rule), and generally no amendment may materially and adversely affect any outstanding award without the affected participant's consent. Notwithstanding the foregoing, an option may be amended to reduce the per share exercise price below the per share exercise price of such option on the grant date and options may be granted in exchange for, or in connection with, the cancellation or surrender of options having a higher per share exercise price without receiving additional stockholder approval.

No incentive stock options may be granted pursuant to the 2021 Plan after the tenth anniversary of the effective date of the 2021 Plan, and no additional annual share increases to the 2021 Plan's aggregate share limit will occur from and after such anniversary. Any award that is outstanding on the termination date of the 2021 Plan will remain in force according to the terms of the 2021 Plan and the applicable award agreement.

2021 Employee Stock Purchase Plan

We intend to adopt the 2021 Employee Stock Purchase Plan, which we refer to as our ESPP, which will be effective on the date immediately prior to the date the registration statement relating to this offering becomes effective. The ESPP is designed to allow our eligible employees to purchase shares of our common stock, at periodic intervals, with their accumulated payroll deductions. The ESPP is intended to qualify under Section 423 of the Code. The material terms of the ESPP, as it is currently contemplated, are summarized below.

Administration. Subject to the terms and conditions of the ESPP, our compensation committee will administer the ESPP. Our compensation committee can delegate administrative tasks under the ESPP to the services of an agent and/or employees to assist in the administration of the ESPP. The administrator will have the discretionary authority to administer and interpret the ESPP. Interpretations and constructions of the administrator of any provision of the ESPP or of any rights thereunder will be conclusive and binding on all persons. We will bear all expenses and liabilities incurred by the ESPP administrator.

Share Reserve. The maximum number of our shares of our common stock which will be authorized for sale under the ESPP is equal to the sum of (i) shares of common stock and (ii) an annual increase on the first day of each year beginning in 2021 and ending in 2030, equal to the lesser of (A) % of the shares of common stock outstanding (on an as converted basis) on the last day of the immediately preceding fiscal year and (B) such number of shares of common stock as determined by our board of directors; provided, however, no more than shares of our common stock may be issued under the ESPP. The shares reserved for issuance under the ESPP may be authorized but unissued shares or reacquired shares.

Eligibility. Employees eligible to participate in the ESPP for a given offering period generally include employees who are employed by us or one of our subsidiaries on the first day of the offering period, or the enrollment date. Our employees (and, if applicable, any employees of our subsidiaries) who customarily work less than five months in a calendar year or are customarily scheduled to work less than 20 hours per week will not be eligible to participate in the ESPP. Finally, an employee who owns (or is deemed to own through attribution) 5% or more of the combined voting power or value of all our classes of stock or of one of our subsidiaries will not be allowed to participate in the ESPP.

Participation. Employees will enroll under the ESPP by completing a payroll deduction form permitting the deduction from their compensation of at least 1% of their compensation but not more than % of their compensation. Such payroll deductions may be expressed as either a whole number percentage or a fixed dollar amount, and the accumulated deductions will be applied to the purchase of shares on each purchase date. However, a participant may not purchase more than shares in each offering period and may not accrue the right to purchase shares of common stock at a rate that exceeds $25,000 in fair market value of shares of our

common stock (determined at the time the option is granted) for each calendar year the option is outstanding (as determined in accordance with Section 423 of the Code). The ESPP administrator has the authority to change these limitations for any subsequent offering period.

Offering. Under the ESPP, participants are offered the option to purchase shares of our common stock at a discount during a series of successive offering periods, the duration and timing of which will be determined by the ESPP administrator. However, in no event may an offering period be longer than 27 months in length.

The option purchase price will be the lower of 85% of the closing trading price per share of our common stock on the first trading date of an offering period in which a participant is enrolled or 85% of the closing trading price per share on the purchase date, which will occur on the last trading day of each offering period.

Unless a participant has previously canceled his or her participation in the ESPP before the purchase date, the participant will be deemed to have exercised his or her option in full as of each purchase date. Upon exercise, the participant will purchase the number of whole shares that his or her accumulated payroll deductions will buy at the option purchase price, subject to the participation limitations listed above.

A participant may cancel his or her payroll deduction authorization at any time prior to the end of the offering period. Upon cancellation, the participant will have the option to either (i) receive a refund of the participant's account balance in cash without interest or (ii) exercise the participant's option for the current offering period for the maximum number of shares of common stock on the applicable purchase date, with the remaining account balance refunded in cash without interest. Following at least one payroll deduction, a participant may also decrease (but not increase) his or her payroll deduction authorization once during any offering period. If a participant wants to increase or decrease the rate of payroll withholding, he or she may do so effective for the next offering period by submitting a new form before the offering period for which such change is to be effective.

A participant may not assign, transfer, pledge or otherwise dispose of (other than by will or the laws of descent and distribution) payroll deductions credited to a participant's account or any rights to exercise an option or to receive shares of our common stock under the ESPP, and during a participant's lifetime, options in the ESPP shall be exercisable only by such participant. Any such attempt at assignment, transfer, pledge or other disposition will not be given effect.

Adjustments upon Changes in Recapitalization, Dissolution, Liquidation, Merger or Asset Sale. In the event of any increase or decrease in the number of issued shares of our common stock resulting from a stock split, reverse stock split, stock dividend, combination or reclassification of the common stock, or any other increase or decrease in the number of shares of common stock effected without receipt of consideration by us, we will proportionately adjust the aggregate number of shares of our common stock offered under the ESPP, the number and price of shares which any participant has elected to purchase under the ESPP and the maximum number of shares which a participant may elect to purchase in any single offering period. If there is a proposal to dissolve or liquidate us, then the ESPP will terminate immediately prior to the consummation of such proposed dissolution or liquidation, and any offering period then in progress will be shortened by setting a new purchase date to take place before the date of our dissolution or liquidation. We will notify each participant of such change in writing at least 10 business days prior to the new exercise date. If we undergo a merger with or into another corporation or sell all or substantially all of our assets, each outstanding option will be assumed or an equivalent option substituted by the successor corporation or the parent or subsidiary of the successor corporation. If the successor corporation refuses to assume the outstanding options or substitute equivalent options, then any offering period then in progress will be shortened by setting a new purchase date to take place before the date of our proposed sale or merger. We will notify each participant of such change in writing at least 10 business days prior to the new exercise date.

Amendment and Termination. Our board of directors may amend, suspend or terminate the ESPP at any time. However, the board of directors may not amend the ESPP without obtaining stockholder approval within 12 months before or after such amendment to the extent required by applicable laws.

2019 Restricted Stock Unit Plan

General. In March 2019, in connection with the acquisition of Cobalt Biomedicine Inc. (Cobalt), we adopted a restricted stock unit plan (RSU Plan) under which we granted restricted stock units to certain employees and consultants. The RSU Plan provides for up to 1,397,018 shares of common stock to be awarded. As of September 30, 2020, there were 1,302,718 restricted stock units outstanding under the RSU Plan. Each restricted stock unit represents the right to receive a share of our common stock upon vesting. No additional awards may be granted under the RSU Plan.

2018 Equity Incentive Plan

General. Our board of directors adopted, and our stockholders approved our 2018 Equity Incentive Plan (2018 Plan) in October 2018. We have subsequently amended our 2018 Plan in February 2019 and November 2020, the purpose of which was to increase the number of shares available for issuance under our 2018 Plan. Our stockholders approved the amendment in February 2019 and November 2020, respectively. Our 2018 Plan will be terminated prior to the completion of this offering in connection with our adoption of our 2021 Plan; however, awards outstanding under our 2018 Plan continue in full effect in accordance with their existing terms.

Share Reserve. 64,599,641 shares of our common stock were reserved for issuance under our 2018 Plan. As of September 30, 2020, options to purchase 36,967,397 shares of common stock, at exercise prices ranging from $0.36 to $1.55 per share, or a weighted-average exercise price of $0.58 per share, and 2,679,687 shares of restricted common stock were outstanding under our 2018 Plan. Subsequent to September 30, 2020, we granted an additional 23,410,081 shares of common stock with a weighted average exercise price of $1.95 per share.

Administration. Our board of directors administers our 2018 Plan. Our board of directors has full authority and discretion to take any actions it deems necessary or advisable for the administration of our 2018 Plan. Our board of directors may modify, extend or renew outstanding option or may accept the cancellation of outstanding options (whether granted by us or another issuer) in return for the grant of new options for the same or a different number of shares and at the same or a different exercise price.

Types of Awards. Our 2018 Plan provides for the grant of incentive stock options and nonstatutory stock options to purchase shares of our common stock, restricted stock awards and other stock-based awards to employees, members of our board of directors and consultants. Incentive stock options may be granted only to employees.

Options. The exercise price of options granted under our 2018 Plan may not be less than 100% of the fair market value of our common stock on the grant date. Options expire at the time determined by the administrator, but in no event more than 10 years after they are granted, and generally expire earlier if the option holder’s service terminates.

Restricted Stock. Restricted stock awards may be granted under the 2018 Equity Incentive Plan. Restricted stock awards are grants of shares of our common stock that are subject to various restrictions, including restrictions on transferability and forfeiture provisions. Shares of restricted stock will vest, and the restrictions on such shares will lapse, in accordance with terms and conditions established by the administrator. Recipients of restricted stock awards will generally have rights equivalent to those of a stockholder with respect to such shares upon grant without regard to vesting.

Restricted Stock Units. Restricted stock units may be granted under the 2018 Plan. Restricted stock units are units representing an amount equal to the fair market value of one share of our common stock. The administrator

determines the terms and conditions of restricted stock units including the vesting criteria, which may include accomplishing specified performance criteria or continued service to us, and the form and timing of payment. Notwithstanding the foregoing, the administrator, in its sole discretion may accelerate the time at which any restrictions will lapse or be removed.

Change in Control. In the event of a change in control, the administrator may cause any outstanding awards to terminate in exchange for cash or other property with a value equal to the amount that could have been obtained upon the exercise of the vested portion of such award. If a change in control occurs and awards are not continued, converted, assumed or replaced with a substantially similar award, and provided that the participant is still an employee, consultant or director, then immediately prior to the change in control such awards shall become fully vested, exercisable and/or payable.

Transferability. A participant may not transfer stock awards under our 2018 Plan other than by will, the laws of descent and distribution, or as otherwise provided under our 2018 Plan.

Plan Amendment or Termination. Our board of directors has the authority to amend, suspend or terminate our 2018 Plan, provided that such action is approved by our stockholders to the extent stockholder approval is necessary. As described above, our 2018 Plan will terminate upon the effective date of our 2021 Plan.

CERTAIN RELATIONSHIPS AND RELATED-PARTY TRANSACTIONS

The following includes a summary of transactions since July 13, 2018 (our date of inception) and any currently proposed transactions, to which we were or are to be a participant, in which (i) the amount involved exceeded or will exceed $120,000; and (ii) any of our directors, executive officers or holders of more than 5% of our capital stock, or any affiliate or member of the immediate family of the foregoing persons, had or will have a direct or indirect material interest, other than compensation and other arrangements that are described under the section titled "Executive and Director Compensation" above.

We believe the terms obtained or consideration that we paid or received, as applicable, in connection with the transactions described below were comparable to terms available or the amounts that we would pay or receive, as applicable, in arm's-length transactions.

Common Stock Issuance

In July 2018 we entered into a stock subscription agreement pursuant to which we issued 117 shares of our common stock at a price of $0.0001 per share to ARCH Venture Fund IX, L.P. (ARCH IX). In July 2018, ARCH IX transferred 58 of such shares to ARCH Venture Fund IX Overage, L.P. (ARCH IX Overage). In August 2018, we effected a 10,000-for-1 forward stock split of our common stock, and as a result, ARCH IX owned 590,000 shares of our common stock and ARCH IX Overage owned 580,000 shares of our common stock. In September 2018 we entered into a stock subscription agreement pursuant to which we issued 235,000 shares of our common stock at a price of $0.0001 per share to F-Prime Capital Partners Healthcare Fund V LP (F-Prime Fund V).

The table below sets forth the number of shares of our common stock acquired by entities affiliated with ARCH Venture Partners, L.P., F-Prime Capital Partners, who are holders of more than 5% of our capital stock, and our directors and executive officers.

Name	Common Stock (#)
Entities affiliated with ARCH Venture Partners(1)	1,170,000
F-Prime Capital Partners Life Sciences Fund VI(2)	235,000
Steven D. Harr, M.D.(3)	27,300,000
Hans E. Bishop(4)	14,820,000
James J. MacDonald(5)	2,340,000
Nathan Hardy(6)	2,045,000
Donald Payan, M.D.(7)	1,170,000

(1) Robert Nelsen, a member of our board of directors, was designated to our board by ARCH Venture Partners. For further details, see the information provided in footnote (1) to the table in the section titled "Principal Stockholders."
(2) F-Prime Capital Partners Life Sciences Advisors Fund VI LP (F-Prime Advisors) is the general partner of F-Prime Fund VI. F-Prime Advisors is solely managed by Impresa Management LLC, the managing member of its general partner and its investment manager. Impresa Management LLC is owned, directly or indirectly, by various shareholders and employees of FMR LLC. Stephen Knight, M.D., a former member of our board of directors affiliated with these entities, resigned as a member of our board of directors in October 2020.
(3) Consists of (i) 24,570,000 shares of restricted common stock of which 13,820,625 had vested as of September 30, 2020 and (ii) 2,730,000 shares of common stock held by the Harr Family Irrevocable Trust of 2015 dtd 12/28/2015, of which 1,535,625 had vested as of September 30, 2020.
(4) Consits of 14,820,000 shares of restricted common stock of which 8,953,750 had vested as of September 30, 2020.
(5) Consists of 2,340,000 shares of restricted common stock of which 1,267,499 had vested as of September 30, 2020.
(6) Consists of 2,045,000 shares of restricted common stock of which 1,107,708 had vested as of September 30, 2020.
(7) Consists of 1,170,000 shares of restricted common stock of which 633,750 had vested as of September 30, 2020. Dr. Payan was a member of our Board and resigned in December 2020.

Convertible Preferred Stock Financings

Convertible Note Purchase Agreement

In September 2018, we entered into a convertible note purchase agreement for $2.5 million of which we drew down $0.8 million with ARCH IX and $0.3 million with F-Prime Fund V. The notes accrued interest at 6% per annum and automatically converted into our Series A-1 preferred stock financing upon closing.

Series A-1 Convertible Preferred Stock Financing

In October 2018, we entered into a Series A-1 convertible preferred stock purchase agreement with various investors, pursuant to which we issued an aggregate of 45,850,000 shares of our Series A-1 convertible preferred stock at a price per share of $1.00 for gross cash proceeds of $45.9 million, including the conversion of the $1.1 million convertible notes.

Series A-2 Convertible Preferred Stock Financing

In February 2019, we entered into a Series A-2 and Series B convertible preferred stock purchase agreement (Series A-2/B Purchase Agreement), with various investors, pursuant to which we issued an aggregate of 216,147,467 shares of Series A-2 convertible preferred stock at $1.00 per share for gross cash proceeds of $216.1 million.

In October 2019, we entered into an amendment to the Series A-2/B Purchase pursuant to which we issued an aggregate of 7,866,669 shares of Series A-2 convertible preferred stock at $1.00 per share for gross proceeds of $7.9 million.

The Series A-2/B Purchase Agreement also committed these investors to a Series B convertible preferred stock financing with the issuance of up to 110,227,706 shares of our Series B convertible preferred stock at a price of $4.00 per share contingent upon the occurrence of certain clinical milestones or the unanimous approval of the Company's board of directors. Additionally, in the event the clinical milestones were not achieved, the agreement stated at least two large Series B convertible preferred stock investors, defined as investors with at least a $29.0 million Series B convertible preferred stock investment, had the right to object to the board of directors' decision to call the Series B convertible preferred stock closing within seven days.

Concurrently with the Series A-2 convertible preferred stock financing, in February 2019 we acquired Cobalt Biomedicine, Inc. (Cobalt) and issued 145,766,384 shares of Series A-2 convertible preferred stock in consideration, valued at $136.0 million. Of the 145,766,384 shares of Series A-2 convertible preferred stock issued, 48,588,795 shares were restricted based on the achievement of a pre-specified development milestone, which was achieved in July 2019.

Series B Convertible Preferred Stock Financing

In June 2020, we issued an aggregate of 108,892,708 shares of Series B convertible preferred stock at $4.00 per share for gross proceeds of $435.6 million pursuant to the Series A-2/B Purchase Agreement.

The table below sets forth the number of shares of our Series A-1, Series A-2 and Series B convertible preferred stock purchased by our executive officers, directors, holders of more than 5% of our capital stock and their affiliated entities or immediate family members. Each share of Series A-1, Series A2 and Series B convertible preferred stock in the table below will convert into one share of our common stock upon the completion of this offering.

Name	Series A-1 Convertible Preferred Stock	Series A-2 Convertible Preferred Stock	Series B Convertible Preferred Stock	Aggregate Purchase Price (in thousands)
Entities affiliated with ARCH Venture Partners(1)	29,500,000	120,500,000	25,000,000	$ 250,000
Entities affiliated with Flagship Pioneering Funds(2)	—	136,956,075	—	—
CPP Investment Board PMI-1 Inc.	—	16,666,667	20,833,333	100,000
F-Prime Fund VI(3)	7,000,000	23,000,000	2,500,000	40,000
Steven D. Harr, M.D.	4,300,000	3,200,000	625,000	10,000
Hans E. Bishop	4,300,000	3,200,000	625,000	10,000
Geoffrey von Maltzahn, Ph.D.(2)	—	7,322,443	—	—
James J. MacDonald(4)	375,000	—	31,250	500

(1) Robert Nelsen, a member of our board of directors, was designated to our board by ARCH Venture Partners. For further details, see the information provided in footnote (1) to the table in the section titled “Principal Stockholders.”

(2) Series A-2 convertible preferred stock issued in connection with the acquisition of Cobalt. Douglas Cole, M.D. and Geoffrey von Maltzahn, Ph.D., members of our board of directors, were designated to our board by the Flagship Pioneering Funds.

(3) F-Prime Advisors is the general partner of F-Prime Fund VI. F-Prime Advisors is solely managed by Impresa Management LLC, the managing member of its general partner and its investment manager. Impresa Management LLC is owned, directly or indirectly, by various shareholders and employees of FMR LLC. Stephen Knight, M.D., a former member of our board of directors affiliated with these entities, resigned in October 2020.

(4) The 31,250 shares of Series B convertible preferred stock are held by the The James J. MacDonald and Rena Chng Trust, dated January 15, 2010, which are deemed beneficially owned by Mr. MacDonald.

Investors’ Rights, Management Rights, Voting and Co-Sale Agreements

In connection with our convertible preferred stock financings, we entered into investors’ rights, management rights, voting and right of first refusal and co-sale agreements containing registration rights, information rights, rights of first offer, voting rights and rights of first refusal, among other things, with certain holders of our capital stock. The holders of more than 5% of our capital stock that are party to these agreements are entities affiliated with ARCH Venture Partners, CPP Investment Board PM1-Inc., and F-Prime Fund VI. In connection with our acquisition of Cobalt, former stockholders of Cobalt, including certain affiliates of the Flagship Pioneering Funds, became parties to the investors’ rights, voting and right of first refusal and co-sale agreements.

These stockholder agreements will terminate upon the closing of this offering, except for the registration rights granted under our investors’ rights agreement, which will terminate upon the earliest of (i) the closing of a deemed liquidation event, as defined in our amended and restated certificate of incorporation as currently in effect; (ii) with respect to each stockholder, the date when such stockholder can sell all of its registrable shares without limitation during a three-month period without registration pursuant to Rule 144 of the Securities Act, or Rule 144, or another similar exemption under the Securities Act; and (iii) five years after the completion of this offering. For a description of the registration rights, see the section titled “Description of Capital Stock—Registration Rights.”

Relationship with Richard Mulligan, Ph.D.

In December 2018, Dr. Mulligan became a member of our board of directors and we entered into a consulting agreement pursuant to which Dr. Mulligan provided general advisory services to us in exchange for an annual fee of $400,000, paid monthly and was eligible to receive a bonus of $160,000 paid annually.

Dr. Mulligan received 11,992,485 restricted shares of common stock, vesting 25% at the one-year anniversary and monthly thereafter, subject to Dr. Mulligan remaining a service provider. Additionally, we issued a promissory note to Dr. Mulligan, for a principal amount of $0.3 million, with an interest rate of 3.0% per annum. In April 2020, Dr. Mulligan became an employee and his consulting relationship ended. In November 2020, the promissory note and accrued interest of $0.3 million was forgiven by the board of directors and the promissory note was exinguished. For further description of Dr. Mulligan's compensation, see the subsection titled "Executive and Director Compensation—Executive Compensation Arrangements."

Other Transactions

We have entered into offer letter agreements with our executive officers that, among other things, provide for certain compensatory and change in control benefits, as well as severance benefits. For a description of these agreements with our named executive officers, see the subsection titled "Executive and Director Compensation—Executive Compensation Arrangements."

We have also granted stock options and restricted stock to our executive officers and certain of our directors. For a description of these equity awards, see the subsection titled "Executive and Director Compensation—Equity Compensation."

Director and Officer Indemnification

We have entered into indemnification agreements with certain of our current directors and executive officers, and intend to enter into new indemnification agreements with each of our current directors and executive officers before the completion of this offering.

Our amended and restated certificate of incorporation also provides that, to the fullest extent permitted by law, we will indemnify any officer or director of our company against all damages, claims, and liabilities arising out of the fact that the person is or was our director or officer, or served any other enterprise at our request as a director or officer. Amending this provision will not reduce our indemnification obligations relating to actions taken before an amendment.

Related Person Transaction Policy

We have a written related-person transaction policy, to be effective upon the closing of this offering, that applies to our executive officers, directors, director nominees, holders of more than five percent of any class of our voting securities, and any member of the immediate family of, and any entity affiliated with, any of the foregoing persons. Such persons will not be permitted to enter into a related person transaction with us without the prior consent of our audit committee, or other independent members of our board of directors in the event it is inappropriate for our audit committee to review such transaction due to a conflict of interest. Any request for us to enter into a transaction with an executive officer, director, director nominee, principal stockholder, or any of their immediate family members or affiliates, in which the amount involved exceeds $120,000 must first be presented to our audit committee for review, consideration, and approval. In approving or rejecting any such proposal, our audit committee will consider the relevant facts and circumstances available and deemed relevant to our audit committee, including, but not limited to, the commercial reasonableness of the terms of the transaction and the materiality and character of the related person's direct or indirect interest in the transaction. All of the transactions described in this section occurred prior to the adoption of this policy.

PRINCIPAL STOCKHOLDERS

The following table sets forth information regarding beneficial ownership of our common stock as of December 11, 2020 by:

- each person whom we know to beneficially own more than 5% of our common stock;
- each of our directors;
- each of our named executive officers; and
- all directors and executive officers as a group.

In accordance with the rules of the SEC, beneficial ownership includes voting or investment power with respect to securities and includes the shares issuable pursuant to stock options that are exercisable within 60 days of December 11, 2020. Shares issuable pursuant to stock options are deemed outstanding for computing the percentage of the person holding such options but are not outstanding for computing the percentage of any other person.

We have based our calculation of the percentage of beneficial ownership prior to this offering on 641,522,004 shares of our common stock outstanding and held of record by approximately 140 stockholders as of December 11, 2020, which gives effect to (i) the filing and effectiveness of our amended and restated certificate of incorporation; and (ii) the conversion of shares of all outstanding convertible preferred stock into shares of our common stock, as if such filing and effectiveness and conversion had taken place as of December 11, 2020. We have based our calculation of the percentage of beneficial ownership after this offering on shares of our common stock outstanding as of December 11, 2020, which gives effect to the adjustments described in the prior sentence and further reflects the issuance of shares of common stock in this offering, assuming that the underwriters will not exercise their over-allotment option to purchase up to an additional shares of our common stock.

Unless otherwise indicated, the address for each listed stockholder is: c/o Sana Biotechnology, Inc., 188 East Blaine Street, Suite 400, Seattle, Washington 98102. To our knowledge, except as indicated in the footnotes to this table and pursuant to applicable community property laws, the persons named in the table have sole voting and investment power with respect to all shares of common stock.

Name of Beneficial Owner	Number of Shares Beneficially Owned (#)	Percentage of Shares Beneficially Owned	
		Before Offering (%)	After Offering (%)
Greater than 5% Owner:			
Entities affiliated with ARCH Venture Partners(1)	176,170,000	27.5%	
Entities affiliated with Flagship Pioneering Funds(2)	136,956,075	21.3%	
CPP Investment Board PMI-1 Inc.(3)	37,500,000	5.8%	
F-Prime Fund VI(4)	32,735,000	5.1%	
Named Executive Officers and Directors:			
Robert Nelsen(5)	176,170,000	27.5%	
Steven D. Harr, M.D.(6)	35,425,000	5.5%	
Hans E. Bishop(7)	22,945,000	3.6%	
Richard Mulligan, Ph.D.(8)	11,992,485	1.9%	
Geoffrey von Maltzahn, Ph.D.(9)	7,322,443	1.1%	
Christian Hordo(10)	3,900,000	*	
Patrick Y. Yang, Ph.D.(11)	585,000	*	
Douglas Cole, M.D.	—	*	
Mary Agnes (Maggie) Wilderotter	—	*	
Michelle Seitz	—	*	
Joshua H. Bilenker, M.D.	—	*	
Alise S. Reicin, M.D.	—	*	
All executive officers and directors as a group (14 persons)	263,131,178	41.0%	

* Less than 1%.

(1) Consists of (i) 590,000 shares of common stock held by ARCH Venture Fund IX, L.P. (ARCH IX), (ii) 14,750,000 shares of common stock issuable upon the conversion of Series A-1 convertible preferred stock held by ARCH IX, (iii) 22,750,000 shares of common stock issuable upon the conversion of Series A-2 convertible preferred stock held by ARCH IX, (iv) 3,125,000 shares of common stock issuable upon the conversion of Series B convertible preferred stock held by ARCH IX, (v) 580,000 shares of common stock held by ARCH Venture Fund IX, Overage L.P. (ARCH IX Overage), (vi) 14,750,000 shares of common stock issuable upon the conversion of Series A-1 convertible preferred stock held by ARCH IX Overage, (vii) 22,750,000 shares of common stock issuable upon the conversion of Series A-2 convertible preferred stock held by ARCH IX Overage, and (viii) 3,125,000 of common stock issuable upon the conversion of Series B convertible preferred stock held by ARCH IX Overage, (ix) 37,500,000 shares of common stock issuable upon the conversion of Series A-2 convertible preferred stock held by ARCH Venture Fund X, L.P. (ARCH X), (x) 9,375,000 of common stock issuable upon the conversion of Series B convertible preferred stock held by ARCH X, (xi) 37,500,000 shares of common stock issuable upon the conversion of Series A-2 convertible preferred stock held by ARCH Venture Fund X Overage, L.P. (ARCH X Overage), and (xii) 9,375,000 of common stock issuable upon the conversion of Series B convertible preferred stock held by ARCH X Overage.ARCH Venture Partners IX, L.P. (AVP IX LP) is the sole general partner of ARCH IX. ARCH Venture Partners IX Overage, L.P. (AVP IX Overage LP) is the sole general partner of ARCH IX Overage. ARCH Venture Partners IX, LLC (AVP IX LLC) is the sole general partner of each of AVP IX LP and AVP IX Overage LP. Keith Crandell, Clinton Bybee, and Robert Nelsen are managing directors of AVP IX LLC (the AVP IX MDs). AVP IX LP and AVP IX Overage LP may be deemed to beneficially own the shares held by ARCH IX and ARCH IX Overage, respectively, AVP IX LLC may be deemed to beneficially own the shares held by ARCH IX and ARCH IX Overage, and each of the AVP IX MDs may be deemed to share the power to direct the disposition and vote of the shares held by ARCH IX and ARCH IX Overage. AVP IX LP, AVP IX Overage LP, AVP IX LLC, and the AVP IX MDs each disclaim beneficial ownership except to any pecuniary interest therein. ARCH Venture Partners X, L.P. (AVP X LP) is the sole general partner of ARCH X. ARCH Venture Partners X Overage, L.P. (AVP X Overage LP) is the sole general partner of ARCH X Overage. ARCH Venture Partners X, LLC (AVP X LLC) is the sole general partner of each of AVP X LP and AVP X Overage LP. Keith Crandell, and Robert Nelsen are managing directors of AVP X LLC (the AVP X MDs). AVP X LP and AVP X Overage LP may be deemed to beneficially own the shares held by ARCH X and ARCH X Overage, respectively, AVP X LLC may be deemed to beneficially own the shares held by ARCH X and ARCH X Overage, and each of the AVP X MDs may be deemed to share the power to direct the disposition and vote of the shares held by ARCH X and ARCH X Overage. AVP X LP, AVP X Overage LP, AVP X LLC, and the AVP X MDs each disclaim beneficial ownership except to any pecuniary interest therein.

(2) Consists of (a) 46,340,795 shares of common stock issuable upon conversion of Series A-2 convertible preferred stock held by Flagship Ventures Fund V, L.P. (Flagship Fund V), (b) 45,765,306 shares of common stock issuable upon conversion of Series A-2 convertible preferred stock held by Flagship VentureLabs V LLC (VentureLabs V), (c) 38,900,488 shares of common stock issuable upon conversion of Series A-2 convertible preferred stock held by Flagship Pioneering Fund VI, L.P. (Flagship Pioneering VI), and (d) 5,949,486 shares of common stock issuable upon conversion of Series A-2 convertible preferred stock held by Flagship V VentureLabs Rx Fund, L.P. (Flagship Fund V Rx and, together with Flagship Pioneering VI, Flagship Fund V and VentureLabs V, the Flagship Pioneering Funds). Flagship Fund V is a member of VentureLabs V. VentureLabs V Manager LLC (VentureLabs V Manager) is the manager of VentureLabs V. Flagship Pioneering, Inc. (Flagship Pioneering) is the manager of VentureLabs V Manager. The General Partner of Flagship Pioneering VI is Flagship Pioneering Fund VI General Partner LLC (Flagship Pioneering VI GP). The manager of Flagship Pioneering VI GP is Flagship Pioneering. The General Partner of Flagship Fund V and Flagship Fund V Rx is Flagship Ventures Fund V General Partner LLC (Flagship V GP and, together with VentureLabs V Manager, Flagship Pioneering, and Flagship Pioneering VI GP, the Flagship General Partners). Noubar B. Afeyan, Ph.D. is the sole Director of Flagship Pioneering and may be deemed to have sole voting and investment control over all the shares held by VentureLabs V and Flagship Fund VI. In addition, Noubar B. Afeyan, Ph.D. serves as the sole manager of Flagship V GP and may be deemed to possess sole voting and investment control over all the shares held by Flagship Fund V and Flagship Fund V Rx. None of the Flagship General Partners nor Noubar B. Afeyan, Ph.D. directly own any of the shares held by the Flagship Pioneering Funds, and each of the Flagship General Partners and Dr. Noubar Afeyan, Ph.D. disclaims beneficial ownership of such shares except to the extent of its or his pecuniary interest therein. The mailing address of the Flagship Funds is 55 Cambridge Parkway, Suite 800E, Cambridge, MA 02142.

(3) Consists of (i) 16,666,667 shares of common stock issuable upon the conversion of Series A-2 convertible preferred stock, and (ii) 20,833,333 shares of common stock issuable upon the conversion of Series B convertible preferred stock. CPP Investment Board PMI-1 Inc. (CPPIB) is a wholly owned subsidiary of Canada Pension Plan Investment Board. Canada Pension Plan Investment Board is overseen by a board of directors. None of the directors of that board of directors has sole voting or dispositive power with respect to the shares of the common stock owned by CPPIB. The mailing address of each of CPPIB and Canada Pension Plan Investment Board is c/o Canada Pension Plan Investment Board, One Queen Street East, Suite 2500, Toronto, ON, M5C 2W5.

(4) Consists of (i) 7,000,000 shares of common stock issuable upon the conversion of Series A-1 convertible preferred stock, (i) 23,000,000 shares of common stock issuable upon the conversion of Series A-2 convertible preferred stock, and (ii) 2,500,000 shares of common stock issuable upon the conversion of Series B convertible preferred stock, and (iv) 235,000 shares of common stock. The portion of shares beneficially owned by F-Prime Fund VI in excess of 4.99% of our total outstanding voting securities are subject to a voting limitation, which does not permit F-Prime Fund VI or its related parties to vote on certain matters with respect to the shares in excess of the beneficial ownership limitation. F-Prime Advisors is the general partner of F-Prime Fund VI. F-Prime Advisors is solely managed by Impresa Management LLC, the managing member of its general partner and its investment manager. Impresa Management LLC is owned, directly or indirectly, by various shareholders and employees of FMR LLC. Stephen Knight, M.D., a former member of our

board of directors affiliated with these entities, resigned as a member of our board of directors in October 2020. The mailing address of F-Prime is 245 Summer Street, Boston, Massachusetts 02210.

(5) Mr. Nelsen is a managing director of AVP IX LLC and AVP and may be deemed to beneficially own the shares held by ARCH, ARCH IX, ARCH IX Overage, ARCH X, and ARCH X Overage as discussed in footnote (1). Mr. Nelsen disclaims beneficial ownership of such shares except to the extent of his pecuniary interest therein, if any.

(6) Consists of (i) 4,300,000 shares of common stock issuable upon the conversion of Series A-1 convertible preferred stock, (ii) 3,200,000 shares of common stock issuable upon the conversion of Series A-2 convertible preferred stock, (iii) 625,000 shares of restricted common stock issuable upon the conversion of Series B convertible preferred stock; (iv) 24,570,000 shares of common stock of which 15,164,296 had vested as of December 11, 2020, and which remaining unvested portion remains subject to repurchase. (v) 2,730,000 shares of restricted common stock held by the Harr Family Irrevocable Trust of 2015 dtd 12/28/2015, of which 1,684,921 had vested as of December 11, 2020 and which remaining unvested portion remains subject to repurchase.

(7) Consists of (i) 4,300,000 shares of common stock issuable upon the conversion of Series A-1 convertible preferred stock, (ii) 3,200,000 shares of common stock issuable upon the conversion of Series A-2 convertible preferred stock, (iii) 625,000 shares of common stock issuable upon the conversion of Series B convertible preferred stock; (iv) 14,820,000 shares of restricted common stock of which 9,880,000 had vested as of December 11, 2020 and which remaining unvested portion remains subject to repurchase.

(8) Consists of 11,992,485 shares of restricted common stock of which 5,996,242 had vested as of December 11, 2020 and which remaining unvested portion remains subject to repurchase.

(9) Consists of (i) 7,322,443 shares of common stock issuable upon the conversion of Series A-2 convertible preferred stock.

(10) Consists of 3,900,000 shares of restricted common stock of which 1,950,000 had vested as of December 11, 2020 and which remaining unvested portion remains subject to repurchase.

(11) Consists of 585,000 shares of restricted common stock of which 341,250 had vested as of December 11, 2020 and which remaining unvested portion remains subject to repurchase.

DESCRIPTION OF CAPITAL STOCK

The following summary describes our capital stock and the material provisions of our amended and restated certificate of incorporation and our amended and restated bylaws, which will become effective immediately prior to the completion of this offering, the amended and restated investors' rights agreement to which we and certain of our stockholders are parties and of the Delaware General Corporation Law. Because the following is only a summary, it does not contain all of the information that may be important to you. For a complete description, you should refer to our amended and restated certificate of incorporation, amended and restated bylaws and amended and restated investors' rights agreement, copies of which have been filed as exhibits to the registration statement of which this prospectus is part.

General

Upon the completion of this offering and the filing of our amended and restated certificate of incorporation, our authorized capital stock will consist of shares of common stock, par value $0.0001 per share, and shares of preferred stock, par value $0.0001 per share.

Common Stock

Outstanding Shares

As of September 30, 2020, we had 641,259,249 shares of common stock outstanding, held of record by 134 stockholders, assuming the automatic conversion of all of our outstanding shares of convertible preferred stock into 536,450,939 shares of common stock immediately prior to the completion of this offering.

Voting Rights

Each holder of common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors. Our stockholders do not have cumulative voting rights in the election of directors. Accordingly, holders of a majority of the voting shares are able to elect all of the directors. In addition, the affirmative vote of holders of 66 2/3% of the voting power of all of the then outstanding voting stock will be required to take certain actions, including amending certain provisions of our amended and restated certificate of incorporation, including the provisions relating to amending our amended and restated bylaws, the classified board and director liability.

Dividends

Subject to preferences that may be applicable to any then outstanding preferred stock, holders of our common stock are entitled to receive dividends as may be declared from time to time by our board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities, subject to the satisfaction of any liquidation preference granted to the holders of any then outstanding shares of preferred stock.

Rights, Preferences, and Privileges

Holders of our common stock have no preemptive, conversion or subscription rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of our preferred stock that we may designate and issue in the future.

Fully Paid and Nonassessable

All of our outstanding shares of common stock are, and the shares of common stock to be issued in this offering will be, fully paid and nonassessable.

Preferred Stock

Upon the completion of this offering, all of our currently outstanding shares of convertible preferred stock will convert into common stock and we will not have any shares of preferred stock outstanding. Immediately prior to the completion of this offering, our amended and restated certificate of incorporation will be amended and restated to delete all references to such shares of convertible preferred stock. From and after the consummation of this offering, our board of directors will have the authority, without further action by our stockholders, to issue up to shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting, or the designation of, such series, any or all of which may be greater than the rights of our common stock. The issuance of our preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon our liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change in control of our company or other corporate action. Immediately after consummation of this offering, no shares of preferred stock will be outstanding, and we have no present plan to issue any shares of preferred stock.

Stock Options

As of September 30, 2020, we had outstanding options to purchase an aggregate of 38,709,333 shares of our common stock, with a weighted-average exercise price of $0.58 per share. Subsequent to September 30, 2020, we granted an additional 23,410,081 shares of common stock with a weighted-average exercise price of $1.95 per share. For additional information regarding terms of our equity incentive plans, see the section titled “Executive and Director Compensation—Equity Incentive Plans.”

Registration Rights

Upon the completion of this offering and subject to the lock-up agreements entered into in connection with this offering and federal securities laws, certain holders of shares of our common stock, including those shares of our common stock that will be issued upon the conversion of our convertible preferred stock in connection with this offering, will initially be entitled to certain rights with respect to registration of such shares under the Securities Act. These shares are referred to as registrable securities. The holders of these registrable securities possess registration rights pursuant to the terms of our amended and restated investors’ rights agreement and are described in additional detail below. The registration of shares of our common stock pursuant to the exercise of the registration rights described below would enable the holders to trade these shares without restriction under the Securities Act when the applicable registration statement is declared effective. We will pay the registration expenses, other than underwriting discounts, selling commissions and stock transfer taxes, of the shares registered pursuant to the demand, piggyback and Form S-3 registrations described below.

Generally, in an underwritten offering, the managing underwriter, if any, has the right, subject to specified conditions and limitations, to limit the number of shares the holders may include. The demand, piggyback and Form S-3 registration rights described below will terminate upon the earliest of (i) with respect to each stockholder, such date, on or after the closing of this offering, on which all registrable shares held by such stockholder may immediately be sold during any 90-day period pursuant to Rule 144 of the Securities Act, or Rule 144; and (ii) the occurrence of a deemed liquidation event, as defined in our amended and restated certificate of incorporation, as currently in effect.

Demand Registration Rights

Upon the completion of this offering, holders of approximately 536.5 million shares of our common stock issuable upon conversion of outstanding convertible preferred stock will be entitled to certain demand registration rights. Beginning 180 days following the effectiveness of the registration statement of which this prospectus is a part, certain major investors holding, collectively, holding at least 40% of registrable securities may, on not more than two occasions, request that we register all or a portion of their shares, subject to certain specified exceptions. If any of these holders exercises its demand registration rights, then holders of approximately 536.5 million shares of our common stock issuable upon the shares of our convertible preferred stock in connection with this offering will be entitled to register their shares, subject to specified conditions and limitations in the corresponding offering.

Piggyback Registration Rights

In connection with this offering, holders of approximately 536.5 million shares of our common stock issuable upon conversion of outstanding convertible preferred stock are entitled to their rights to notice of this offering and to include their shares of registrable securities in this offering. The requisite percentage of these stockholders are expected to waive all such stockholders' rights to notice of this offering and to include their shares of registrable securities in this offering. In the event that we propose to register any of our securities under the Securities Act in another offering, either for our own account or for the account of other security holders, the holders of registrable securities will be entitled to certain "piggyback" registration rights allowing them to include their shares in such registration, subject to specified conditions and limitations.

S-3 Registration Rights

Upon the completion of this offering, the holders of approximately 536.5 million shares of our common stock issuable upon conversion of outstanding convertible preferred stock will initially be entitled to certain Form S-3 registration rights. Certain major investors holding at least 25% of registrable securities may, on not more than two registrations on Form S-3 within any 12-month period, request that we register all or a portion of their shares on Form S-3 if we are qualified to file a registration statement on Form S-3, subject to specified exceptions. Such request for registration on Form S-3 must cover securities with an aggregate offering price which equals or exceeds $15.0 million, net of selling expenses. The right to have such shares registered on Form S-3 is further subject to other specified conditions and limitations.

Election and Removal of Directors; Vacancies

Our board of directors will consist of between five and fifteen directors. The exact number of directors will be fixed from time to time by resolution of the board. Directors will be elected by a plurality of the votes of the shares of our capital stock present in person or represented by proxy at the meeting and entitled to vote on the election of directors.

No director may be removed except for cause, and directors may be removed for cause only by an affirmative vote of shares representing not less than a majority of the shares then entitled to vote at an election of directors.

Any vacancy occurring on the board of directors and any newly created directorship may be filled only by a majority of the remaining directors in office.

Staggered Board

Upon the closing of this offering, our board of directors will be divided into three classes serving staggered three-year terms. Class I, Class II, and Class III directors will serve until our annual meetings of stockholders in

2022, 2023, and 2024, respectively. At each annual meeting of stockholders, directors will be elected to succeed the class of directors whose terms have expired. This classification of our board of directors could have the effect of increasing the length of time necessary to change the composition of a majority of the board of directors. In general, at least two annual meetings of stockholders will typically be necessary for stockholders to effect a change in a majority of the members of the board of directors.

Limitation on Action by Written Consent

Our amended and restated certificate of incorporation and our amended and restated bylaws provide that holders of our common stock will not be able to act by written consent without a meeting.

Stockholder Meetings

Our amended and restated certificate of incorporation and our amended and restated bylaws provide that special meetings of our stockholders may be called only by a the chairman of the board, our chief executive officer (or president, in the absence of a chief executive officer) or a majority of the directors. Our amended and restated certificate of incorporation and our amended and restated bylaws specifically deny any power of any other person to call a special meeting.

Amendment of Certificate of Incorporation

The provisions of our amended and restated certificate of incorporation described under "—Election and Removal of Directors; Vacancies," "—Stockholder Meetings," "—Limitation on Action by Written Consent," "—Limitation of Liability of Directors and Officers," "—Common Stock—Voting Rights," and "—Forum Selection" and provisions relating to amendments to our amended and restated certificate of incorporation may be amended only by the affirmative vote of holders of at least 66 2/3% of the voting power of our outstanding shares of voting stock. The affirmative vote of holders of at least a majority of the voting power of our outstanding shares of stock will generally be required to amend other provisions of our amended and restated certificate of incorporation.

Amendment of Bylaws

Certain provisions of our amended and restated bylaws may generally be altered, amended, or repealed, and new bylaws may be adopted, with the affirmative vote of a majority of directors present at any regular or special meeting of the board of directors called for that purpose, provided that any alteration, amendment, or repeal of, or adoption of any bylaw inconsistent with specified provisions of the bylaws, including those related to special and annual meetings of stockholders, action of stockholders by written consent, nomination of directors, transfers of capital stock and dividends requires the affirmative vote of at least 66-2/3% of all directors in office at a meeting called for that purpose.

All other provisions of our amended and restated bylaws may generally be altered, amended, or repealed, and new bylaws may be adopted, with the affirmative vote of holders of 66-2/3% of the voting power of our outstanding shares of voting stock.

Other Limitations on Stockholder Actions

Our amended and restated bylaws impose some procedural requirements on stockholders who wish to:

- make nominations in the election of directors;
- propose that a director be removed;
- propose any repeal or change in our amended and restated bylaws; or
- propose any other business to be brought before an annual or special meeting of stockholders.

Under these procedural requirements, in order to bring a proposal before a meeting of stockholders, a stockholder must deliver timely notice of a proposal pertaining to a proper subject for presentation at the meeting to our corporate secretary along with the following:

- a description of the business or nomination to be brought before the meeting and the reasons for conducting such business at the meeting;
- the stockholder's name and address;
- any material interest of the stockholder in the proposal;
- the number of shares beneficially owned by the stockholder and evidence of such ownership; and
- the names and addresses of all persons with whom the stockholder is acting in concert and a description of all arrangements and understandings with those persons, and the number of shares such persons beneficially own.

To be timely, a stockholder must generally deliver notice:

- in connection with an annual meeting of stockholders, not less than 120 nor more than 150 days prior to the date on which the annual meeting of stockholders was held in the immediately preceding year, but in the event that the date of the annual meeting is more than 30 days before or more than 70 days after the anniversary date of the preceding annual meeting of stockholders, a stockholder notice will be timely if received by us not later than the close of business on the later of (i) not less than 70 nor more than 120 days prior to the date of the annual meeting and (ii) the 10th day following the day on which we first publicly announce the date of the annual meeting; or
- in connection with the election of a director at a special meeting of stockholders, during the period not less than 120 nor more than 150 days prior to the date of the special meeting, or the 10th day following the day on which a notice of the date of the special meeting was mailed to the stockholders or the public disclosure of that date was made.

In order to submit a nomination for our board of directors, a stockholder must also submit all information with respect to the nominee that would be required to be included in a proxy statement, as well as other information. If a stockholder fails to follow the required procedures, the stockholder's proposal or nominee will be ineligible and will not be voted on by our stockholders.

Limitation of Liability of Directors and Officers

Our amended and restated certificate of incorporation provides that no director will be personally liable to us or our stockholders for monetary damages for breach of fiduciary duty as a director, except as required by applicable law, as in effect from time to time. Section 102(b)(7) of the Delaware General Corporation Law permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability for:

- any breach of the director's duty of loyalty to our company or our stockholders;
- any act or omission not in good faith or which involved intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; and
- any transaction from which the director derived an improper personal benefit.

As a result, neither we nor our stockholders have the right, through stockholders' derivative suits on our behalf, to recover monetary damages against a director for breach of fiduciary duty as a director, including breaches resulting from grossly negligent behavior, except in the situations described above.

Our amended and restated certificate of incorporation also provides that, to the fullest extent permitted by law, we will indemnify any officer or director of our company against all damages, claims, and liabilities arising out of the fact that the person is or was our director or officer, or served any other enterprise at our request as a director or officer. Amending this provision will not reduce our indemnification obligations relating to actions taken before an amendment.

Forum Selection

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware will be the sole and exclusive forum for the following types of actions or proceedings under Delaware statutory or common law: (i) any derivative action or proceeding brought on behalf of us; (ii) any action asserting a claim of breach of fiduciary duty owed by any director, officer, or other employee of our company to us or our stockholders; (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law or our amended and restated certificate of incorporation and bylaws; or (iv) any action asserting a claim governed by the internal affairs doctrine. This provision would not apply to claims brought to enforce a duty or liability created by the Securities Exchange Act of 1934, as amended, or any other claim for which the federal courts have exclusive jurisdiction.

Furthermore, our amended and restated certificate of incorporation will also provide that unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act of 1933, as amended. Any person or entity purchasing or otherwise acquiring any interest in our shares of capital stock shall be deemed to have notice of and consented to the foregoing forum selection provisions.

Our exclusive forum provision will not relieve us of our duties to comply with the federal securities laws and the rules and regulations thereunder, and our stockholders will not be deemed to have waived our compliance with these laws, rules and regulations.

The enforceability of similar federal court choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that a court could find this type of provision to be inapplicable or unenforceable. If a court were to find either of the choice of forum provisions contained in our amended and restated certificate of incorporation or amended and restated bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions.

The choice of forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with the company or its directors, officers or other employees, which may discourage such lawsuits against the company and its directors, officers and other employees and result in increased costs for investors to bring a claim.

Delaware Business Combination Statute

We have elected to be subject to Section 203 of the Delaware General Corporation Law. Section 203 prevents an "interested stockholder," which is defined generally as a person owning 15% or more of a corporation's voting stock, or any affiliate or associate of that person, from engaging in a broad range of "business combinations" with the corporation for three years after becoming an interested stockholder unless:

- the board of directors of the corporation had previously approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, that person owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, other than statutorily excluded shares; or

- following the transaction in which that person became an interested stockholder, the business combination is approved by the board of directors of the corporation and holders of at least two-thirds of the outstanding voting stock not owned by the interested stockholder.

Under Section 203, the restrictions described above also do not apply to specific business combinations proposed by an interested stockholder following the announcement or notification of designated extraordinary transactions involving the corporation and a person who had not been an interested stockholder during the previous three years or who became an interested stockholder with the approval of a majority of the corporation's directors, if such extraordinary transaction is approved or not opposed by a majority of the directors who were directors prior to any person becoming an interested stockholder during the previous three years or were recommended for election or elected to succeed such directors by a majority of such directors.

Section 203 may make it more difficult for a person who would be an interested stockholder to effect various business combinations with a corporation for a three-year period. Section 203 also may have the effect of preventing changes in our management and could make it more difficult to accomplish transactions that our stockholders may otherwise deem to be in their best interests.

Washington Business Corporation Act

The laws of Washington, where our principal executive offices are located, impose restrictions on certain transactions between certain foreign corporations and significant stockholders. In particular, the Washington Business Corporation Act (WBCA), prohibits a "target corporation," with certain exceptions, from engaging in certain "significant business transactions" with a person or group of persons which beneficially owns 10% or more of the voting securities of the target corporation, an "acquiring person," for a period of five years after such acquisition, unless the transaction or acquisition of shares is approved by a majority of the members of the target corporation's board of directors prior to the time of acquisition. Such prohibited transactions may include, among other things:

- any merger or consolidation with, disposition of assets to, or issuance or redemption of stock to or from, the acquiring person;
- any termination of 5% or more of the employees of the target corporation as a result of the acquiring person's acquisition of 10% or more of the shares; and
- allowing the acquiring person to receive any disproportionate benefit as a stockholder.

After the five-year period, a significant business transaction may take place as long as it complies with certain fair price provisions of the statute or is approved at an annual or special meeting of stockholders.

We will be considered a "target corporation" so long as our principal executive office is located in Washington, and: (i) a majority of our employees are residents of the state of Washington or we employ more than one thousand residents of the state of Washington; (ii) a majority of our tangible assets, measured by market value, are located in the state of Washington or we have more than $50.0 million worth of tangible assets located in the state of Washington; and (iii) any one of the following: (a) more than 10% of our stockholders of record are resident in the state of Washington; (b) more than 10% of our shares are owned of record by state residents; or (c) 1,000 or more of our stockholders of record are resident in the state.

If we meet the definition of a target corporation, the WBCA may have the effect of delaying, deferring or preventing a change of control.

Anti-Takeover Effects of Some Provisions

Certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws could make the following more difficult:

- acquisition of control of us by means of a proxy contest, tender offer, or otherwise; or
- removal of our incumbent officers and directors.

These provisions, as well as our ability to issue preferred stock, are designed to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of increased protection give us the potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us, and that the benefits of this increased protection outweigh the disadvantages of discouraging those proposals, because negotiation of those proposals could result in an improvement of their terms.

Listing

We intend to apply to list our common stock on the Nasdaq Global Select Market under the symbol “SANA.”

Transfer Agent and Registrar

The transfer agent and registrar for the common stock will be . The transfer agent’s address is .

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES FOR NON-U.S. HOLDERS OF COMMON STOCK

The following discussion is a summary of the material U.S. federal income tax consequences to Non-U.S. Holders (as defined below) of the purchase, ownership, and disposition of our common stock issued pursuant to this offering, but does not purport to be a complete analysis of all potential tax effects. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local, or non-U.S. tax laws are not discussed. This discussion is based on the U.S. Internal Revenue Code of 1986, as amended (the Code), Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the U.S. Internal Revenue Service (the IRS), in each case in effect as of the date hereof.

These authorities may change or be subject to differing interpretations. Any such change or differing interpretation may be applied retroactively in a manner that could adversely affect a Non-U.S. Holder. We have not sought and will not seek any rulings from the IRS regarding the matters discussed below. There can be no assurance the IRS or a court will not take a contrary position to that discussed below regarding the tax consequences of the purchase, ownership, and disposition of our common stock.

This discussion is limited to Non-U.S. Holders that hold our common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a Non-U.S. Holder's particular circumstances, including the impact of the Medicare contribution tax on net investment income or the alternative minimum tax. In addition, it does not address consequences relevant to Non-U.S. Holders subject to special rules, including, without limitation:

- U.S. expatriates and former citizens or long-term residents of the United States;
- persons holding our common stock as part of a hedge, straddle, or other risk reduction strategy or as part of a conversion transaction or other integrated investment;
- banks, insurance companies, and other financial institutions;
- brokers, dealers, or traders in securities;
- "controlled foreign corporations," "passive foreign investment companies," and corporations that accumulate earnings to avoid U.S. federal income tax;
- partnerships or other entities or arrangements treated as partnerships for U.S. federal income tax purposes (and investors therein);
- tax-exempt organizations or governmental organizations;
- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- persons who hold or receive our common stock pursuant to the exercise of any employee stock option or otherwise as compensation;
- tax-qualified retirement plans; and
- "qualified foreign pension funds" as defined in Section 897(l)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds.

If an entity treated as a partnership for U.S. federal income tax purposes holds our common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership, and certain determinations made at the partner level. Accordingly, partnerships holding our common stock and the partners in such partnerships should consult their tax advisors regarding the U.S. federal income tax consequences to them.

THIS DISCUSSION IS NOT TAX ADVICE. INVESTORS SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES OF THE PURCHASE, OWNERSHIP, AND DISPOSITION OF OUR COMMON STOCK ARISING UNDER THE U.S. FEDERAL ESTATE OR GIFT TAX LAWS OR UNDER THE LAWS OF ANY STATE, LOCAL OR NON-U.S. TAXING JURISDICTION OR UNDER ANY APPLICABLE INCOME TAX TREATY.

Definition of Non-U.S. Holder

For purposes of this discussion, a "Non-U.S. Holder" is any beneficial owner of our common stock that is neither a "U.S. person" nor an entity treated as a partnership for U.S. federal income tax purposes. A U.S. person is any person that, for U.S. federal income tax purposes, is or is treated as any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation created or organized under the laws of the United States, any state thereof, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust that (i) is subject to the primary supervision of a U.S. court and all substantial decisions of which are subject to the control of one or more "United States persons" (within the meaning of Section 7701(a)(30) of the Code), or (ii) has a valid election in effect to be treated as a United States person for U.S. federal income tax purposes.

Distributions

As described in the section titled "Dividend Policy," we have never declared or paid cash dividends on our capital stock, and we do not anticipate paying any cash dividends in the foreseeable future. However, if we do make distributions of cash or property on our common stock, such distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Amounts not treated as dividends for U.S. federal income tax purposes will constitute returns of capital and first be applied against and reduce a Non-U.S. Holder's adjusted tax basis in its common stock, but not below zero. Any excess will be treated as capital gain and will be treated as described below under "—Sale or Other Taxable Disposition."

Subject to the discussion below regarding effectively connected income, dividends paid to a Non-U.S. Holder will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends (or such lower rate specified by an applicable income tax treaty, provided the Non-U.S. Holder furnishes a valid IRS Form W-8BEN or IRS Form W-8BEN-E (or other applicable documentation) certifying qualification for the lower treaty rate). A Non-U.S. Holder that does not timely furnish the required documentation, but that qualifies for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. Non-U.S. Holders should consult their tax advisors regarding their entitlement to benefits under any applicable tax treaties.

If dividends paid to a Non-U.S. Holder are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment in the United States to which such dividends are attributable), the Non-U.S. Holder will be exempt from the U.S. federal withholding tax described above. To claim the exemption, the Non-U.S. Holder must furnish to the applicable withholding agent a valid IRS Form W-8ECI, certifying that the dividends are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States. Any such effectively connected dividends will be subject to U.S. federal income tax on a net income basis at the regular rates applicable to United States persons. A Non-U.S. Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such

lower rate specified by an applicable income tax treaty) on such effectively connected dividends, as adjusted for certain items. Non-U.S. Holders should consult their tax advisors regarding any applicable tax treaties that may provide for different rules.

Sale or Other Taxable Disposition

Subject to the discussion below regarding backup withholding, a Non-U.S. Holder will not be subject to U.S. federal income tax on any gain realized upon the sale or other taxable disposition of our common stock unless:

- the gain is effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment in the United States to which such gain is attributable);
- the Non-U.S. Holder is a nonresident alien individual present in the United States for 183 days or more during the taxable year of the disposition and certain other requirements are met; or
- our common stock constitutes a U.S. real property interest (USRPI) by reason of our status as a U.S. real property holding corporation (USRPHC) for U.S. federal income tax purposes.

Gain described in the first bullet point above generally will be subject to U.S. federal income tax on a net income basis at the regular rates applicable to United States persons. A Non-U.S. Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected gain, as adjusted for certain items.

A Non-U.S. Holder described in the second bullet point above will be subject to U.S. federal income tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on gain realized upon the sale or other taxable disposition of our common stock, which may be offset by certain U.S.-source capital losses of the Non-U.S. Holder (even though the individual is not considered a resident of the United States), provided the Non-U.S. Holder has timely filed U.S. federal income tax returns with respect to such losses.

With respect to the third bullet point above, we believe we currently are not, and do not anticipate becoming, a USRPHC. Because the determination of whether we are a USRPHC depends, however, on the fair market value of our USRPIs relative to the fair market value of our non-U.S. real property interests and our other business assets, there can be no assurance that we currently are not a USRPHC or will not become one in the future. Even if we are or were to become a USRPHC, gain arising from the sale or other taxable disposition of our common stock by a Non-U.S. Holder will not be subject to U.S. federal income tax if our common stock is "regularly traded," as defined by applicable Treasury Regulations, on an established securities market, and such Non-U.S. Holder owned, actually and constructively, 5% or less of our common stock throughout the shorter of the five-year period ending on the date of the sale or other taxable disposition or the Non-U.S. Holder's holding period.

Non-U.S. Holders should consult their tax advisors regarding any applicable tax treaties that may provide for different rules.

Information Reporting and Backup Withholding

Payments of dividends on our common stock will not be subject to backup withholding, provided the Non-U.S. Holder certifies its non-U.S. status, such as by furnishing a valid IRS Form W-8BEN, W-8BEN-E, or W-8ECI, or otherwise establishes an exemption. However, information returns are required to be filed with the IRS in connection with any distributions on our common stock paid to the Non-U.S. Holder, regardless of whether any tax was actually withheld. In addition, proceeds of the sale or other taxable disposition of our common stock within the United States or conducted through certain U.S.-related brokers generally will not be

subject to backup withholding or information reporting if the applicable withholding agent receives the certification described above or the Non-U.S. Holder otherwise establishes an exemption. Proceeds of a disposition of our common stock conducted through a non-U.S. office of a non-U.S. broker that does not have certain enumerated relationships with the United States generally will not be subject to backup withholding or information reporting.

Copies of information returns that are filed with the IRS may also be made available under the provisions of an applicable treaty or agreement to the tax authorities of the country in which the Non-U.S. Holder resides or is established.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a Non-U.S. Holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Additional Withholding Tax on Payments Made to Foreign Accounts

Withholding taxes may be imposed under Sections 1471 to 1474 of the Code (such Sections commonly referred to as the Foreign Account Tax Compliance Act (FATCA)) on certain types of payments made to non-U.S. financial institutions and certain other non-U.S. entities. Specifically, a 30% withholding tax may be imposed on dividends on, or (subject to the proposed Treasury Regulations discussed below) gross proceeds from the sale or other disposition of, our common stock paid to a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code), unless (i) the foreign financial institution undertakes certain diligence and reporting obligations, (ii) the non-financial foreign entity either certifies it does not have any "substantial United States owners" (as defined in the Code) or furnishes identifying information regarding each substantial United States owner, or (iii) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in (i) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertakes to identify accounts held by certain "specified United States persons" or "United States owned foreign entities" (each as defined in the Code), annually reports certain information about such accounts, and withholds 30% on certain payments to non-compliant foreign financial institutions and certain other account holders. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules.

Under the applicable Treasury Regulations and administrative guidance, withholding under FATCA generally applies to payments of dividends on our common stock. While withholding under FATCA would have applied also to payments of gross proceeds from the sale or other disposition of stock on or after January 1, 2019, proposed Treasury Regulations eliminate FATCA withholding on payments of gross proceeds entirely. Taxpayers generally may rely on these proposed Treasury Regulations until final Treasury Regulations are issued.

Prospective investors should consult their tax advisors regarding the potential application of withholding under FATCA to their investment in our common stock.

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for our common stock. Future sales of substantial amounts of our common stock in the public market could adversely affect market prices prevailing from time to time. Furthermore, because only a limited number of shares will be available for sale shortly after this offering due to existing contractual and legal restrictions on resale as described below, there may be sales of substantial amounts of our common stock in the public market after the restrictions lapse. This may adversely affect the prevailing market price and our ability to raise equity capital in the future.

Based on the number of shares of our common stock outstanding as of September 30, 2020, upon completion of this offering, we will have shares of common stock outstanding, assuming no exercise of the underwriters' option to purchase additional shares and no exercise of any options after September 30, 2020. Of these shares, shares, or shares if the underwriters exercise their over-allotment option to purchase additional shares in full, sold in this offering will be freely transferable without restriction or registration under the Securities Act, except for any shares purchased by one of our existing "affiliates," as that term is defined in Rule 144 under the Securities Act. The remaining shares of common stock outstanding will bear "restricted shares" as defined in Rule 144. Restricted shares and the shares of common stock into which such securities are convertible may be sold in the public market only if registered or if they qualify for an exemption from registration under Rules 144 or 701 of the Securities Act, which rules are summarized below. As a result of the contractual lock-up period ending 180 days after the date of this prospectus described below and the provisions of Rules 144 and 701, these shares will be available for sale in the public market as follows:

Number of Shares	Date
	After 180 days from the date of this prospectus (subject, in some cases, to volume limitations)

Rule 144

In general, a person who has beneficially owned restricted shares of our common stock for at least six months would be entitled to sell such securities, provided that (i) such person is not deemed to have been one of our affiliates at the time of, or at any time during the 90 days preceding, a sale; and (ii) we are subject to the Exchange Act periodic reporting requirements for at least 90 days before the sale. Persons who have beneficially owned restricted shares of our common stock for at least six months but who are our affiliates at the time of, or any time during the 90 days preceding, a sale, would be subject to additional restrictions, by which such person would be entitled to sell within any three-month period only a number of securities that does not exceed the greater of either of the following:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately shares immediately after this offering, assuming no exercise of the underwriters' option to purchase additional shares; or
- the average weekly trading volume of shares of our common stock on the Nasdaq Global Select Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale;

provided, in each case, that we are subject to the Exchange Act periodic reporting requirements for at least 90 days before the sale. Such sales both by affiliates and by non-affiliates must also comply with the manner of sale, current public information, and notice provisions of Rule 144 to the extent applicable.

Rule 701

In general, under Rule 701 as currently in effect, any of our employees, directors, officers, consultants or advisors who acquired common stock from us in connection with a written compensatory stock or option plan or

other written agreement in compliance with Rule 701 before the effective date of the registration statement of which this prospectus is a part (to the extent such common stock is not subject to a lock-up agreement) and who are not our "affiliates" as defined in Rule 144 during the immediately preceding 90 days, is entitled to rely on Rule 701 to resell such shares beginning 90 days after the date of this prospectus in reliance on Rule 144, but without complying with the notice, manner of sale, public information requirements or volume limitation provisions of Rule 144. Persons who are our "affiliates" may resell those shares beginning 90 days after the date of this prospectus without compliance with minimum holding period requirements under Rule 144 (subject to the terms of the lock-up agreement referred to below, if applicable).

Lock-Up Agreements

In connection with this offering, we, our directors, our executive officers and holders of substantially all of our other outstanding shares of common stock or securities convertible into or exchangeable for shares of our common stock outstanding upon the completion of this offering, have entered into or will enter into lock-up agreements with the underwriters, subject to certain exceptions more fully described under the section titled "Underwriting," not to dispose of or hedge any of their common stock or securities convertible into or exchangeable for shares of common stock during the period from the date of this prospectus continuing through the date 180 days after the date of this prospectus, except with the prior consent of Morgan Stanley & Co. LLC, Goldman Sachs & Co. LLC, J.P. Morgan Securities LLC and BofA Securities, Inc. See the section titled "Underwriting" for additional information.

Registration Rights

Upon the completion of this offering, the holders of approximately 536.5 million shares of our common stock will be entitled to rights with respect to the registration of their shares under the Securities Act, subject to the lock-up agreements described under "—Lock-Up Agreements" above. Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act, except for shares purchased by affiliates, immediately upon the effectiveness of the registration statement of which this prospectus is a part. Any sales of securities by these stockholders could have a material adverse effect on the trading price of our common stock. The requisite percentage of these stockholders will waive all such stockholders' rights to notice of this offering and to include their shares of registrable securities in this offering. See the section titled "Description of Capital Stock—Registration Rights."

Equity Incentive Plans

We intend to file with the SEC a registration statement on Form S-8 under the Securities Act covering the shares of common stock reserved for issuance under our 2018 Plan, 2021 Plan and our ESPP. Such registration statement is expected to be filed and become effective as soon as practicable after the completion of this offering. Accordingly, shares registered under such registration statement will be available for sale in the open market following its effective date, subject to Rule 144 volume limitations and the lock-up agreements described above, if applicable.

UNDERWRITING

Under the terms and subject to the conditions in an underwriting agreement dated the date of this prospectus, the underwriters named below, for whom Morgan Stanley & Co. LLC, Goldman Sachs & Co. LLC, J.P. Morgan Securities LLC, and BofA Securities, Inc. are acting as representatives, have severally agreed to purchase, and we have agreed to sell to them, severally, the number of shares indicated below:

Name	Number of Shares
Morgan Stanley & Co. LLC	
Goldman Sachs & Co. LLC	
J.P. Morgan Securities LLC	
BofA Securities, Inc.	
Total:	

The underwriters and the representatives are collectively referred to as the "underwriters" and the "representatives," respectively. The underwriters are offering the shares of common stock subject to their acceptance of the shares from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of common stock offered by this prospectus are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriters are obligated to take and pay for all of the shares of common stock offered by this prospectus if any such shares are taken. However, the underwriters are not required to take or pay for the shares covered by the underwriters' over-allotment option described below. The offering of the shares of common stock by the underwriters is subject to receipt and acceptance and subject to the underwriters' right to reject any order in whole or in part.

The underwriters initially propose to offer part of the shares of common stock directly to the public at the offering price listed on the cover page of this prospectus and part to certain dealers at a price that represents a concession not in excess of $ per share under the public offering price. After the initial offering of the shares of common stock, the offering price and other selling terms may from time to time be varied by the representatives.

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to additional shares of common stock at the public offering price listed on the cover page of this prospectus, less underwriting discounts and commissions. The underwriters may exercise this option solely for the purpose of covering over-allotments, if any, made in connection with the offering of the shares of common stock offered by this prospectus. To the extent the option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase about the same percentage of the additional shares of common stock as the number listed next to the underwriter's name in the preceding table bears to the total number of shares of common stock listed next to the names of all underwriters in the preceding table.

The following table shows the per share and total public offering price, underwriting discounts and commissions, and proceeds before expenses to us. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase up to an additional shares of our common stock.

		Total	
	Per Share	No Exercise	Full Exercise
Initial public offering price	$	$	$
Underwriting discounts and commissions to be paid by us:	$	$	$
Proceeds, before expenses, to us	$	$	$

The estimated offering expenses payable by us, exclusive of the underwriting discounts and commissions, are approximately $. We have also agreed to reimburse the underwriters for expense relating to clearance of this offering with the Financial Industry Regulatory Authority up to $.

The underwriters have informed us that they do not intend sales to discretionary accounts to exceed 5% of the total number of shares of common stock offered by them.

We intend to apply to list our common stock on the Nasdaq Global Select Market under the trading symbol “SANA”.

We and all of our directors and officers and the holders of substantially all of our outstanding securities have agreed that, without the prior written consent of Morgan Stanley & Co. LLC, Goldman Sachs & Co. LLC, J.P. Morgan Securities LLC, and BofA Securities, Inc. on behalf of the underwriters, we and they will not, and will not publicly disclose an intention to, during the period ending 180 days after the date of this prospectus (the Restricted Period):

- offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer, or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock;
- submit or file any registration statement with the SEC relating to the offering of any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock; or
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock.

Whether any such transaction described above is to be settled by delivery of common stock or such other securities, in cash or otherwise. In addition, we and each such person have agreed that, without the prior written consent of Morgan Stanley & Co. LLC, Goldman Sachs & Co. LLC, J.P. Morgan Securities LLC, and BofA Securities, Inc. on behalf of the underwriters, we or such other person will not, during the restricted period, make any demand for, or exercise any right with respect to, the registration of any shares of common stock or any security convertible into or exercisable or exchangeable for common stock.

The restrictions described in the immediately preceding paragraph do not apply to our directors, officers and securityholders with respect to:

(a) transactions relating to our securities acquired in open market transactions after the completion of this offering, provided that no filing under Section 16(a) of the Exchange Act or other public announcement shall be required or shall be voluntarily made in connection with subsequent sales of securities acquired in such open market transactions;

(b) transfers of our securities as a bona fide gift or to a charitable organization or educational institution in a transfer not involving a disposition for value;

(c) distributions or transfers of our securities to partners, members, stockholders or affiliates of the securityholder;

(d) facilitating the establishment of a trading plan on behalf of a shareholder, officer, or director of the company pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of our securities, provided that (i) such plan does not provide for the transfer of our securities during the restricted period and (ii) no filing or notification by any party under the Exchange Act or other public announcement shall be required or shall be made voluntarily in connection with such transfer or distribution;

(e) transfers or dispositions of our securities to any member of the immediate family of the securityholder or any trust for the direct or indirect benefit of the securityholder or the immediate family of the securityholder in a transaction not involving a disposition for value;

(f) transfers or dispositions of our securities (i) by will, other testamentary document or intestate succession to the legal representative, heir, beneficiary or a member of the immediate family of the securityholder upon the death of the securityholder, provided no filing or notification by any party under the Exchange Act or other public announcement shall be required or shall be made voluntarily in connection with such transfer or distribution, and (ii) by operation of law pursuant to orders of a court, in connection with a negotiated divorce settlement or pursuant to a qualified domestic relations order, provided no public filing, report or announcement shall be voluntarily made and if any filing under Section 16(a) of the Exchange Act reporting a reduction in beneficial ownership of our securities is required, it shall indicate in the footnotes thereto the nature and conditions of such transfer;

(g) transfers or dispositions of our securities to any corporation, partnership, limited liability company or other entity all of the beneficial ownership interests of which are held by the securityholder or the immediate family of the securityholder;

(h) transfers to the securityholder's affiliates or to any investment fund or other entity controlled or managed by, controlling or managing, or under common control with, the securityholder;

(i) transfers or dispositions of our securities to the Company pursuant to any contractual arrangement in effect on the date of this prospectus and disclosed in this prospectus that provides for the repurchase of the securityholder's common stock or other securities by us or in connection with the termination of the securityholder's employment with or service to us; provided that (i) the repurchase price for any such shares or securities shall not exceed the original purchase price (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization) paid, and (ii) no public filing, report or announcement reporting a reduction in beneficial ownership of our securities shall be required or shall be voluntarily made during the restricted period within 75 days after the date the securityholder ceases to provide services to us, and after such 75th day, if the securityholder is required to file a report reporting a reduction in beneficial ownership of shares of common stock during the restricted period, the securityholder shall clearly indicate in the footnotes thereto that the filing relates to the circumstances described in this clause and no public filing, report or announcement shall be voluntarily made;

(j) transfers or dispositions of our securities to us in connection with the exercise of any option or warrant for, shares of our common stock (by way of "net" or "cashless" exercise solely to cover withholding tax obligations in connection with such exercise or transfer to the Company for the payment of taxes as a result of such exercise) or transfers or dispositions of our securities to cover tax withholding obligations of the securityholder in connection with a vesting of our securities, in each case as disclosed in this prospectus; provided that (i) any such shares of common stock received by the securityholder shall be subject to the terms of the lock-up agreement and (ii) no public filing, report or announcement reporting a reduction in beneficial ownership of shares of common stock shall be required or shall be voluntarily made during the restricted period within 60 days after the date of this prospectus, and after such 60th day, if the securityholder is required to file a report reporting a reduction in beneficial ownership of shares of our common stock during the restricted period, the securityholder shall clearly indicate in the footnotes thereto that the filing relates to the circumstances described in this clause and that the shares of common stock received upon exercise of the stock option or warrant or vesting event are subject to the lock-up agreement, and no public filing, report or announcement shall be voluntarily made;

(k) the exercise on a cash basis of options to purchase shares of our common stock granted under any stock incentive plan or stock purchase plan of the company disclosed in this prospectus, provided that the underlying shares shall continue to be subject to the restrictions on transfer set forth in the lock-up agreement, and provided further that any filing under Section 16(a) of the Exchange Act with regard to this clause (k) shall clearly indicate in the footnotes thereto that the filing relates to the circumstances described in this clause (k) and no public filings, report or announcement shall be voluntarily made;

(l) transfers of our securities pursuant to a bona fide third-party tender offer, merger, consolidation or other similar transaction made to all holders of our common stock and involving a change of control of our company approved by our board of directors, provided that in the event that the tender offer, merger, consolidation or other such transaction is not completed, the common stock owned by the securityholder shall remain subject to the restrictions contained in the lock-up agreement; or

(m) the conversion of any outstanding shares of preferred stock into common stock in connection with this offering, provided that any such securities received upon such conversion shall be subject to the terms of the lock-up agreement and any required filing under Section 16(a) of the Exchange Act shall indicate by footnote disclosure regarding the circumstances of the conversion and that the shares of common stock received upon such conversion remain subject to the lock-up agreement;

provided that in the case of any transfer or distribution pursuant to clauses (b), (c), (e), (f), (g) or (h), (x) each transferee, donee or distributee shall sign and deliver a lock-up agreement, (y) no filing or notification by any party (donor, donee, devisee, transferor, transferee, distributer or distributee) under the Exchange Act or other public announcement shall be required or shall be made voluntarily in connection with such transfer or distribution and (z) such transfer shall not involve a disposition for value.

In our case, such restrictions shall not apply to us as well subject to certain exceptions.

Morgan Stanley & Co. LLC, Goldman Sachs & Co. LLC, J.P. Morgan Securities LLC, and BofA Securities, Inc., in their sole discretion, may release the common stock and other securities subject to the lock-up agreements described above in whole or in part at any time.

In order to facilitate the offering of the common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the common stock. Specifically, the underwriters may sell more shares than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares available for purchase by the underwriters under the over-allotment option. The underwriters can close out a covered short sale by exercising the over-allotment option or purchasing shares in the open market. In determining the source of shares to close out a covered short sale, the underwriters will consider, among other things, the open market price of shares compared to the price available under the over-allotment option. The underwriters may also sell shares in excess of the over-allotment option, creating a naked short position. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in this offering. As an additional means of facilitating this offering, the underwriters may bid for, and purchase, shares of common stock in the open market to stabilize the price of the common stock. These activities may raise or maintain the market price of the common stock above independent market levels or prevent or retard a decline in the market price of the common stock. The underwriters are not required to engage in these activities and may end any of these activities at any time.

We and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act.

A prospectus in electronic format may be made available on websites maintained by one or more underwriters, or selling group members, if any, participating in this offering. The representatives may agree to allocate a number of shares of common stock to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters that may make Internet distributions on the same basis as other allocations.

Other Relationships

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing, and brokerage activities. Certain of the underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for us, for which they received or will receive customary fees and expenses.

In addition, in the ordinary course of their various business activities, the underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts
of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve our securities and instruments. The underwriters and their respective affiliates may also make investment recommendations or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long or short positions in such securities and instruments.

Pricing of the Offering

Prior to this offering, there has been no public market for our common stock. The initial public offering price was determined by negotiations between us and the representatives. Among the factors considered in determining the initial public offering price were our future prospects and those of our industry in general, our sales, earnings, and certain other financial and operating information in recent periods, and the price-earnings ratios, price-sales ratios, market prices of securities, and certain financial and operating information of companies engaged in activities similar to ours.

Selling Restrictions

Canada

The shares may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the *Securities Act* (Ontario), and are permitted clients, as defined in National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any resale of the shares must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 (or, in the case of securities issued or guaranteed by the government of a non-Canadian jurisdiction, section 3A.4) of National Instrument 33-105 *Underwriting Conflicts* (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

European Economic Area

In relation to each Member State of the European Economic Area and the United Kingdom (each, a Relevant State), no securities have been offered or will be offered pursuant to the offering to the public in that

Relevant State prior to the publication of a prospectus in relation to the securities which has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation, except that offers of securities may be made to the public in that Relevant State at any time under the following exemptions under the Prospectus Regulation:

(i) to any legal entity which is a qualified investor as defined under the Prospectus Regulation;

(ii) to fewer than 150 natural or legal persons (other than qualified investors as defined under the Prospectus Regulation), subject to obtaining the prior consent of the representatives; or

(iii) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of shares shall require us or any of our representatives to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase any shares, and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129 (as amended).

United Kingdom

Each underwriter has represented and agreed that:

(i) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000 (FSMA)), received by it in connection with the issue or sale of the shares of our common stock in circumstances in which Section 21(1) of the FSMA does not apply to us; and

(ii) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares of our common stock in, from or otherwise involving the United Kingdom.

Hong Kong

Shares of our common stock may not be offered or sold by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong); (ii) to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap.571, Laws of Hong Kong) and any rules made thereunder; or (iii) in other circumstances which do not result in the document being a "prospectus" within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong), and no advertisement, invitation or document relating to shares of our common stock may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the laws of Hong Kong) other than with respect to shares of our common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap.571, Laws of Hong Kong) and any rules made thereunder.

Japan

No registration pursuant to Article 4, paragraph 1 of the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended) (the FIEL) has been made or will be made with respect to the solicitation of the application for the acquisition of the shares of common stock.

Accordingly, the shares of common stock have not been, directly or indirectly, offered or sold and will not be, directly or indirectly, offered or sold in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan) or to others for re-offering or re-sale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan except pursuant to an exemption from the registration requirements, and otherwise in compliance with, the FIEL and the other applicable laws and regulations of Japan.

For Qualified Institutional Investors (QII)

Please note that the solicitation for newly-issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to the shares of common stock constitutes either a "QII only private placement" or a "QII only secondary distribution" (each as described in Paragraph 1, Article 23-13 of the FIEL). Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to the shares of common stock. The shares of common stock may only be transferred to QIIs.

For Non-QII Investors

Please note that the solicitation for newly-issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to the shares of common stock constitutes either a "small number private placement" or a "small number private secondary distribution" (each as is described in Paragraph 4, Article 23-13 of the FIEL). Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to the shares of common stock. The shares of common stock may only be transferred en bloc without subdivision to a single investor.

Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares of our common stock may not be circulated or distributed, nor may the shares of our common stock be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the SFA); (ii) to a relevant person, or any person pursuant to Section 275(1A), and in accordance with the conditions, specified in Section 275 of the SFA; or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where shares of our common stock are subscribed or purchased under Section 275 by a relevant person which is: (i) a corporation (which is not an accredited investor) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or (ii) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary is an accredited investor, shares, debentures and units of shares and debentures of that corporation or the beneficiaries' rights and interest in that trust shall not be transferable for 6 months after that corporation or that trust has acquired shares of our common stock under Section 275 except: (a) to an institutional investor under Section 274 of the SFA or to a relevant person, or any person pursuant to Section 275(1A), and in accordance with the conditions, specified in Section 275 of the SFA; (b) where no consideration is given for the transfer; or (c) by operation of law.

Switzerland

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or SIX, or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the

Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, the Company or the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA (FINMA), and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes (CISA). The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

Dubai International Financial Centre

This prospectus relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority (DFSA). This prospectus is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus nor taken steps to verify the information set forth herein and has no responsibility for the prospectus. The shares to which this prospectus relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the shares offered should conduct their own due diligence on the shares. If you do not understand the contents of this prospectus you should consult an authorized financial advisor.

Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission, in relation to the offering. This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (Corporations Act), and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares may only be made to persons (Exempt Investors) who are “sophisticated investors” (within the meaning of section 708(8) of the Corporations Act), “professional investors” (within the meaning of section 708(11) of the Corporations Act), or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Israel

In the State of Israel this prospectus shall not be regarded as an offer to the public to purchase shares of common stock under the Israeli Securities Law, 5728 - 1968, which requires a prospectus to be published and authorized by the Israel Securities Authority, if it complies with certain provisions of Section 15 of the Israeli Securities Law, 5728 - 1968, including, inter alia, if: (i) the offer is made, distributed or directed to not more than 35 investors, subject to certain conditions (the Addressed Investors); or (ii) the offer is made, distributed or directed to certain qualified investors defined in the First Addendum of the Israeli Securities Law, 5728 - 1968, subject to certain conditions (the Qualified Investors). The Qualified Investors shall not be taken into account in the count of the Addressed Investors and may be offered to purchase securities in addition to the 35 Addressed Investors. The company has not and will not take any action that would require it to publish a prospectus in accordance with and subject to the Israeli Securities Law, 5728 - 1968. We have not and will not distribute this prospectus or make, distribute or direct an offer to subscribe for our common stock to any person within the State of Israel, other than to Qualified Investors and up to 35 Addressed Investors.

Qualified Investors may have to submit written evidence that they meet the definitions set out in of the First Addendum to the Israeli Securities Law, 5728 - 1968. In particular, we may request, as a condition to be offered common stock, that Qualified Investors will each represent, warrant and certify to us and/or to anyone acting on our behalf: (i) that it is an investor falling within one of the categories listed in the First Addendum to the Israeli Securities Law, 5728 - 1968; (ii) which of the categories listed in the First Addendum to the Israeli Securities Law, 5728 - 1968 regarding Qualified Investors is applicable to it; (iii) that it will abide by all provisions set forth in the Israeli Securities Law, 5728 - 1968 and the regulations promulgated thereunder in connection with the offer to be issued common stock; (iv) that the shares of common stock that it will be issued are, subject to exemptions available under the Israeli Securities Law, 5728 - 1968: (a) for its own account, (b) for investment purposes only, and (c) not issued with a view to resale within the State of Israel, other than in accordance with the provisions of the Israeli Securities Law, 5728 - 1968; and (v) that it is willing to provide further evidence of its Qualified Investor status. Addressed Investors may have to submit written evidence in respect of their identity and may have to sign and submit a declaration containing, inter alia, the Addressed Investor’s name, address and passport number or Israeli identification number.

LEGAL MATTERS

The validity of the issuance of the shares of common stock offered hereby will be passed upon for Sana Biotechnology, Inc. by Latham & Watkins LLP, Menlo Park, California. Cooley LLP, San Diego, California, is representing the underwriters.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements at December 31, 2019 and 2018, and for the year ended December 31, 2019 and the period from July 13, 2018 (inception) to December 31, 2018, as set forth in their report. We've included our financial statements in the prospectus and elsewhere in the registration statement in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the common stock offered hereby. This prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules thereto. For further information with respect to the Company and its common stock, reference is made to the registration statement and the exhibits and any schedules filed therewith. Statements contained in this prospectus as to the contents of any contract or other document referred to are not necessarily complete and in each instance, if such contract or document is filed as an exhibit, reference is made to the copy of such contract or other document filed as an exhibit to the registration statement, each statement being qualified in all respects by such reference. The SEC maintains a website at www.sec.gov, from which interested persons can electronically access the registration statement, including the exhibits and any schedules thereto.

As a result of the offering, we will be required to file periodic reports and other information with the SEC. We also maintain a website at https://sana.com, at which, following this offering, you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with or furnished to the SEC. Our website and the information contained therein or connected thereto shall not be deemed to be incorporated into this prospectus or the registration statement of which it forms a part. We have included our website address as an inactive textual reference only.

SANA BIOTECHNOLOGY, INC.
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Sana Biotechnology, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Sana Biotechnology, Inc. (the Company) as of December 31, 2019 and 2018, the related consolidated statements of operations and comprehensive loss, convertible preferred stock and stockholders' deficit and cash flows for the year ended December 31, 2019 and the period from July 13, 2018 (inception) to December 31, 2018, and the related notes (collectively referred to as the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2019 and 2018, and the results of its operations and its cash flows for year ended December 31, 2019 and the period from July 13, 2018 (inception) to December 31, 2018 in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are required to be independent with respect to the Company in accordance with the relevant ethical requirements relating to our audit.

We conducted our audits in accordance with the auditing standards of the Public Company Accounting Oversight Board (United States) and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2019.

Seattle, Washington
April 22, 2020

Sana Biotechnology, Inc.
Consolidated Balance Sheets
(in thousands, except share and per share amounts)

	December 31, 2018	December 31, 2019
ASSETS		
Current assets:		
Cash and cash equivalents	$ 30,630	$ 80,030
Marketable securities	—	58,952
Prepaid expenses and other current assets	1,966	5,281
Total current assets	32,596	144,263
Property and equipment, net	585	27,911
Operating lease right-of-use assets, net	—	41,403
Restricted cash	816	1,777
Intangible asset	—	59,195
Goodwill	—	140,627
Other non-current assets	336	522
TOTAL ASSETS	$ 34,333	$ 415,698
LIABILITIES, CONVERTIBLE PREFERRED STOCK, AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	$ 289	$ —
Accrued compensation	811	8,094
Accrued expenses and other current liabilities	685	9,887
Operating lease liabilities	—	1,848
Total current liabilities	1,785	19,829
Operating lease liabilities, net of current portion	—	46,359
Contingent consideration	—	69,108
Success payment liabilities	—	4,352
Other non-current liabilities	15	1,233
Total liabilities	1,800	140,881
Commitments and contingencies (Note 10)		
Convertible preferred stock, $0.0001 par value; 45,850,000 and 537,786,206 shares authorized as of December 31, 2018 and 2019, respectively; 45,850,000 and 427,558,231 shares issued and outstanding as of December 31, 2018 and 2019, respectively; aggregate liquidation preference of $46,536 and $450,837 as of December 31, 2018 and 2019, respectively	45,721	417,359
Stockholders' deficit:		
Common stock, $0.0001 par value; 187,250,000 and 700,000,000 shares authorized as of December 31, 2018 and 2019, respectively; 6,310,467 and 40,013,424 shares issued and outstanding as of December 31, 2018 and 2019, respectively	1	4
Additional paid-in capital	58	1,555
Accumulated other comprehensive income	—	26
Accumulated deficit	(13,247)	(144,127)
Total stockholders' deficit	(13,188)	(142,542)
TOTAL LIABILITIES, CONVERTIBLE PREFERRED STOCK, AND STOCKHOLDERS' DEFICIT	$ 34,333	$ 415,698

The accompanying notes are an integral part of these financial statements.

Sana Biotechnology, Inc.
Consolidated Statements of Operations
(in thousands, except share and per share amounts)

	Period from July 13, 2018 (Inception) to December 31, 2018	Year Ended December 31, 2019
Operating expenses:		
Research and development	$ 9,040	$ 119,375
General and administrative	4,206	21,777
Total operating expenses	13,246	141,152
Loss from operations	(13,246)	(141,152)
Interest income, net	—	2,856
Other expense, net	(1)	(29)
Loss before income taxes	(13,247)	(138,325)
Benefit from income taxes	—	7,547
Net loss	$ (13,247)	$ (130,778)
Net loss per share, basic and diluted	$ (3.48)	$ (6.67)
Weighted-average shares outstanding, basic and diluted	3,808,344	19,610,571

The accompanying notes are an integral part of these financial statements.

Sana Biotechnology, Inc.
Consolidated Statements of Comprehensive Loss
(in thousands)

	Period from July 13, 2018 (Inception) to December 31, 2018	Year Ended December 31, 2019
Net loss	$ (13,247)	$ (130,778)
Other comprehensive income, net of tax:		
Net unrealized gain on marketable securities	—	26
Total other comprehensive income	—	26
Comprehensive loss	$ (13,247)	$ (130,752)

The accompanying notes are an integral part of these financial statements.

Sana Biotechnology, Inc.
Consolidated Statements of Convertible Preferred Stock and Stockholders' Deficit
(in thousands, except share amounts)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount				
Balance as of July 13, 2018 (inception)	—	$ —	—	$ —	$ —	$ —	$ —	$ —
Issuance of common stock	—	—	1,405,000	—	—	—	—	—
Issuance of Series A-1 convertible preferred stock, net of issuance costs of $100	45,850,000	45,721	—	—	—	—	—	—
Stock-based compensation expense	—	—	4,905,467	1	58	—	—	59
Net loss	—	—	—	—	—	—	(13,247)	(13,247)
Balance as of December 31, 2018	45,850,000	$ 45,721	6,310,467	$ 1	$ 58	$ —	$ (13,247)	$ (13,188)
Adjustment to beginning accumulated deficit from adoption of ASC 842	—	—	—	—	—	—	(102)	(102)
Issuance of Series A-2 convertible preferred stock, net of issuance costs of $300	224,014,136	223,739	—	—	—	—	—	—
Issuance of Series A-2 convertible preferred stock for acquisition, non-cash	145,766,384	135,971	—	—	—	—	—	—
Issuance of Series A-2 convertible preferred stock in connection with license agreements	11,927,711	11,928	—	—	—	—	—	—
Stock-based compensation expense	—	—	33,700,457	3	1,496	—	—	1,499
Exercise of stock options	—	—	2,500	—	1	—	—	1
Other comprehensive income, net	—	—	—	—	—	26	—	26
Net loss	—	—	—	—	—	—	(130,778)	(130,778)
Balance as of December 31, 2019	427,558,231	$ 417,359	40,013,424	$ 4	$ 1,555	$ 26	$ (144,127)	$ (142,542)

The accompanying notes are an integral part of these financial statements.

Sana Biotechnology, Inc.
Consolidated Statements of Cash Flows
(in thousands)

	Period from July 13, 2018 (Inception) to December 31, 2018	Year Ended December 31, 2019
OPERATING ACTIVITIES:		
Net loss	$ (13,247)	$ (130,778)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	1	1,826
Deferred income tax	—	(7,547)
Stock-based compensation expense	59	1,497
Change in fair value of contingent consideration	—	17,860
Change in fair value of success payment liabilities	—	1,924
Non-cash expense for equity issuance in connection with license agreements	—	11,928
Non-cash expense in connection with license agreement	—	4,557
Non-cash expense in connection with asset acquisition	—	1,200
Non-cash right-of-use assets lease expense	—	2,095
Other non-cash items	—	(592)
Changes in operating assets and liabilities:		
Prepaid expenses and other assets	(1,982)	(4,300)
Operating lease right-of-use assets and liabilities	—	5,697
Accounts payable	289	(421)
Accrued expenses and other liabilities	1,385	9,550
Net cash used in operating activities	(13,495)	(85,504)
INVESTING ACTIVITIES:		
Purchases of marketable securities	—	(141,519)
Proceeds from maturities of marketable securities	—	82,977
Purchases of property and equipment	(460)	(26,183)
Acquisitions, net of cash acquired	—	(3,195)
Proceeds from disposal of assets	—	59
Issuance of promissory note	(320)	—
Net cash used in investing activities	(780)	(87,861)
FINANCING ACTIVITIES:		
Proceeds from issuance of convertible preferred stock, net of issuance costs	45,721	223,739
Proceeds from issuance of common stock	—	1
Payment of contingent consideration	—	(14)
Net cash provided by financing activities	45,721	223,726
Net increase in cash, cash equivalents, and restricted cash	31,446	50,361
Cash, cash equivalents, and restricted cash at beginning of period	—	31,446
Cash, cash equivalents, and restricted cash at end of period	$ 31,446	$ 81,807
SUPPLEMENTAL CASH FLOW DISCLOSURES:		
Purchases of property and equipment included in accounts payable and accrued liabilities	$ 126	$ 2,495
Issuance of convertible preferred stock for acquisition	$ —	$ 135,971
Right-of-use assets obtained in exchange for operating lease liabilities	$ —	$ 48,863
Cash received from lessor for tenant improvement allowance	$ —	$ 5,697
Tenant improvement allowance included in contra-lease liability	$ —	$ 2,575

The accompanying notes are an integral part of these financial statements.

Sana Biotechnology, Inc.
Notes to Consolidated Financial Statements

1. Organization

Sana Biotechnology, Inc. (the Company or Sana) was incorporated in Delaware on July 13, 2018 (inception) as FD Therapeutics, Inc., and changed its name to Sana Biotechnology, Inc. on September 17, 2018. The Company is a biotechnology company, focusing on utilizing engineered cells as medicines. The Company's operations to date have included identifying and developing potential product candidates, executing preclinical studies, acquiring technology, organizing and staffing the Company, business planning, establishing the Company's intellectual property portfolio, raising capital, and providing general and administrative support for these operations.

In February 2019, the Company acquired 100% of the outstanding equity in Cobalt Biomedicine, Inc. (Cobalt), a privately-held early-stage biotechnology company developing a platform technology using its fusogen technology to specifically and consistently deliver various biological payloads to cells. The Cobalt acquisition adds *in-vivo cell engineering technology to complement the Company's existing ex-vivo cell engineering technology. See Note 3, Acquisitions.*

In November 2019, the Company acquired Cytocardia, Inc. (Cytocardia), a privately-held early-stage biotechnology company whose primary asset was in-process research and development related to its *ex vivo* cell engineering programs focused on replacement of damaged heart cells. See Note 3, Acquisitions.

The Company is subject to a number of risks similar to other biotechnology companies in the development stage including, but not limited to, the need to obtain adequate additional funding, possible failure of preclinical testing or clinical trials, the need to obtain marketing approval for its product candidates, competitors developing new technological innovations, the need to successfully commercialize and gain market acceptance of the Company's products, protect the Company's intellectual property and proprietary technology, and the need to attract and retain key scientific and management personnel. If the Company does not successfully commercialize or partner any of its product candidates, it will be unable to generate product revenue or achieve profitability. Through December 31, 2019, the Company has financed its operations through the sale and issuance of convertible preferred stock. The Company intends to raise additional capital through the issuance of equity or strategic alliances with third parties. As of December 31, 2019, the Company had an accumulated deficit of $144.1 million and cash, cash equivalents, and marketable securities of $139.0 million.

2. Summary of significant accounting policies

Basis of presentation

The accompanying consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. The Company's consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States (GAAP). Certain prior period amounts have been reclassified to conform to current period presentation.

Use of estimates

The preparation of the financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. The Company evaluates its estimates and assumptions on an ongoing basis using historical experience and other factors and adjusts those estimates and assumptions when facts and circumstances dictate. Actual results could materially differ from those estimates. The most significant estimates in the Company's consolidated financial statements relate to business combinations, accrued expenses, the valuation of common stock, and the valuation of success payments and contingent consideration.

The Company utilizes significant estimates and assumptions in determining the fair value of its common stock. The Company recorded expense for restricted stock awards (RSAs), stock options and restricted stock

units (RSUs) at prices not less than the fair market value of its common stock as determined by management with consideration of the American Institute of Certified Public Accountants Technical Practice Aid, *Valuation of Privately-Held Company Equity Securities Issued as Compensation*, (AICPA Guide). The estimated fair value of the Company's common stock is based on a number of objective and subjective factors, including the most recently available valuations of the Company's common stock performed by an independent third-party valuation firm, the prices of shares of convertible preferred stock sold to investors in arm's length transactions, committed future rounds of funding, the superior rights and preferences of securities senior to the Company's common stock at the time, the Company's stage of development, results of operation and financial position, material risks to the Company's business, the lack of marketability of the common stock, and external market conditions affecting the biotechnology industry sector.

The Company also uses significant estimates and assumptions in determining the estimated fair value of the success payment and contingent consideration liabilities, which are measured at issuance and at each balance sheet date, with changes in fair value recognized in research and development expense. A small change in the estimated future value of the Company's Series A convertible preferred stock price or the estimated future value of the Company implied by the estimated future per share value of the Series B convertible preferred stock may have a relatively large change in the estimated fair value of the success payment liability and associated expense or gain. Changes in the probabilities and estimated timing of milestones used in the calculation of the contingent consideration liability may have a relatively large impact on the resulting liability and associated expense or gain.

Cash and cash equivalents

Cash and cash equivalents include cash and highly liquid investments with original maturities of three months or less at acquisition. Cash equivalents include investments in money market funds with commercial banks and financial institutions and are stated at fair value.

Marketable securities

Marketable securities are classified as available-for-sale debt securities and are carried at fair value. Unrealized gains and losses, if any, are reported as a component of comprehensive income (loss). Amortization, accretion, interest and dividends, realized gains and losses, and declines in value judged to be other than-temporary are included in other income (expense). The cost of securities sold is based on the specific-identification method. Investments in securities with maturities of less than one year, or those which management intends to use to fund current operations, are included in current assets.

The Company evaluates whether an investment is other-than-temporarily impaired based on the specific facts and circumstances. Factors that are considered in determining whether an other-than-temporary decline in value has occurred include the market value of the security in relation to its cost basis, the financial condition of the investee, and the intent and ability to retain the investment for a sufficient period of time to allow for recovery in the market value of the investment.

Concentrations of credit risk and off-balance sheet risk

The Company maintains its cash, cash equivalents, and marketable securities with high quality, accredited financial institutions. These amounts, at times, may exceed federally insured limits. The Company has not experienced any credit losses in such accounts and does not believe it is exposed to significant risk on these funds. The Company has no off-balance sheet concentrations of credit risk, such as foreign currency exchange contracts, option contracts or other hedging arrangements.

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Fair value of financial instruments

The Company is required to disclose information on all assets and liabilities reported at fair value that enables an assessment of the inputs used in determining the reported fair values. The fair value hierarchy prioritizes valuation inputs based on the observable nature of those inputs. The hierarchy applies only to the valuation inputs used to determine the reported fair value of the investments and is not a measure of the investment credit quality. The hierarchy defines three levels of valuation inputs:

Level 1 – Quoted prices in active markets for identical assets or liabilities.

Level 2 – Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.

Level 3 – Unobservable inputs that reflect the Company's own assumptions about the assumptions market participants would use in pricing the asset or liability.

The Company's financial instruments include cash and cash equivalents, marketable securities, note receivable, accounts payable, contingent consideration, success payment liabilities, contingent license liability, and other accrued liabilities. The carrying amounts of cash, cash equivalents, accounts payable, and accrued liabilities approximate fair value due to the short-term nature of these instruments. To the extent the valuation of financial instruments is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3. See Note 7, Fair value measurements.

Property and equipment, net

Property and equipment are stated at cost, net of accumulated depreciation. Depreciation of property and equipment is computed using the straight-line method over the estimated useful lives of the respective assets, generally three to five years. Leasehold improvements are depreciated over the lesser of their useful lives or the remaining life of the lease. When assets are retired or otherwise disposed of, the cost and related accumulated depreciation and amortization are removed from the balance sheet and the resulting gain or loss is reflected in operations in the period realized. Maintenance and repairs are charged to operations as incurred.

Impairment of long-lived assets

The Company reviews the carrying value and estimated lives of its long-lived assets whenever events or circumstances indicate the carrying values may not be recoverable. Should an impairment exist, the impairment loss would be measured based on the excess of the asset's carrying amount over its fair value. The Company has not recognized any impairment losses since inception.

Acquisitions

The Company accounts for business combinations using the acquisition method of accounting, which requires the assets acquired, including in-process research and development (IPR&D), and liabilities assumed be recorded at their fair values as of the acquisition date. Any excess of the purchase price over the fair value of net assets acquired is recorded as goodwill. The determination of the estimated fair value of these items requires us to make significant estimates and assumptions. Transaction costs associated with business combinations are recorded in general and administrative expense as they are incurred.

If the Company determines the acquisition does not meet the definition of a business combination under the acquisition method of accounting, the transaction is accounted for as an asset acquisition and no goodwill or

contingent consideration are recognized at the acquisition date. In an asset acquisition, up-front payments allocated to IPR&D are recorded in research and development expense if there is no alternative future use, and subsequent milestone payments are recorded in research and development expense when achieved.

Goodwill and intangible assets

Goodwill represents the excess of the purchase price over the estimated fair value of the identifiable assets acquired and liabilities assumed in a business combination. The Company evaluates goodwill for impairment annually or when a triggering event occurs that could indicate a potential impairment. The evaluation for impairment includes assessing qualitative factors or performing a quantitative analysis to determine whether it is more-likely-than-not that the fair value of net assets is below the carrying amount.

Intangible assets acquired in a business combination are recognized separately from goodwill and are initially recognized at their fair value at the acquisition date. The fair value of the IPR&D has been estimated using the replacement cost method. Under this method, the Company estimated the cost to recreate the technology and derived an estimated value to develop the technology. IPR&D assets are required to be classified as indefinite-lived assets and are not amortized until they become finite-lived assets, upon the successful completion of the associated research and development technology. At that time, the useful life of the asset will be determined, and amortization will begin. If the associated research and development technology is abandoned, the related IPR&D asset will be written-off and an impairment charge recorded. Intangible assets are reviewed for impairment at least annually or when a triggering event occurs that could indicate a potential impairment.

Contingent consideration from business combinations

At and subsequent to the acquisition date of a business combination, contingent consideration obligations are remeasured to fair value at each balance sheet date with changes in fair value recognized in research and development expense. Changes in fair values reflect changes to the Company's assumptions regarding probabilities of successful achievement of related milestones, the timing in which the milestones are expected to be achieved, and the discount rate used to estimate the fair value of the obligation.

Success payments

The Company granted rights to a success payment to Cobalt (Cobalt Success Payment) pursuant to the terms of its acquisition agreement and to the President and Fellows of Harvard College (Harvard) pursuant to the terms of its exclusive license agreement.

The Company may be required to make a Cobalt Success Payment in cash or stock, at its discretion, based on an increase in value of the Company implied by the per share value of the Company's Series B convertible preferred stock at issuance, or any security into which such stock has been converted or exchanged, and the Company has an active program based on the fusogen technology in a clinical trial pursuant to an investigational new drug application (IND), or have filed for, or received approval for, a biologics license application (BLA) or new drug application (NDA). The Company may be required to make success payments to Harvard (Harvard Success Payments) in cash based on increases in the per share value of the Company's Series A convertible preferred stock, or any security into which such stock has been converted or exchanged. The success payments are accounted for under Accounting Standards Codification (ASC) 815, *Derivatives and Hedging.*

Success payment liabilities are estimated at fair value at inception and at each subsequent balance sheet date with changes recorded in research and development expense. To determine the estimated fair value of the success payments the Company uses a Monte Carlo simulation methodology which models the value of the liability

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based on several key variables including the term of the success payments, expected volatility, risk-free interest rate, and estimated number and timing of valuation measurement dates on the basis of which payments may be triggered. Additionally, the Cobalt Success Payment liability incorporates the estimated future value of the Company implied by the estimated future per share value of the Company's Series B convertible preferred stock at issuance, and the Harvard Success Payment liability incorporates the estimated future fair value of the Company's Series A convertible preferred stock. The computation of expected volatility is estimated using peer company stocks for a time period matching the expected term assumption.

Leases

In February 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2016-02, *Leases* (ASC 842). The new guidance requires lessees to recognize the assets and liabilities arising from leases on the balance sheet, unless the lease is a short-term lease, defined as having a term of twelve-months or less. Additional qualitative and quantitative disclosures are also required. The Company early adopted this standard on January 1, 2019 using the prospective transition method. Under this method, the Company did not restate the prior comparative periods and initially applied ASC 842 on January 1, 2019 and recorded an immaterial entry to the opening balance in accumulated stockholders' deficit.

The Company elected to apply the practical expedient election as permitted under the transition guidance, which must be elected as a package and applied consistently to all leases at the transition date. The Company did not reassess the lease classification of existing leases, whether any expired or existing contracts are or contain leases, the initial direct costs for any existing leases, or separate lease and non-lease components. The adoption resulted in the recognition of an operating lease right-of-use (ROU) asset and operating lease liability of $8.9 million on the Company's consolidated balance sheet as of January 1, 2019.

The Company determines if a contract contains a lease at the inception of the contract. The Company currently has leases related to its facilities for office and laboratory space, which are classified as operating leases. These leases result in operating ROU assets and current and non-current operating lease liabilities on the balance sheet. The Company does not have any financing leases. Leases with a term of 12 months or less are considered short-term and a ROU asset and lease obligation are not recognized. Payments associated with short-term leases are expensed as incurred. Rent expense for operating leases is recognized on a straight-line basis over the lease term.

Lease liabilities represent an obligation to make lease payments arising from the lease. ROU assets represent the right to use the underlying asset identified in the lease for the lease term. Lease liabilities are measured at the present value of the remaining future lease payments over the lease term discounted using the incremental borrowing rate (IBR) for the lease established at the lease commencement date. ROU assets are based on the measurement of the lease liability and include any prepaid lease payments made prior to or on the lease commencement date and exclude any lease incentives received and initial direct costs incurred.

To determine the present value of lease payments at the lease inception the Company determines an IBR which reflects the fixed rate at which the Company could borrow the amount of the lease payments, on a collateralized basis, for a similar term, and economic environment. The lease terms may include the impact of options to extend or terminate the lease when it is reasonably certain that the Company will exercise the option. Assumptions made by the Company at the commencement date are re-evaluated upon occurrence of certain events, including a lease modification. When a lease modification results in a separate contract, it is accounted for in the same manner as a new lease.

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Claims and contingencies

From time to time, the Company may become involved in litigation and proceedings relating to claims arising from the ordinary course of business. The Company accrues a liability if the likelihood of an adverse outcome is probable and the amount can be reasonably estimated. If the likelihood of an adverse outcome is only reasonably possible (as opposed to probable), or if an estimate is not determinable, the Company provides disclosure of a material claim or contingency.

Convertible preferred stock

The carrying value of the Company's Series A-1 and Series A-2 convertible preferred stock is adjusted to reflect dividends if and when declared by the Company's board of directors. No dividends have been declared by the board of directors since inception. The Company classifies its convertible preferred stock outside of permanent equity, as the redemption of such stock is not solely under the control of the Company.

Stock-based compensation

The Company grants share based compensation to employees, directors, and non-employees, including consultants, in the form of stock options, RSAs, and RSUs. The Company accounts for stock-based compensation awards in accordance with ASC Topic 718, *Compensation—Stock Compensation* (ASC 718) by measuring the fair value of the award on the date of grant. Expense is recognized on a straight-line basis over the requisite service period, which is generally the vesting period of the respective award. Forfeitures are recognized as they occur.

Generally, stock option awards granted by the Company vest over four years and have an exercise price equal to the estimated fair value of the common stock as determined by the board of directors with consideration given to contemporaneous valuations of the Company's common stock prepared by an independent third party valuation firm in accordance with the guidance provided by the AICPA Guide.

The Company accounts for share-based awards issued to non-employees under ASU 2018-07, *Compensation—Stock Compensation,* using the measurement date at the date of grant without subsequent changes in the fair value of the award. Share-based compensation costs for non-employees are recognized as expense over the requisite service period, which is the vesting period.

The fair value of stock options is estimated at the date of grant using a Black-Scholes option pricing model which requires management to apply judgment and make estimates, including:

- *Fair Value of Common Stock*—The Company's board of directors, with the assistance and upon the recommendation of management, has for financial reporting purposes periodically determined the estimated per share fair value of the Company's common stock on the grant date in part using contemporaneous independent third-party valuations consistent with the AICPA Guide.
- *Expected Term*—The expected term represents the period that the stock-based awards are expected to be outstanding. The Company uses the simplified method to determine the expected term, which is based on the average of the time-to-vesting and the contractual life of the options.
- *Expected Volatility*—Since the Company is not yet a public company and does not have any trading history for its common stock, the expected volatility is estimated based on the average historical volatilities of common stock of comparable publicly traded entities over a period equal to the expected term of the stock option grants. The comparable companies are chosen based on their size, stage in the product development cycle or area of specialty. The Company will continue to apply this process until sufficient historical information regarding the volatility of its own stock price becomes available.

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- *Risk-Free Interest Rate*—The risk-free interest rate is based on the U.S. Treasury yield in effect at the time of grant for zero-coupon U.S. Treasury notes with maturities approximately equal to the expected term of the awards.
- *Expected Dividend*—The Company has never paid dividends on its common stock and has no plans to pay dividends on its common stock. Therefore, the Company used an expected dividend yield of zero.

Research and development expense

The Company records expense for research and development costs as incurred. Nonrefundable, advance payments for goods or contracts for services are deferred, and expense is recognized in the period in which the goods are received, or the services are rendered.

Research and development expense consist of costs incurred by the Company for the discovery and development of the Company's platform technology and product candidates and contain personnel costs, including salaries, benefits, and non-cash stock-based compensation, external research and development expenses incurred under arrangements with third parties, laboratory supplies, costs to acquire and license technologies aligned with the Company's goal of translating engineered cells to medicine, changes in the estimated fair value of the success payment and contingent consideration liabilities, and other expenses, which include facility and other allocated expenses, including rent, depreciation, and allocated overhead costs, and other research and development costs.

General and administrative expenses

General and administrative expenses consist of personnel costs, including salaries, benefits, and non-cash stock-based compensation, for our employees in executive, legal, finance, human resources, information technology, and other administrative functions, legal fees, consulting fees, recruiting costs, and facility costs not otherwise included in research and development expenses. Legal fees include those related to corporate and patent matters.

Income taxes

The Company determines its deferred tax assets and liabilities based on the differences between the financial statement and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. A valuation allowance is recorded when it is more likely than not that the deferred tax asset will not be recovered. The Company applies judgment in the determination of the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. The Company recognizes any material interest and penalties related to unrecognized tax benefits in income tax expense.

The Company is required to file income tax returns in the United States (U.S.) federal jurisdiction, and other state and local jurisdictions. The Company currently is not under examination by the Internal Revenue Service or other jurisdictions for any tax years.

Segments

Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision-maker in making decisions regarding resource allocation and assessing performance. The Company views its operations and manages its business in one operating segment.

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Recent accounting pronouncements

Recently adopted

ASU No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*

In December 2019, the FASB issued ASU 2019-12, *Simplifying the Accounting for Income Taxes*. The objective of the standard is to improve areas of GAAP by removing certain exceptions permitted by ASC Topic 740, *Income Taxes*, and clarifying existing guidance to facilitate consistent application. Early adoption of the new standard is permitted for companies for periods for which financial statements have not yet been issued. The Company early adopted the standard beginning on January 1, 2019. The adoption of this standard did not have an impact on the financial condition, results of operations and cash flows, or financial statement disclosures.

Not yet adopted

ASU No. 2016-13, *Financial Instruments—Credit Losses (Topic 362): Measurement of Credit Losses on Financial Statements*, ASU No. 2019-05, *Financial Instruments—Credit Losses (Topic 326): Targeted Transition Relief*, ASU No. 2019-11, *Codification Improvements to Topic 326, Financial Instruments—Credit Losses*

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments—Credit Losses (Topic 362): Measurement of Credit Losses on Financial Statements* (ASU 2016-13). The new standard requires that expected credit losses relating to financial assets measured on an amortized cost basis and available-for-sale debt securities be recorded through an allowance for credit losses. It also limits the amount of credit losses to be recognized for available-for-sale debt securities to the amount by which carrying value exceeds fair value and also requires the reversal of previously recognized credit losses if fair value increases. The targeted transition relief standard allows companies an option to irrevocably elect the fair value option of ASC 825-10, *Financial Instruments-Overall*, applied on an instrument-by-instrument basis for eligible instruments. The new standard will be effective for the Company beginning January 1, 2023. The Company is currently evaluating the potential impact ASU 2016-13, and related updates, will have on its financial position and results of operations upon adoption.

ASU No. 2017-04, *Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*

In January 2017, the FASB issued ASU 2017-04, *Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment* (ASU 2017-04). To address concerns over the cost and complexity of the two-step goodwill impairment test, the amendments in this ASU remove the second step of the test. An entity will instead apply a one-step quantitative test and record the amount of goodwill impairment as the excess of a reporting unit's carrying amount over its fair value, not to exceed the total amount of goodwill allocated to the reporting unit. The new guidance does not amend the optional qualitative assessment of goodwill impairment. The new standard will be effective beginning January 1, 2023. The adoption of ASU 2017-04 is not expected to have a material impact on the Company's financial position or results of operations upon adoption.

ASU No. 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement*

In August 2018, the FASB issued ASU 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement*, (ASU 2018-13). The new standard removes certain disclosures, modifies certain disclosures and adds additional disclosures related to fair value measurement. The new standard will be effective beginning January 1, 2023. The Company is currently evaluating the potential impact ASU 2018-13 may have on its disclosures upon adoption.

Sana Biotechnology, Inc.
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3. Acquisitions

Cobalt Biomedicine, Inc.

In February 2019, the Company acquired 100% of the outstanding equity in Cobalt, a privately-held early-stage biotechnology company developing a platform technology using its fusogen technology to specifically and consistently deliver various biological payloads to cell. The Company issued 145,766,384 shares of its Series A-2 convertible preferred stock in consideration, valued at $136.0 million. Of the 145,766,384 shares of Series A-2 convertible preferred stock issued, 48,588,795 shares were restricted based on the achievement of a pre-specified development milestone, which was achieved in July 2019. Additionally, 2,766,578 RSAs and 1,383,288 RSUs were granted to former employees of Cobalt.

The elements of the purchase consideration are as follows (in thousands):

Series A-2 convertible preferred stock issued(1)	$ 97,178
First milestone—restricted Series A-2 convertible preferred stock(2)	38,769
Success payment(3)	2,428
Fair value of contingent consideration(4)	51,248
Other	66
Total consideration	$ 189,689

(1) The purchase consideration included 97,177,589 shares of the Company's Series A-2 convertible preferred stock. The value of the stock was $1.00 per share, equivalent to the purchase price per share of the Series A-2 convertible preferred stock financing that occurred in February 2019.
(2) The Company concluded the value of the first milestone, to be paid in restricted shares, met the definition of being indexed to common stock. The restricted Series A-2 convertible preferred shares were recorded in convertible preferred stock valued at $38.8 million based on the estimated probability and timing of the milestone achievement on the date of acquisition, and is not subject to remeasurement upon achievement. In July 2019, the first milestone was achieved, and the Company issued a total of 48,588,795 shares of its Series A-2 convertible preferred stock.
(3) The fair value of the Cobalt Success Payment was determined using a Monte Carlo simulation methodology which models the estimated future value of the Company based on several key variables including the term of the success payment, expected volatility, risk-free interest rate, and estimated number and timing of valuation measurement dates on the basis of which payment may be triggered.
(4) The fair value of the contingent consideration was determined by calculating the probability-weighted estimated value of the milestone payments based on the assessment of the likelihood and estimated timing that certain milestones would be achieved and estimated using discount rates ranging from 15.3% to 17.6%. The discount rate captures the credit risk associated with the payment of the contingent consideration when earned and due.

The Company accounted for the Cobalt acquisition using the acquisition method of accounting. Under this method, the assets acquired and liabilities assumed in a business combination are measured at fair value as of the acquisition date. The results of operations of Cobalt are included in the Company's results of operations from the date of acquisition. Pro forma results of operations have not been presented because the effects of the acquisition were not material to the Company's financial results. The allocation of the purchase price is based on the estimated fair value of assets acquired and liabilities assumed as of the date of acquisition. The components of the purchase price allocation are as follows (in thousands):

Net working capital	$ (3,275)
Property and equipment	689
Net liabilities assumed	(2,586)
Deferred tax liability	(7,547)
Acquired in-process research and development	59,195
Goodwill	140,627
Total consideration	$189,689

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As part of the Cobalt acquisition, the Company recorded an IPR&D asset of $59.2 million and $140.6 million in goodwill. IPR&D is required to be classified as an indefinite-lived asset until it becomes a finite-lived asset upon the successful completion or the abandonment of the associated research and development technology. The Company is actively developing the fusogen technology and accordingly, this asset will not be amortized until regulatory approval is obtained in a major market, typically either the U.S. or the European Union, subject to management judgment.

The goodwill recognized as a result of the Cobalt acquisition is primarily attributable to the value the acquisition provides the Company by complementing its *ex-vivo* portfolio with *in-vivo* cell engineering technology and furthers the continued research in using engineered cells as medicines. The goodwill is not expected to be deductible for income tax purposes.

The Company also agreed to pay contingent consideration of up to an aggregate of $500.0 million upon the achievement of certain pre-specified development milestones (Cobalt Contingent Consideration), and a success payment of up to $500.0 million, if, at pre-determined valuation measurement dates, the value of the Company is equal to or exceeds three times the value of the Company implied by the per share value of the Company's Series B convertible preferred stock at issuance, or any security into which such stock has been converted or exchanged, and we have an active program based on the fusogen technology in a clinical trial pursuant to an IND, or have filed for, or received approval for, a BLA or NDA. The Cobalt Contingent Consideration and Cobalt Success Payment are payable in cash or stock, at the Company's discretion. A success payment can be achieved over a maximum of 20 years but could be shorter upon the occurrence of certain events. The valuation measurement dates for the Cobalt Success Payment are triggered by an arms' length equity financing, or an initial public offering (IPO), and periodically thereafter. In addition to an arms' length equity financing or an IPO, a valuation measurement date is triggered upon a change of control when at least one company product utilizing technology acquired from Cobalt is the subject of an active research program. If there is a change of control and the Company valuation implied by the per share value of the Company's Series B convertible preferred stock at issuance, or any security into which such stock has been converted or exchanged, falls below certain thresholds as shown below, the amount of the Cobalt Success Payment will decrease and the amount of potential Cobalt Contingent Consideration will increase. The following table sets forth the different Company valuation thresholds and resulting potential success payment and additional potential Cobalt Contingent Consideration upon a change of control:

Company valuation at change of control date as calculated using a multiple of the Series B convertible preferred stock price at issuance, or any security into which such stock has been converted or exchanged	Success Payment	Additional Potential Cobalt Contingent Consideration
	(in millions)	
Equal to or exceeds a multiple of three (3x)	$ 500	$ —
Equal to or exceeds a multiple of two and three-quarters (2.75x), but less than three (3x)	150	350
Equal to or exceeds a multiple of two and a half (2.50x), but less than two and three-quarters (2.75x)	100	400
Less than a multiple of two and a half (2.50x)	—	500

The Company's liabilities for the Cobalt Success Payment and Cobalt Contingent Consideration are carried at fair value with changes recognized in research and development expense. As of December 31, 2019, the estimated fair value of the Cobalt Success Payment liability and Cobalt Contingent Consideration was $2.4 million and $69.1 million, respectively.

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Cytocardia, Inc.

In November 2019, the Company acquired 100% of the outstanding equity in Cytocardia for a purchase price of $8.0 million, of which $6.8 million was an upfront cash payment, and $1.2 million was set aside (Cytocardia Holdback Amount) to satisfy certain general representations and warranties as set forth in the stock purchase agreement.

The primary asset acquired in the acquisition was IPR&D related to its *ex vivo* cell engineering programs focused on replacement of damaged heart cells. The Company evaluated the acquisition and determined the screen test, as permitted under ASC 805, *Business Combinations*, was met as the $8.0 million purchase price represented consideration for a single identifiable asset related to the technology. The Company concluded the assets acquired did not meet the accounting definition of a business as inputs were acquired, but no processes or outputs were acquired, and the assets had no alternative future use. The transaction was accounted for as an asset acquisition and the purchase price was recorded in research and development expense for the year ended December 31, 2019.

The Cytocardia Holdback Amount will be held for 15 months, until February 2021, at which time the remainder of the balance, after payment of any claims, will be released to the co-founders. In addition to cash paid, the Company is required to make future milestone payments of up to an aggregate of $140.0 million upon the achievement of certain pre-specified development and commercial milestones.

4. Goodwill and intangible asset

The following table summarizes the changes in the carrying amount of goodwill (in thousands):

Balance as of December 31, 2018	$ —
Goodwill acquired	140,627
Balance as of December 31, 2019	$ 140,627

The intangible asset consists of IPR&D acquired from the Cobalt acquisition which is classified as indefinite-lived until the successful completion of the associated research and development technology, at which point it becomes a finite-lived asset that will be amortized over its estimated useful life. The following table summarizes the gross carrying amount, accumulated amortization and the net carrying amount of the intangible asset:

	December 31, 2019		
	Gross Carrying Amount	Accumulated Amortization	Intangible Asset
	(in thousands)		
Indefinite-lived intangible asset:			
Acquired in-process research and development	$ 59,195	$ —	$ 59,195
Total identifiable intangible asset	$ 59,195	$ —	$ 59,195

There were no impairments of goodwill or the intangible asset since inception.

5. License and collaboration agreements

Oscine Corp.

In November 2018, the Company entered into a collaboration, license and option to purchase agreement with Oscine Corp. (Oscine) to pursue research related to Oscine's *ex vivo* glial progenitor cell programs focused

on brain disorders. The Company paid a $5.0 million non-refundable upfront fee, which was recorded in research and development expense for the period from July 13, 2018 (inception) to December 31, 2018. The Company provided $5.5 million to Oscine in additional research funding through December 31, 2019. Oscine is eligible to receive future pre-specified development and commercial milestone payments up to an aggregate of $180.8 million, payable in cash or stock. The Company also has the option to purchase Oscine after the achievement of certain clinical milestones. The agreement terminates at the end of the option to acquire window, the timing of which is dependent upon clinical progress. The Company can terminate the agreement at will upon advance written notice. The Company recognized $0.2 million and $4.2 million of research and development expenses in connection with its collaboration agreement with Oscine for the period from July 13, 2018 (inception) to December 31, 2018 and the year ended December 31, 2019, respectively, and as of December 31, 2019 $1.1 million was included in prepaid expenses and other current assets.

The Regents of the University of California

In January 2019, the Company entered into an exclusive license agreement with the Regents of the University of California to access certain intellectual property for the development of immunoengineered pluripotent cells. Under this agreement, the Company paid $0.1 million in cash and issued 2,950,061 shares of its Series A-2 convertible preferred stock, valued at $1.00 per share, for total consideration of $3.1 million. The Company determined that the licensed technology has no alternative future use and therefore the $3.1 million was recorded in research and development expense for year ended December 31, 2019. Under the agreement, the Company may be required to make certain pre-specified development milestone payments up to an aggregate of $22.4 million.

Harvard College

In March 2019, the Company entered into an exclusive license agreement with Harvard to access certain intellectual property for the development of hypo-immune cells. Under this agreement, the Company paid $3.0 million in cash and issued 8,977,650 shares of its Series A-2 convertible preferred stock, valued at $1.00 per share, for total consideration of $12.0 million. The Company determined the licensed technology has no alternative future use and therefore the $12.0 million was recorded in research and development expense for the year ended December 31, 2019. Additionally, the Company agreed to pay Harvard $6.0 million in cash contingent upon the closing of the Company's Series B convertible preferred stock financing. Under the agreement, the Company may be required to make certain pre-specified development and regulatory milestone payments up to an aggregate of $76.0 million, which would double upon a change of control, as well as success payments up to an aggregate of $175.0 million based on increases in the fair value of the Company's Series A convertible preferred stock at pre-defined thresholds. The contingent $6.0 million license payment and success payments are accounted for as derivatives under ASC 815, *Derivatives and Hedging*, and will be re-valued each reporting period. See Note 7, Fair value measurements.

As of December 31, 2019, the estimated fair value of the contingent license payment to Harvard was $4.6 million. The Company recorded research and development expense of $4.6 million for the year ended December 31, 2019 and a corresponding liability on the balance sheet.

The Company granted Harvard rights to certain success payments, payable in cash. Under the terms of this arrangement, the Company may be required to make success payments to Harvard based on increases in the fair value of the Company's Series A convertible preferred stock, or any security into which such stock has been converted or exchanged. The potential payments are based on multiples of increased value ranging from 5x to 40x based on a comparison of the fair value of the Company's Series A convertible preferred stock relative to its original $1.00 issuance price at pre-determined valuation measurement dates. The aggregate amount of the

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Harvard Success Payments does not exceed an aggregate of $175.0 million which would only occur upon a 40x increase in value. The Harvard Success Payments can be achieved over a maximum of 12 years from the effective date of the contract. The following table summarizes the potential success payments:

Multiple of Equity Value at Issuance	5x	10x	20x	30x	40x
Per share Series A preferred stock price required for payment	$5.00	$10.00	$20.00	$30.00	$40.00
Success payment(s) (in millions)	$ 5.0	$ 15.0	$ 30.0	$ 50.0	$ 75.0

The valuation measurement dates are triggered by events which include: an equity financing prior to an IPO of more than $25.0 million, the one year anniversary of an IPO and periodically thereafter, a merger, an asset sale, the sale of the majority of the shares held by the Company's Series A convertible preferred stockholders, or the last day of the term of the success payments. If a higher success payment tier is met at the same time a lower tier is first met, both tiers will be owed. Any previous success payments made to Harvard are credited against the success payment owed as of any valuation measurement date so that Harvard does not receive multiple success payments in connection with the same threshold.

The Company's liability for the Harvard Success Payments is carried at fair value with changes recognized in research and development expense. To determine the estimated fair value of the success payment liability, the Company uses a Monte Carlo simulation methodology which models the future movement of its Series A convertible preferred stock price based on several key variables.

As of December 31, 2019, the estimated fair value of the Harvard Success Payment liability was $1.9 million. The Company recorded research and development expense of $1.9 million for the year ended December 31, 2019 and a corresponding liability on the balance sheet.

6. Restricted cash

As of December 31, 2018, and 2019, the Company maintained standby letters of credit of $0.8 million and $1.8 million, respectively. Standby letters of credit are collateralized with a bank account at a financial institution in accordance with the lease agreements as follows:

	December 31,	
	2018	2019
	(in thousands)	
South San Francisco, CA	$ 816	$ 816
Cambridge, MA	—	961
Total restricted cash	$ 816	$ 1,777

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7. Fair value measurements

The following tables summarizes Company's financial assets and liabilities measured at fair value on a recurring basis by level based on the three-tier fair value hierarchy:

	Valuation Hierarchy	December 31, 2019 Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Estimated Fair Value
			(in thousands)		
Financial assets:					
Cash equivalents:					
Money market funds	Level 1	$ 49,420	$ —	$ —	$ 49,420
U.S. government and agency securities	Level 2	18,682	1	—	18,683
Corporate debt securities	Level 2	8,433	1	(1)	8,433
Total cash equivalents		76,535	2	(1)	76,536
Short-term marketable securities:					
U.S. government and agency securities	Level 2	42,449	18	(1)	42,466
Corporate debt securities	Level 2	16,477	10	(1)	16,486
Total marketable securities		58,926	28	(2)	58,952
Total financial assets		$135,461	$ 30	$ (3)	$135,488
Financial liabilities:					
Contingent license payment	Level 3	$ 4,557	$ —	$ —	$ 4,557
Contingent consideration	Level 3	69,108	—	—	69,108
Success payment liabilities	Level 3	4,352	—	—	4,352
Total financial liabilities		$ 78,017	$ —	$ —	$ 78,017

The Company evaluated its securities for other-than-temporary impairment and considers the decline in market value for the securities to be primarily attributable to current economic and market conditions. Securities in an unrealized loss position have been in an unrealized loss position for less than one year. For the debt securities, it is not more-likely-than-not that the Company will be required to sell the securities, and the Company does not intend to do so prior to the recovery of the amortized cost basis.

All marketable securities have an effective maturity date of two years or less. Investments in securities with maturities of less than one year, or those for which management intends to use the investments to fund current operations, are included in current assets and are available for use and therefore classified as available-for-sale.

The Company measures the fair value of money market funds based on quoted prices in active markets for identical assets or liabilities. The Level 2 marketable securities include U.S. government, agency securities and corporate debt securities and are valued either based on recent trades of securities in inactive markets or based on quoted market prices of similar instruments and other significant inputs derived from or corroborated by observable market data.

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The following table sets forth a summary of the changes in the fair value of the Company's Level 3 financial liabilities:

	Contingent License Payment	Contingent Consideration	Success Payment Liabilities
		(in thousands)	
Balance as of December 31, 2018	$ —	$ —	$ —
Additions	3,989	51,248	4,192
Changes in fair value	568	17,860	160
Balance as of December 31, 2019	$ 4,557	$ 69,108	$ 4,352

The initial recognition of the Cobalt Contingent Consideration and Cobalt Success Payment liability was recorded as part of the purchase price as an increase to goodwill and accrued liabilities. Subsequent changes in the fair value of the Cobalt Contingent Consideration and Cobalt Success Payment liability are recorded in research and development expense. The fair value of the Harvard Success Payments and Harvard contingent license payment are recorded in research and development expense.

Contingent license payment

The Company utilizes estimates and assumptions in determining the estimated contingent license liability and associated expense at each balance sheet date. The assumptions used to calculate the fair value of the contingent license payment are subject to a significant amount of judgment including the expected probability of the Series B financing occurring and estimated timing of achievement. A small change in the assumptions, such as the timing of the Series B financing, may have a relatively large change in the estimated valuation and associated liability and expense.

Contingent consideration

In connection with the acquisition of Cobalt, the Company may be required to pay future consideration that is contingent upon the achievement of certain pre-specified development milestones. The valuation of the Cobalt Contingent Consideration uses assumptions the Company believes would be made by a market participant. The fair value of the Cobalt Contingent Consideration was determined by calculating the probability-weighted estimated value of the pre-specified development milestone payments based on the assessment of the likelihood and estimated timing that certain milestones would be achieved, and the estimated discount rates. The discount rate captures the credit risk associated with the payment of the contingent consideration when earned and due. The Company assesses these estimates on an on-going basis as additional data impacting the assumptions is obtained.

As of December 31, 2019, the fair value of the Cobalt Contingent Consideration was calculated using the following unobservable inputs:

Unobservable Input	Range	Weighted-Average
Discount rates	14.6% - 15.6%	15%
Probability of milestone achievement	1.9% - 47.5%	19%

The weighted-average unobservable inputs were based on the relative value of the Cobalt Contingent Consideration. The estimated fair value of the Cobalt Contingent Consideration may change significantly as development progresses and additional data are obtained, impacting the assumptions regarding probabilities of

successful achievement of the milestones used to estimate the fair value of the liability and the timing in which they are expected to be achieved. In evaluating the fair value information, judgment is required to interpret the market data used to develop the estimates. The estimates of fair value may not be indicative of the amounts that could be realized in a current market exchange. Accordingly, the use of different market assumptions and/or different valuation techniques could result in materially different fair value estimates. Significant increases or decreases in any of the inputs would result in a significantly higher or lower fair value measurement.

Success payments

The Company utilizes significant estimates and assumptions in determining the estimated success payment liability and associated expense or gain at each balance sheet date. The assumptions used to calculate the fair value of the success payments are subject to a significant amount of judgment including the estimated future value of the Company's Series A convertible preferred stock, the estimated future value of the Company implied by the estimated future per share value of the Company's Series B convertible preferred stock at issuance, the expected volatility, estimated term, and estimated number and timing of valuation measurement dates.

As of December 31, 2019, the fair value of the Cobalt and Harvard Success Payments were calculated using the following unobservable inputs:

Unobservable Input	Cobalt	Harvard
Expected volatility	70%	70%
Expected term (years)	19	11

A small change in the assumptions and other inputs used to calculate the estimated fair value of the success payments may result in a relatively large change in the estimated valuation and associated liability and expense or gain.

8. Property and equipment, net

Property and equipment, net consists of the following:

	December 31,	
	2018	2019
	(in thousands)	
Laboratory equipment	$ 57	$ 15,046
Leasehold improvements	—	10,624
Construction in progress	529	3,421
Computer equipment, software and other	—	636
Total property and equipment, at cost	586	29,727
Less: Accumulated depreciation	(1)	(1,816)
Property and equipment, net	$ 585	$ 27,911

Depreciation expense related to property and equipment was immaterial for the period from July 13, 2018 (inception) to December 31, 2018, and $1.8 million for the year ended December 31, 2019.

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9. Accrued liabilities

Accrued compensation and accrued expenses and other current liabilities consist of the following:

	December 31, 2018	December 31, 2019
	(in thousands)	
Accrued compensation:		
Accrued bonuses	$ 540	$ 6,035
Other accrued compensation	271	2,059
Total accrued compensation	$ 811	$ 8,094
Accrued expenses and other current liabilities:		
Accrued contingent license payment	$ —	$ 4,557
Accrued property and equipment	—	2,257
Accrued professional fees	321	1,131
Other	364	1,942
Total accrued expenses and other current liabilities	$ 685	$ 9,887

10. Commitments and contingencies

Lease commitments

The Company's lease portfolio is primarily comprised of operating leases for office and laboratory space located in Seattle, WA, Cambridge, MA, and South San Francisco, CA. These leases contain various rent abatement periods, after which they require monthly lease payments that may be subject to annual increases throughout the lease term. The Seattle and South San Francisco lease agreements provide the Company with the option to renew for an additional period of five years. The Company is not reasonably certain it will renew these leases, and therefore the renewal options are not considered in the remaining lease term. Certain leases provide the Company the right to make tenant improvements, including the addition of laboratory space, and include a lease incentive allowance.

The following table is a summary of the Company's operating leases in which a ROU asset and lease liability were recognized:

Location	Approximate Square Footage	Lease Commencement	Rent Commencement	Lease Expiration
Seattle, WA	25,898	March 2019	December 2019	December 2026
Cambridge, MA	24,386	March 2019	July 2019	June 2027
South San Francisco, CA	66,075	November 2018 amended December 2019	November 2018 and September 2020	April 2030

Throughout the term of the lease agreements, the Company is responsible for paying certain operating costs, in addition to rent, such as common area maintenance, taxes, utilities, and insurance. These additional charges are considered variable lease costs and are recognized in the period in which the costs are incurred.

For the year ended December 31, 2019, the weighted-average remaining lease term was 9.09 years and the weighted-average IBR was 11.24%.

Rent expense for the period from July 13, 2018 (inception) to December 31, 2018 was $1.1 million and consisted primarily of short-term leases and the Company's South San Francisco lease. Rent expense for the

Company's operating leases was $8.6 million for the year ended December 31, 2019, which consisted of $4.9 million straight-line recognition of fixed payments and $3.7 million associated with short-term leases. Variable lease payments for operating expenses were $0.1 million and $1.5 million for the period from July 13, 2018 (inception) to December 31, 2018 and for the years ended December 31, 2019, respectively.

The following table presents the scheduled maturities of the Company's operating lease liabilities by fiscal year and the present value of those lease liabilities as of December 31, 2019 (in thousands):

2020	$ 6,763
2021	8,579
2022	8,858
2023	9,146
2024	9,443
2025 and thereafter	41,338
Total lease payments	84,127
Less: imputed interest	(33,345)
Less: tenant improvement allowances	(2,575)
Present value of lease liabilities	$ 48,207

11. Convertible preferred stock

Series A-1 convertible preferred stock financing

In October 2018, the Company executed an agreement to sell up to 45,850,000 shares of its Series A-1 convertible preferred stock at a price of $1.00 per share. The Company issued 45,850,000 shares in October and November 2018 for gross proceeds of $45.9 million.

Upon certain change in control events that are outside of the Company's control, holders of the convertible preferred stock can cause its redemption. This requires the Company's convertible preferred stock to be classified outside of stockholders' deficit on the accompanying consolidated balance sheets.

Series A-2 and Series B convertible preferred stock financing

In February 2019, the Company executed an agreement for 216,147,467 shares of its Series A-2 convertible preferred stock at a price of $1.00 per share, for gross proceeds of $216.1 million. In October 2019, an additional 7,866,669 the Company's Series A-2 convertible preferred stock were sold at a price of $1.00 per share, for gross proceeds of $7.9 million.

The Series A-2 convertible preferred agreement also commits these investors to a Series B convertible preferred stock financing with the issuance of up to 110,227,706 shares of the Company's Series B convertible preferred stock at a price of $4.00 per share, contingent upon the occurrence of certain clinical milestones or the unanimous approval of the Company's board of directors. Additionally, in the event the clinical milestones are not achieved, the agreement states at least two large Series B convertible preferred stock investors, defined as investors with at least a $29.0 million Series B convertible preferred stock investment, have the right to object to a the board of director's decision to call the Series B convertible preferred stock closing within seven days.

In connection with this financing, the Company amended and restated its certificate of incorporation and amended the investors' rights agreement and voting agreement with its stockholders. Under the amended and

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restated certificate of incorporation, the authorized capital stock of the Company increased to 700,000,000 shares, each with a par value of $0.0001 per share. The authorized shares consisted of 162,213,794 shares designated as common stock and 537,786,206 shares designated as convertible preferred stock.

Rights issued with Series A-1 and Series A-2 convertible preferred stock

The Company assessed the Series A-1 and Series A-2 convertible preferred stock for any beneficial conversion features or embedded derivatives, including the conversion option, that would require bifurcation from the convertible preferred stock and receive separate accounting treatment. On the dates of the issuances, the fair value of the common stock into which the convertible preferred stock was convertible was less than the effective conversion price of the Series A-1 and Series A-2 convertible preferred stock; as such, there was no intrinsic value of the conversion option on the commitment date.

Conversion

Shares of the Company's Series A-1 and Series A-2 convertible preferred stock are convertible into shares of the Company's common stock based on a defined conversion ratio, set at one-for-one, adjustable for certain dilutive events. The conversion ratio for the convertible preferred stock is subject to change in accordance with anti-dilution provisions contained in the Company's certificate of incorporation.

The Company's Series A-1 and Series A-2 convertible preferred stock is convertible at the option of the holder at any time without any additional consideration. The convertible preferred stock will automatically convert into shares of the Company's common stock at the then effective applicable conversion rate, upon the closing of the sale of shares of common stock to the public in an underwritten public offering at a price that generates at least $75.0 million in gross proceeds pursuant to an effective registration statement under the Securities Act of 1933, as amended, provided that the Company's common stock is listed for trading on a national securities exchange. In addition, the convertible preferred stock will automatically convert into shares of common stock upon the vote or written consent of the holders of at least 70% of the outstanding Series A-1 convertible preferred stock and Series A-2 convertible preferred stock, voting together as a single class on an as-converted basis.

Dividends

Each holder of the Company's Series A-1 and Series A-2 convertible preferred stock is entitled to receive non-cumulative dividends, when and if declared by the Company's board of directors, at an annual rate of 6% of the original issue price prior to and in preference to the payment of a dividend on common stock. Any additional dividends shall be distributed among the holders of common stock pro rata based on the number of shares of common stock (on an as-converted basis). No dividends have been declared to date.

Liquidation preference

The Company may be liquidated voluntarily by the Company's board of directors with consent of the holders of at least 70% of the outstanding Series A-1 convertible preferred stock and Series A-2 convertible preferred stock, voting together as a single class on an as-converted basis.

In the event that the Company is liquidated either voluntarily or involuntarily, or if any event occurs that is deemed a liquidation under the Company's certificate of incorporation, each holder of the Company's Series A-1 and Series A-2 convertible preferred stock will be entitled to receive a liquidation preference out of any proceeds from the liquidation before any distributions are made to the holders of common stock. The liquidation

preference for each share of the Series A-1 and Series A-2 convertible preferred is equal to the greater of a) the original issue price (plus any declared but unpaid dividends), or b) such amount per share as would have been payable had all the Series A-1 and Series A-2 convertible preferred stock been converted into common stock immediately prior to a liquidation event.

Voting rights

Each of the Company's Series A-1 and Series A-2 convertible preferred stock vote (on an as-converted to common stock basis) with the other voting stock of the Company.

The consent of the holders of at least 70% of the Company's outstanding Series A-1 convertible preferred stock and Series A-2 convertible preferred stock, voting together as a single class on an as-converted basis, is required for any of the following actions: the amendment or waiver of any provision of the certificate of incorporation or bylaws of the Company in a manner that adversely affects the rights, preferences or privileges of the Series A-1 and Series A-2 convertible preferred stock; any change in the authorized number of Series A-1 and Series A-2 convertible preferred stock, or any other class of stock of the Company; the creation of any new class or series of shares having rights, preferences or privileges senior to or on a parity with the Series A-1 and Series A-2 convertible preferred stock; the approval of any change in control event; the redemption of any securities of the Company, other than repurchases of common stock upon termination of a consultant, director or employee approved by the Company's board of directors; any increase or decrease in the authorized size of the Company's board of directors; the declaration or payment of any dividend or distribution on the Series A-1 and Series A-2 convertible preferred stock (except as provided in the certificate of incorporation) or common stock; or the liquidation or dissolution of the Company.

In addition, the stockholders of the Company have entered into a voting agreement pursuant to which the Company's Series A-1 and Series A-2 convertible preferred stock and common stockholders each elected five members to its board of directors, respectively.

Reorganization

Any change in control event, including any change in the holders of a majority of the equity of the Company by merger, consolidation, reorganization or otherwise, or any sale or exclusive license of substantially all the assets of the Company, will be deemed a liquidation under the Company's certificate of incorporation unless waived the holders of at least 70% of Company's the outstanding Series A-1 convertible preferred stock and Series A-2 convertible preferred stock, voting together as a single class on an as-converted basis.

After liquidation preferences for the Company's Series A-1 and Series A-2 convertible preferred stock described above have been satisfied, any additional proceeds from any deemed liquidation will be distributed among the holders of common stock pro rata based on the number of shares of common stock (on an as-converted basis).

12. Common stock

As of December 31, 2019, there were 40,013,424 shares of the Company's common stock outstanding, excluding the 68,560,627 shares of restricted common stock outstanding that are subject to vesting requirements.

As of December 31, 2019, the Company had reserved 427,558,231 shares of its common stock for future issuance upon the conversion of its Series A-1 and Series A-2 convertible preferred stock outstanding.

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13. Stock-based compensation

Equity Incentive Plan

In October 2018, the Company adopted the 2018 Equity Incentive Plan (the 2018 Plan) under which it may grant incentive stock options, non-statutory stock options, RSAs, RSUs, and other stock-based awards to any person, including officers, directors, and consultants. Terms of stock agreements, including vesting requirements, are determined by the Company's board of directors, or by a committee appointed by the board of directors, subject to the provisions of the 2018 Plan.

Generally, awards granted by the Company vest over four years and have an exercise price equal to the estimated fair value of the common stock as determined by the board of directors with consideration given to contemporaneous valuations of the Company's common stock prepared by an independent third party valuation firm in accordance with the guidance provided by the AICPA Guide.

As of December 31, 2019, there were 9,614,001 shares available for future issuance under the 2018 Plan.

RSU Plan

In March 2019, pursuant to the terms of the Cobalt merger agreement, the Company adopted a restricted stock unit plan (RSU Plan) under which it may grant RSUs to certain employees and consultants. The RSU Plan provides for up to 1,397,018 shares of common stock to be awarded. As of December 31, 2019, there were 17,239 shares available for future issuance under the RSU Plan.

Stock-based compensation expense

Stock-based compensation expense is recognized in the consolidated statements of operations as follows:

	Period from July 13, 2018 (Inception) to December 31, 2018	Year Ended December 31, 2019
	(in thousands)	
Research and development	$ 36	$ 1,246
General and administrative	22	251
Total stock-based compensation expense	$ 58	$ 1,497

Unrecognized stock-based compensation costs related to unvested awards and the weighted-average period over which the costs are expected to be recognized as of December 31, 2019 are as follows:

	Stock Options	RSAs
Unrecognized stock-based compensation expense (thousands)	$ 2,802	$ 4,885
Expected weighted-average period compensation costs to be recognized (years)	3.5	2.6

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As of December 31, 2019, the Company had $0.5 million of unrecognized stock-based compensation costs related to RSUs originating from the Cobalt acquisition that are subject to (i) service-based vesting over four years, (ii) achievement of the first milestone which occurred in July 2019, and (iii) a liquidity event. The estimated compensation expense will be recognized ratably over the service period, or remaining service period, if and when it becomes probable that the vesting conditions will be satisfied. As of December 31, 2019, no stock-based compensation expense was recognized related to RSUs.

Stock options

A summary of the Company's stock option activity is as follows:

	Stock Options	Weighted-Average Exercise Price per Share	Weighted-Average Remaining Contractual Life (years)	Aggregate Intrinsic Value (in thousands)
Outstanding as of December 31, 2018	—	$ —		
Granted	14,555,642	0.36		
Exercised	(2,500)	0.36		
Forfeited/Cancelled	(357,143)	0.36		
Outstanding as of December 31, 2019	14,195,999	$ 0.36	9.6	$ 142
Exercisable as of December 31, 2019	231,005	$ 0.36	9.3	$ 2

The fair value of stock options granted to employees, directors, and consultants was estimated on the date of grant using the Black-Scholes option pricing model using the following assumptions:

Assumptions	December 31, 2019
Risk-free interest rate	1.53% - 2.62%
Expected volatility	70%
Expected term (years)	6.02 - 6.25
Expected dividend	0%

During the year ended December 31, 2019 the weighted-average grant date fair value of the options granted was $0.23 per share. No stock options were granted in 2018.

Restricted stock awards

A summary of the Company's RSA activity is as follows:

	RSAs	Weighted-Average Grant Date Fair Value per Share
Unvested shares as of July 13, 2018 (inception)	—	$ —
Granted	108,305,485	0.02
Vested	(4,905,467)	—
Forfeited	(15,000)	—
Unvested shares as of December 31, 2018	103,385,018	$ 0.02
Granted	9,966,578	0.36
Vested	(33,700,457)	0.03
Forfeited	(11,090,512)	0.01
Unvested shares as of December 31, 2019	68,560,627	$ 0.07

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The fair value of vested RSAs was immaterial for the period from July 13, 2018 (inception) to December 31, 2018 and $1.0 million for the year ended December 31, 2019.

During the year ended December 31, 2019, there were 1,383,288 RSUs granted, zero vested, and 3,509 cancelled.

14. Income taxes

As of December 31, 2018 and 2019, the Company had U.S. federal tax-effected net operating loss (NOL) carryforwards of $1.9 million and $22.6 million, respectively, which are available to reduce future taxable income. The Company also had state tax-effected NOL carryforwards of $0.1 million and $3.5 million as of December 31, 2018 and 2019, respectively. At December 31, 2019, the Company also had federal and state research tax credits of $2.9 million and $1.6 million, respectively, which may be used to offset future tax liabilities. The federal NOL carries forward indefinitely and the federal tax credit carryforward will begin to expire in 2038. The state NOL will begin to expire in 2038 and the California state tax credit will carry forward indefinitely. The NOL and tax credit carryforwards may become subject to an annual limitation in the event of certain cumulative changes in the ownership interest. This could limit the amount of tax attributes that can be utilized annually to offset future taxable income or tax liabilities. Subsequent ownership changes may further affect the limitation in future years.

In connection with the 2019 Cobalt acquisition, the Company recorded a deferred tax liability of $7.5 million associated with the acquired intangible asset. For the year ended December 31, 2019, the Company recorded a tax benefit of $7.5 million related to the release of valuation allowance on U.S. deferred tax assets as a result of deferred tax liabilities established for intangible assets from the acquisition of Cobalt.

A reconciliation of income taxes computed using the U.S. federal statutory rate to that reflected in operations follows:

	Period from July 13, 2018 (Inception) to December 31, 2018	Year Ended December 31, 2019
Federal statutory tax	21.00%	21.00%
Valuation allowance	(23.60)	(16.32)
Contingent liability	—	(2.71)
In-process research & development	—	(1.21)
Tax credits	1.01	1.93
Other	1.59	2.77
Effective income tax rate	0.00%	5.46%

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The principal components of the Company's net deferred tax assets are as follows:

	December 31,	
	2018	2019
	(in thousands)	
Deferred tax assets:		
Net operating loss carryforwards	$ 1,984	$ 26,116
Lease liabilities	—	11,391
Tax credit carryforwards	196	4,527
Accrued liabilities and allowances	13	1,620
Business transactions	1,308	1,204
Intangibles	159	—
Other	9	453
Gross deferred tax assets	3,669	45,311
Valuation allowance	(3,127)	(25,791)
Deferred tax assets, net of valuation allowance	542	19,520
Deferred tax liabilities:		
Right-of-use assets	—	(9,664)
Intangibles	—	(8,340)
Stock-based compensation	(530)	(1,145)
Fixed assets	(12)	(371)
Deferred tax liabilities	(542)	(19,520)
Net deferred taxes assets	$ —	$ —

The valuation allowance relates primarily to net U.S. deferred tax assets from operating losses, research tax credit carryforwards, and amounts paid and accrued to enter into various agreements for which the tax treatment requires capitalization and amortization.

The Company maintains a full valuation allowance on its net U.S. deferred tax assets. The assessment regarding whether a valuation allowance is required considers both positive and negative evidence when determining whether it is more likely than not that deferred tax assets are recoverable. In making this assessment, significant weight is given to evidence that can be objectively verified. In its evaluation, the Company considered its cumulative loss in the first year of operation and its forecasted losses in the near term as significant negative evidence. Based upon a review of the four sources of income identified within ASC 740, *Accounting for Income Taxes*, the Company determined that the negative evidence outweighed the positive evidence and a full valuation allowance on its net deferred tax assets will be maintained. The Company will continue to assess the realizability of its deferred tax assets going forward and will adjust the valuation allowance as needed.

The Company determines its uncertain tax positions based on a determination of whether and how much of a tax benefit taken by the Company in its tax filings or positions is more likely than not to be sustained upon examination by the relevant income tax authorities. The Company is generally subject to examination by U.S. federal and local income tax authorities for all tax years in which the loss carryforward is available.

The Company applies judgment in the determination of the financial statement recognition and measurement of tax positions taken or expected to be taken in a tax return. As of December 31, 2018, and 2019, the Company had no uncertain tax positions.

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Notes to Consolidated Financial Statements

15. Net loss per share

Basic and diluted net loss per common share is calculated by dividing net loss applicable to common stockholders by the weighted-average number of common shares outstanding during the period, without consideration for common stock equivalents. The Company was in a loss position for all periods presented, therefore basic net loss per share was the same as diluted net loss per share for all periods as the inclusion of all potential common securities outstanding would have been anti-dilutive.

The following table sets forth the computation of basic and diluted net loss per share of common stock:

	Period from July 13, 2018 (Inception) to December 31, 2018	Year Ended December 31, 2019
	(in thousands, except share and per share data)	
Net loss applicable to common stockholders	$ (13,247)	$ (130,778)
Weighted-average common shares used in net loss per share applicable to common stockholders, basic and diluted	3,808,344	19,610,571
Net loss per share applicable to common stockholders, basic and diluted	$ (3.48)	$ (6.67)

The amounts in the table below were excluded from the calculation of diluted net loss per share, prior to the use of the treasury stock method, due to their anti-dilutive effect:

	December 31,	
	2018	2019
Series A-1 convertible preferred stock	45,850,000	45,850,000
Series A-2 convertible preferred stock	—	381,708,231
Unvested restricted common stock	103,385,018	68,560,627
Options to purchase common stock	—	14,195,999
Unvested RSUs	—	1,379,779
Total	149,235,018	511,694,636

16. Employee benefit plan

In January 2019, the Company adopted a 401(k) retirement and savings plan (the 401(k) Plan) covering all employees. The 401(k) Plan allows employees to make pre- and post-tax contributions up to the maximum allowable amount set by the IRS. As of December 31, 2019, the Company has not made any matching contributions to the 401(k) Plan on behalf of participants.

17. Subsequent events

In January 2020, the Company entered into a sublease agreement for office and laboratory space in Cambridge Massachusetts. As of December 31, 2019, the Company maintains a letter of credit for the benefit of the landlord in the amount of $0.9 million. See Note 6, Restricted cash. The Company has the right to make tenant improvements, including the addition of laboratory space, with a lease incentive allowance of $1.3 million. The rent payments will begin in May 2020 after an abatement period of three months. Upon obtaining access to the building in January 2020, the Company recognized a lease asset and lease liability of $14.3 million. The lease term is eight years. The landlord has a right to terminate the lease after five years. If the lease is terminated by the landlord, the Company would receive an early termination fee calculated as a percentage of constructed tenant improvements, net of the tenant improvement allowance.

The Company evaluated subsequent events through April 22, 2020, the date the consolidated financial statements were available to be issued.

Sana Biotechnology, Inc.
Condensed Consolidated Balance Sheets
(in thousands, except share and per share amounts)

	December 31, 2019	September 30, 2020 (unaudited)
ASSETS		
Current assets:		
Cash and cash equivalents	$ 80,030	$ 149,221
Marketable securities	58,952	301,640
Prepaid expenses and other current assets	5,281	4,707
Total current assets	144,263	455,568
Property and equipment, net	27,911	39,770
Operating lease right-of-use assets, net	41,403	61,965
Restricted cash	1,777	2,143
Long-term marketable securities	—	8,209
Intangible asset	59,195	59,195
Goodwill	140,627	140,627
Other non-current assets	522	238
TOTAL ASSETS	$ 415,698	$ 767,715
LIABILITIES, CONVERTIBLE PREFERRED STOCK, AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	$ —	$ 3,889
Accrued compensation	8,094	10,912
Accrued expenses and other current liabilities	9,887	8,547
Operating lease liabilities	1,848	3,189
Total current liabilities	19,829	26,537
Operating lease liabilities, net of current portion	46,359	67,461
Contingent consideration	69,108	85,780
Success payment liabilities	4,352	44,989
Other non-current liabilities	1,233	1,226
Total liabilities	140,881	225,993
Commitments and contingencies (Note 10)		
Convertible preferred stock, $0.0001 par value; 537,786,206 shares authorized as of December 31, 2019 and September 30, 2020; 427,558,231 and 536,450,939 shares issued and outstanding as of December 31, 2019 and September 30, 2020, respectively; aggregate liquidation preference of $450,837 and $913,613 as of December 31, 2019 and September 30, 2020, respectively	417,359	852,897
Stockholders' deficit:		
Common stock, $0.0001 par value; 700,000,000 shares authorized as of December 31, 2019 and September 30, 2020; 40,013,424 and 57,001,580 shares issued and outstanding as of December 31, 2019 and September 30, 2020, respectively	4	6
Additional paid-in capital	1,555	5,026
Accumulated other comprehensive income	26	55
Accumulated deficit	(144,127)	(316,262)
Total stockholders' deficit	(142,542)	(311,175)
TOTAL LIABILITIES, CONVERTIBLE PREFERRED STOCK, AND STOCKHOLDERS' DEFICIT	$ 415,698	$ 767,715

The accompanying notes are an integral part of these financial statements.

Sana Biotechnology, Inc.
Condensed Consolidated Statements of Operations
(in thousands, except share and per share amounts)
(unaudited)

	Nine Months Ended September 30,	
	2019	2020
Operating expenses:		
Research and development	$ 80,101	$ 153,762
General and administrative	15,959	19,063
Total operating expenses	96,060	172,825
Loss from operations	(96,060)	(172,825)
Interest income, net	2,175	622
Other (expense) income, net	(52)	68
Loss before income taxes	(93,937)	(172,135)
Benefit from income taxes	6,204	—
Net loss	$ (87,733)	$ (172,135)
Net loss per share, basic and diluted	$ (6.06)	$ (3.51)
Weighted-average shares outstanding, basic and diluted	14,480,086	48,997,930

The accompanying notes are an integral part of these financial statements.

Sana Biotechnology, Inc.
Condensed Consolidated Statements of Comprehensive Loss
(in thousands)
(unaudited)

	Nine Months Ended September 30,	
	2019	2020
Net loss	$ (87,733)	$ (172,135)
Other comprehensive income, net of tax:		
Net unrealized gain on marketable securities	44	29
Total other comprehensive income	44	29
Comprehensive loss	$ (87,689)	$ (172,106)

The accompanying notes are an integral part of these financial statements.

Sana Biotechnology, Inc.
Condensed Consolidated Statements of Convertible Preferred Stock and Stockholders' Deficit
(in thousands, except share amounts)
(unaudited)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount				
Balance as of December 31, 2018	45,850,000	$ 45,721	6,310,467	$ 1	$ 58	$ —	$ (13,247)	$ (13,188)
Adjustment to beginning accumulated deficit from adoption of ASC 842	—	—	—	—	—	—	(102)	(102)
Issuance of Series A-2 convertible preferred stock, net of issuance costs of $224	216,147,467	215,924	—	—	—	—	—	—
Issuance of Series A-2 convertible preferred stock for acquisition, non-cash	145,766,384	135,971	—	—	—	—	—	—
Issuance of Series A-2 convertible preferred stock in connection with license agreements	11,927,711	11,928	—	—	—	—	—	—
Stock-based compensation expense	—	—	24,092,346	2	1,010	—	—	1,012
Exercise of stock options	—	—	2,500	—	1	—	—	1
Other comprehensive income, net	—	—	—	—	—	44	—	44
Net loss	—	—	—	—	—	—	(87,733)	(87,733)
Balance as of September 30, 2019	419,691,562	$ 409,544	30,405,313	$ 3	$ 1,069	$ 44	$ (101,082)	$ (99,966)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount				
Balance as of December 31, 2019	427,558,231	$ 417,359	40,013,424	$ 4	$ 1,555	$ 26	$ (144,127)	$ (142,542)
Issuance of Series B convertible preferred stock, net of issuance costs of $33	108,892,708	435,538	—	—	—	—	—	—
Issuance of common stock in connection with license agreement	—	—	250,000	—	388	—	—	388
Stock-based compensation expense	—	—	16,609,512	2	3,037	—	—	3,039
Exercise of stock options	—	—	128,644	—	46	—	—	46
Other comprehensive income, net	—	—	—	—	—	29	—	29
Net loss	—	—	—	—	—	—	(172,135)	(172,135)
Balance as of September 30, 2020	536,450,939	$ 852,897	57,001,580	$ 6	$ 5,026	$ 55	$ (316,262)	$ (311,175)

The accompanying notes are an integral part of these financial statements.

Sana Biotechnology, Inc.
Condensed Consolidated Statements of Cash Flows
(in thousands)
(unaudited)

	Nine Months Ended September 30,	
	2019	2020
OPERATING ACTIVITIES:		
Net loss	$ (87,733)	$ (172,135)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	798	4,166
Deferred income tax	(6,204)	—
Stock-based compensation expense	1,010	3,037
Change in fair value of contingent consideration	15,564	16,672
Change in fair value of success payment liabilities	1,427	40,637
Non-cash expense for equity issuance in connection with license agreements	11,928	388
Non-cash expense in connection with license agreement	4,364	—
Non-cash expense in connection with asset acquisition	—	850
Non-cash right-of-use assets lease expense	1,559	2,889
Other non-cash items	(313)	(419)
Changes in operating assets and liabilities:		
Prepaid expenses and other assets	(4,528)	682
Operating lease right-of-use assets and liabilities	2,791	91
Accounts payable	469	2,414
Accrued expenses and other liabilities	7,160	1,748
Payment of contingent liability in connection with license agreement	—	(1,443)
Net cash used in operating activities	(51,708)	(100,423)
INVESTING ACTIVITIES:		
Purchases of marketable securities	(130,395)	(307,398)
Proceeds from sales and maturities of marketable securities	39,340	56,400
Purchases of property and equipment	(20,453)	(14,606)
Acquisitions, net of cash acquired	(3,195)	—
Proceeds from disposal of assets	59	—
Net cash used in investing activities	(114,644)	(265,604)
FINANCING ACTIVITIES:		
Proceeds from issuance of convertible preferred stock, net of issuance costs	215,924	435,538
Proceeds from issuance of common stock	1	46
Payment of contingent consideration	(14)	—
Net cash provided by financing activities	215,911	435,584
Net increase in cash, cash equivalents, and restricted cash	49,559	69,557
Cash, cash equivalents, and restricted cash at beginning of period	31,446	81,807
Cash, cash equivalents, and restricted cash at end of period	$ 81,005	$ 151,364
SUPPLEMENTAL CASH FLOW DISCLOSURES:		
Purchases of property and equipment included in accounts payable and accrued liabilities	$ 988	$ 4,238
Issuance of convertible preferred stock for acquisition	$ 135,971	$ —
Right-of-use assets obtained in exchange for operating lease liabilities	$ 28,023	$ 23,049
Tenant improvement allowance included in contra-lease liability	$ 3,058	$ 8,515
Cash received from lessor for tenant improvement allowance	$ 2,791	$ 91

The accompanying notes are an integral part of these financial statements.

Sana Biotechnology, Inc.
Notes to Unaudited Condensed Consolidated Financial Statements

1. Organization

Sana Biotechnology, Inc. (the Company or Sana) was incorporated in Delaware on July 13, 2018 (inception) as FD Therapeutics, Inc., and changed its name to Sana Biotechnology, Inc. on September 17, 2018. The Company is a biotechnology company, focusing on utilizing engineered cells as medicines. The Company's operations to date have included identifying and developing potential product candidates, executing preclinical studies, acquiring technology, organizing and staffing the Company, business planning, establishing the Company's intellectual property portfolio, raising capital, and providing general and administrative support for these operations.

In September 2020, the Company acquired 100% of the outstanding shares of common stock of Oscine Corp. (Oscine), a privately-held early-stage biotechnology company developing *ex vivo* glial progenitor cell programs focused on brain disorders. The acquisition of Oscine complements the Company's *ex vivo* cell engineering portfolio. See Note 3, Acquisitions.

The Company is subject to a number of risks similar to other biotechnology companies in the development stage including, but not limited to, the need to obtain adequate additional funding, possible failure of preclinical testing or clinical trials, the need to obtain marketing approval for its product candidates, competitors developing new technological innovations, the need to successfully commercialize and gain market acceptance of the Company's products, protect the Company's intellectual property and proprietary technology, and the need to attract and retain key scientific and management personnel. If the Company does not successfully commercialize or partner any of its product candidates, it will be unable to generate product revenue or achieve profitability. Through September 30, 2020, the Company has financed its operations through the sale and issuance of convertible preferred stock. The Company intends to raise additional capital through the issuance of equity or strategic alliances with third parties. As of September 30, 2020, the Company had an accumulated deficit of $316.3 million and cash, cash equivalents, and marketable securities of $459.1 million.

2. Summary of significant accounting policies

Basis of presentation

The accompanying consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. The Company's consolidated financial statements have been prepared in accordance with generally accepted accounting principles in the United States (GAAP). Certain prior period amounts have been reclassified to conform to current period presentation.

Use of estimates

The preparation of the financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. The Company evaluates its estimates and assumptions on an ongoing basis using historical experience and other factors and adjusts those estimates and assumptions when facts and circumstances dictate. Actual results could materially differ from those estimates. The most significant estimates in the Company's consolidated financial statements relate to business combinations, accrued expenses, the valuation of common stock, and the valuation of success payments and contingent consideration.

The Company utilizes significant estimates and assumptions in determining the fair value of its common stock. The Company recorded expense for restricted stock awards (RSAs), stock options and restricted stock units (RSUs) at prices not less than the fair market value of its common stock as determined by management with consideration of the American Institute of Certified Public Accountants Technical Practice Aid, *Valuation of*

Sana Biotechnology, Inc.
Notes to Unaudited Condensed Consolidated Financial Statements

Privately-Held Company Equity Securities Issued as Compensation, (AICPA Guide). The estimated fair value of the Company's common stock is based on a number of objective and subjective factors, including the most recently available valuations of the Company's common stock performed by an independent third-party valuation firm, the prices of shares of convertible preferred stock sold to investors in arm's length transactions, the superior rights and preferences of securities senior to the Company's common stock at the time, the Company's stage of development, results of operation and financial position, material risks to the Company's business, the lack of marketability of the common stock, and external market conditions affecting the biotechnology industry sector.

The Company also uses significant estimates and assumptions in determining the estimated fair value of the success payment and contingent consideration liabilities, which are measured at issuance and at each balance sheet date, with changes in fair value recognized in research and development expense. A small change in the estimated future value of the Company's Series A convertible preferred stock price or the estimated future value of the Company implied by the estimated future per share value of the Series B convertible preferred stock may have a relatively large impact on the change in the estimated fair value of the success payment liability and associated expense or gain. Changes in the probabilities and estimated timing of milestones used in the calculation of the contingent consideration liability may have a relatively large impact on the resulting liability and associated expense or gain.

Unaudited interim condensed consolidated financial statements

The interim condensed consolidated balance sheet as of September 30, 2020, and the condensed consolidated statements of operations, comprehensive loss, cash flows, and convertible preferred stock and stockholders' deficit for the nine months ended September 30, 2019 and 2020 are unaudited. The unaudited interim condensed consolidated financial statements have been prepared on the same basis as the annual consolidated financial statements and reflect, in the opinion of management, all adjustments of a normal and recurring nature that are necessary for the fair presentation of the Company's financial position as of September 30, 2020 and its results of operations, convertible preferred stock and stockholders' deficit, and cash flows for the nine months ended September 30, 2019 and 2020. The financial data and the other financial information disclosed in these notes to the condensed consolidated financial statements related to the nine-month periods are also unaudited. The condensed consolidated results of operations for the nine months ended September 30, 2020 are not necessarily indicative of the results to be expected for the year ended December 31, 2020 or for any other future annual or interim period. The consolidated balance sheet as of December 31, 2019 included herein was derived from the audited consolidated financial statements as of that date. These interim condensed consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements included elsewhere in this prospectus.

Deferred offering costs

Deferred offering costs, consisting of legal, accounting and filing fees relating to an initial public offering (IPO), are capitalized. The deferred offering costs will be offset against offering proceeds upon the completion of the offering. In the event the offering is terminated, or delayed, deferred offering costs will be expensed. As of September 30, 2020, the Company had incurred an immaterial amount in deferred offering costs related to the planned IPO.

Recent accounting pronouncements

Recently adopted

Accounting Standards Update (ASU) No. 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement*

In August 2018, the Financial Accounting Standards Board (FASB) issued ASU 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value*

Measurement, (ASU 2018-13). The new standard removes certain disclosures, modifies certain disclosures and adds additional disclosures related to fair value measurement. The Company adopted ASU 2018-13 on January 1, 2020 and the adoption resulted in additional disclosures related to the Company's Level 3 financial instruments. See Note 7, Fair value measurements.

Not yet adopted

ASU No. 2016-13, *Financial Instruments—Credit Losses (Topic 362): Measurement of Credit Losses on Financial Statements*, ASU No. 2019-05 *Financial Instruments—Credit Losses (Topic 326): Targeted Transition Relief*, ASU No. 2019-11, *Codification Improvements to Topic 326, Financial Instruments—Credit Losses*

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments—Credit Losses (Topic 362): Measurement of Credit Losses on Financial Statements* (ASU 2016-13). The new standard requires that expected credit losses relating to financial assets measured on an amortized cost basis and available-for-sale debt securities be recorded through an allowance for credit losses. It also limits the amount of credit losses to be recognized for available-for-sale debt securities to the amount by which carrying value exceeds fair value and also requires the reversal of previously recognized credit losses if fair value increases. The targeted transition relief standard allows companies an option to irrevocably elect the fair value option of Accounting Standards Codification (ASC) 825-10, Financial Instruments-Overall, applied on an instrument-by-instrument basis for eligible instruments. The new standard will be effective beginning January 1, 2023. The adoption of ASU 2016-13 is not expected to have a material impact on the Company's condensed consolidated financial statements.

ASU No. 2017-04, *Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*

In January 2017, the FASB issued ASU 2017-04, *Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment* (ASU 2017-04). To address concerns over the cost and complexity of the two-step goodwill impairment test, the amendments in this ASU remove the second step of the test. An entity will instead apply a one-step quantitative test and record the amount of goodwill impairment as the excess of a reporting unit's carrying amount over its fair value, not to exceed the total amount of goodwill allocated to the reporting unit. The new guidance does not amend the optional qualitative assessment of goodwill impairment. The new standard will be effective beginning January 1, 2023. The adoption of ASU 2017-04 is not expected to have a material impact on the Company's condensed consolidated financial statements.

3. Acquisitions

Cobalt Biomedicine, Inc.

In February 2019, the Company acquired 100% of the outstanding equity in Cobalt Biomedicine, Inc. (Cobalt), a privately-held early-stage biotechnology company developing a platform technology using its fusogen technology to specifically and consistently deliver various biological payloads to cells. The Company issued 145,766,384 shares of its Series A-2 convertible preferred stock in consideration, valued at $136.0 million. Of the 145,766,384 shares of Series A-2 convertible preferred stock, issued 48,588,795 shares were restricted based on the achievement of a pre-specified development milestone, which was achieved in July 2019. Additionally, 2,766,578 RSAs and 1,383,288 RSUs were granted to former employees of Cobalt.

Sana Biotechnology, Inc.
Notes to Unaudited Condensed Consolidated Financial Statements

The elements of the purchase consideration are as follows (in thousands):

Series A-2 convertible preferred stock issued(1)	$ 97,178
First milestone—restricted Series A-2 convertible preferred stock(2)	38,769
Success payment(3)	2,428
Fair value of contingent consideration(4)	51,248
Other	66
Total consideration	$ 189,689

(1) The purchase consideration included 97,177,589 shares of the Company's Series A-2 convertible preferred stock. The value of the stock was $1.00 per share, equivalent to the purchase price per share of the Series A-2 convertible preferred stock financing that occurred in February 2019.
(2) The Company concluded the value of the first milestone, to be paid in restricted shares, met the definition of being indexed to common stock. The restricted Series A-2 convertible preferred shares were recorded in convertible preferred stock valued at $38.8 million based on the estimated probability and timing of the milestone achievement on the date of acquisition, and is not subject to remeasurement upon achievement. In July 2019, the first milestone was achieved, and the Company issued a total of 48,588,795 shares of its Series A-2 convertible preferred stock.
(3) The fair value of the success payment was determined using a Monte Carlo simulation methodology which models the estimated future value of the Company based on several key variables including the term of the success payment, expected volatility, risk-free interest rate, and estimated number and timing of valuation measurement dates on the basis of which payment may be triggered.
(4) The fair value of the contingent consideration was determined by calculating the probability-weighted estimated value of the milestone payments based on the assessment of the likelihood and estimated timing that certain milestones would be achieved and estimated using discount rates ranging from 15.3% to 17.6%. The discount rate captures the credit risk associated with the payment of the contingent consideration when earned and due.

The Company accounted for the Cobalt acquisition using the acquisition method of accounting. Under this method the assets acquired and liabilities assumed in a business combination are measured at their fair value as of the acquisition date. The results of operations of Cobalt are included in the Company's results of operations from the date of acquisition. Pro forma results of operations have not been presented because the effects of the acquisition were not material to the Company's financial results. The allocation of the purchase price is based on estimates of the fair value of assets acquired and liabilities assumed as of the date of acquisition.

The components of the purchase price allocation are as follows (in thousands):

Net working capital	$ (3,275)
Property and equipment	689
Net liabilities assumed	(2,586)
Deferred tax liability	(7,547)
Acquired in-process research and development	59,195
Goodwill	140,627
Total consideration	$189,689

As part of the Cobalt acquisition, the Company recorded an IPR&D asset of $59.2 million and $140.6 million in goodwill. IPR&D is required to be classified as an indefinite-lived asset until it becomes a finite-lived asset upon the successful completion or the abandonment of the associated research and development technology. The Company is actively developing the fusogen technology, and accordingly, this asset will not be amortized until regulatory approval is obtained in a major market, typically either the United States (U.S.) or the European Union, subject to management judgment.

The goodwill recognized as a result of the Cobalt acquisition is primarily attributable to the value the acquisition provides the Company by complementing its *ex-vivo* portfolio with *in-vivo* cell engineering

technology and furthers the continued research in using engineered cells as medicines. The goodwill is not expected to be deductible for income tax purposes.

The Company also agreed to pay contingent consideration of up to an aggregate of $500.0 million upon the achievement of certain pre-specified development milestones (Cobalt Contingent Consideration), and a success payment (Cobalt Success Payment) of up to $500.0 million, if, at pre-determined valuation measurement dates, the value of the Company is equal to or exceeds three times the value of the Company implied by the per share value of the Company's Series B convertible preferred stock at issuance, or any security into which such stock has been converted or exchanged, and we have an active program based on the fusogen technology in a clinical trial pursuant to an investigational new drug application (IND), or have filed for, or received approval for, a biologics license application (BLA) or new drug application (NDA). The Cobalt Contingent Consideration and Cobalt Success Payment are payable in cash or stock, at the Company's discretion. The success payment can be achieved over a maximum of 20 years but could be shorter upon the occurrence of certain events. In addition to an arms' length equity financing or an IPO, a valuation measurement date is triggered upon a change of control when at least one company product utilizing technology acquired from Cobalt is the subject of an active research program. If there is a change of control and the Company valuation implied by the per share value of the Company's Series B convertible preferred stock at issuance, or any security into which such stock has been converted or exchanged falls below certain thresholds as shown below, the amount of the potential Cobalt Success Payment will decrease and the amount of potential Cobalt Contingent Consideration will increase. The following table sets forth the different Company valuation thresholds and resulting potential success payment and additional potential Cobalt Contingent Consideration upon a change of control:

Company valuation at change of control date as calculated using a multiple of the Series B convertible preferred stock price at issuance, or any security into which such stock has been converted or exchanged	Success Payment	Additional Potential Cobalt Contingent Consideration
	(in millions)	
Equal to or exceeds a multiple of three (3x)	$ 500	$—
Equal to or exceeds a multiple of two and three-quarters (2.75x), but less than three (3x)	150	350
Equal to or exceeds a multiple of two and a half (2.50x), but less than two and three-quarters (2.75x)	100	400
Less than a multiple of two and a half (2.50x)	—	500

The Company's liabilities for the Cobalt Success Payment and contingent consideration are carried at fair value with changes recognized in research and development expense. As of December 31, 2019 and September 30, 2020, the estimated fair value of the Cobalt Success Payment liability was $2.4 million and $37.6 million, respectively. As of December 31, 2019 and September 30, 2020, the estimated fair value of the Cobalt Contingent Consideration was $69.1 million and $85.8 million, respectively.

Cytocardia, Inc.

In November 2019, the Company acquired 100% of the outstanding equity in Cytocardia, Inc. (Cytocardia) for a purchase price of $8.0 million, of which $6.8 million was an upfront cash payment, and $1.2 million was set aside (Cytocardia Holdback Amount) to satisfy certain general representations and warranties as set forth in the stock purchase agreement.

The primary asset acquired in the acquisition was IPR&D related to its *ex vivo* cell engineering programs focused on replacement of damaged heart cells. The Company evaluated the acquisition and determined the screen test, as permitted under ASC 805, *Business Combinations*, was met as the $8.0 million purchase price

represented consideration for a single identifiable asset related to the technology. The Company concluded the assets acquired did not meet the accounting definition of a business as inputs were acquired, but no processes or outputs were acquired, and the asset had no alternative future use. The transaction was accounted for as an asset acquisition and the purchase price was recorded in research and development expense for the year ended December 31, 2019.

The Cytocardia Holdback Amount will be held for 15 months, until February 2021, at which time the remainder of the balance, after payment of any claims, will be released to the co-founders. In addition to cash paid, the Company is required to make future milestone payments of up to an aggregate of $140.0 million upon the achievement of certain pre-specified development and commercial milestones.

Oscine Corp.

In November 2018, the Company entered into a collaboration, license, and option to purchase agreement with Oscine to pursue research related to Oscine's glial progenitor *ex vivo* cell engineering programs focused on brain disorders (the Oscine Collaboration Agreement) and paid a $5.0 million non-refundable upfront fee, which was recognized in research and development expense for the period from July 13, 2018 (inception) to December 31, 2018. In connection with its Oscine Collaboration Agreement, the Company recognized $3.0 million and $3.4 million in research and development expenses for the nine months ended September 30, 2019 and 2020, respectively.

In September 2020, the Company entered into a stock purchase agreement to acquire all of the outstanding equity of Oscine for a purchase price of $8.5 million (the Oscine Stock Purchase Agreement), of which $7.6 million was an upfront cash payment, and $0.9 million was set aside (Oscine Holdback Amount) to satisfy certain general representations and warranties as set forth in the Oscine Stock Purchase Agreement.

The primary asset acquired in the acquisition was IPR&D related to its glial progenitor *ex vivo* cell engineering programs focused on brain disorders. The Company evaluated the acquisition and concluded it should be accounted for as an asset acquisition as the technology was determined to be one single identifiable asset under the screen test, and did not meet the definition of a business under ASC 805, *Business Combinations*, and the asset had no alternative future use. The purchase price of $8.5 million was recorded in research and development expense for the nine months ended September 30, 2020.

The Oscine Holdback Amount will be held for 15 months, until December 2021, at which time the remainder of the balance, after payment of any claims, will be released. In addition to cash paid, the Company is required to make up to an aggregate of $225.8 million in future milestone payments upon the achievement of certain development and commercial milestones.

4. Goodwill and intangible asset

As of September 30, 2020, the Company had goodwill of $140.6 million, which represents the excess of the purchase price over the estimated fair value of the net assets acquired from Cobalt. As of September 30, 2020, the Company had an intangible asset of $59.2 million, which consists of IPR&D acquired from the Cobalt acquisition which is classified as indefinite-lived until the successful completion of the associated research and development technology, at which point it becomes a finite-lived asset that will be amortized over its estimated useful life. There were no impairments of goodwill or the intangible asset since inception.

5. License and collaboration agreements

The Regents of the University of California

In January 2019, the Company entered into an exclusive license agreement with the Regents of the University of California to access certain intellectual property for the development of immunoengineered

pluripotent cells. Under this agreement, the Company paid $0.1 million in cash and issued 2,950,061 shares of its Series A-2 convertible preferred stock, valued at $1.00 per share, for total consideration of $3.1 million. The Company determined that the licensed technology has no alternative future use and therefore the $3.1 million was recorded in research and development expense for the nine months ended September 30, 2019. Under the agreement, the Company may be required to make certain pre-specified development milestone payments up to an aggregate of $22.4 million.

Harvard College

In March 2019, the Company entered into an exclusive license agreement with the President and Fellows of Harvard College (Harvard) to access certain intellectual property for the development of hypo-immune cells (the Harvard Agreement). Under this agreement, the Company paid $3.0 million in cash and issued 8,977,650 shares of its Series A-2 convertible preferred stock, valued at $1.00 per share, for total consideration of $12.0 million. The Company determined the licensed technology has no alternative future use and therefore the $12.0 million was recorded in research and development expense for the year ended December 31, 2019. Additionally, the Company agreed to pay Harvard $6.0 million in cash contingent upon the closing of the Company's Series B convertible preferred stock financing. Under the Harvard Agreement, the Company may be required to make certain pre-specified development and regulatory milestone payments up to an aggregate of $76.0 million, which would double upon a change of control, as well as success payments up to an aggregate of $175.0 million based on increases in the fair value of the Company's Series A convertible preferred stock at pre-defined thresholds. The contingent $6.0 million license payment and success payments are accounted for as derivatives under ASC 815, *Derivatives and Hedging*, and will be re-valued each reporting period. See Note 7, Fair value measurements.

As of December 31, 2019, the estimated fair value of the contingent license payment to Harvard was $4.6 million. The Series B convertible preferred stock financing closed in June 2020, and the Company paid Harvard $6.0 million cash, and recognized an additional $1.4 million in research and development expense for the nine months ended September 30, 2020.

The Company granted Harvard rights to certain success payments (Harvard Success Payments), payable in cash. Under the terms of this arrangement, the Company may be required to make success payments to Harvard based on increases in the fair value of the Company's Series A convertible preferred stock, or any security into which such stock has been converted or exchanged. The potential payments are based on multiples of increased value ranging from 5x to 40x based on a comparison of the fair value of the Company's Series A convertible preferred stock relative to its original $1.00 issuance price at pre-determined valuation measurement dates. The aggregate amount of the Harvard Success Payments does not exceed an aggregate of $175.0 million which would only occur upon a 40x increase in value. The Harvard Success Payments can be achieved over a maximum of 12 years from the effective date of the agreement. The following table summarizes the potential success payments:

Multiple of Equity Value at Issuance	5x	10x	20x	30x	40x
Per share Series A preferred stock price required for payment	$5.00	$10.00	$20.00	$30.00	$40.00
Success payment(s) (in millions)	$ 5.0	$ 15.0	$ 30.0	$ 50.0	$ 75.0

The valuation measurement dates are triggered by events which include: an equity financing prior to an IPO of more than $25.0 million, the one year anniversary of an IPO and periodically thereafter, a merger, an asset sale, the sale of the majority of the shares held by the Company's Series A convertible preferred stockholders, and the last day of the term of the success payments. If a higher success payment tier is first met at the same time a lower tier is first met, both tiers will be owed. Any previous success payments made to Harvard are credited against the success payment owed as of any valuation measurement date, so that Harvard does not receive multiple success payments in connection with the same threshold.

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The Company's liability for the Harvard Success Payments is carried at fair value with changes recognized in research and development expense. To determine the estimated fair value of the success payment liability the Company uses a Monte Carlo simulation methodology which models the future movement of its Series A convertible preferred stock price based on several key variables.

As of December 31, 2019 and September 30, 2020, the estimated fair value of the Harvard Success Payment liability was $1.9 million and $7.4 million, respectively. The Company recorded research and development expense of $1.7 million and $5.5 million for the nine months ended September 30, 2019 and 2020, respectively.

6. Restricted cash

As of December 31, 2019, and September 30, 2020, the Company maintained standby letters of credit of $1.8 million and $2.1 million, respectively. Standby letters of credit are collateralized with a bank account at a financial institution in accordance with the lease agreements as follows:

	December 31, 2019	September 30, 2020
	(in thousands)	
South San Francisco, CA	$ 816	$ 816
Cambridge, MA	961	961
Seattle, WA	—	366
Total restricted cash	$ 1,777	$ 2,143

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7. Fair value measurements

The following table summarize the Company's financial assets and liabilities measured at fair value on a recurring basis based on the three-tier fair value hierarchy:

	Valuation Hierarchy	December 31, 2019 Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Estimated Fair Value
			(in thousands)		
Financial assets:					
Cash equivalents:					
Money market funds	Level 1	$ 49,420	$ —	$ —	$ 49,420
U.S. government and agency securities	Level 2	18,682	1	—	18,683
Corporate debt securities	Level 2	8,433	1	(1)	8,433
Total cash equivalents		76,535	2	(1)	76,536
Short-term marketable securities:					
U.S. government and agency securities	Level 2	42,449	18	(1)	42,466
Corporate debt securities	Level 2	16,477	10	(1)	16,486
Total marketable securities		58,926	28	(2)	58,952
Total financial assets		$ 135,461	$ 30	$ (3)	$ 135,488
Financial liabilities:					
Contingent license payment	Level 3	$ 4,557	$ —	$ —	$ 4,557
Contingent consideration	Level 3	69,108	—	—	69,108
Success payment liabilities	Level 3	4,352	—	—	4,352
Total financial liabilities		$ 78,017	$ —	$ —	$ 78,017

	Valuation Hierarchy	September 30, 2020 Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Estimated Fair Value
			(in thousands)		
Financial assets:					
Cash equivalents:					
Money market funds	Level 1	$ 93,258	$ —	$ —	$ 93,258
U.S. government and agency securities	Level 2	41,202	1	—	41,203
Corporate debt securities	Level 2	3,257	—	(1)	3,256
Total cash equivalents		137,717	1	(1)	137,717
Short-term marketable securities:					
U.S. government and agency securities	Level 2	281,222	40	(2)	281,260
Corporate debt securities	Level 2	20,366	14	—	20,380
Total marketable securities		301,588	54	(2)	301,640
Long-term marketable securities:					
U.S. government and agency securities	Level 2	8,206	3	—	8,209
Total long-term marketable securities		8,206	3	—	8,209
Total financial assets		$ 447,511	$ 58	$ (3)	$ 447,566
Financial liabilities:					
Contingent consideration	Level 3	$ 85,780	$ —	$ —	$ 85,780
Success payment liabilities	Level 3	44,989	—	—	44,989
Total financial liabilities		$ 130,769	$ —	$ —	$ 130,769

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The Company evaluated its securities for other-than-temporary impairment and considers the decline in market value for the securities to be primarily attributable to current economic and market conditions. Securities in an unrealized loss position have been in an unrealized loss position for less than one year. For the debt securities, it is not more-likely-than-not that the Company will be required to sell the securities, and the Company does not intend to do so prior to the recovery of the amortized cost basis.

As of September 30, 2020, all marketable securities had an effective maturity date of two years or less. Investments in securities with maturities of less than one year, or those for which management intends to use the investments to fund current operations, are included in current assets and are available for use and therefore classified as available-for-sale. As of September 30, 2020, the balance in the Company's accumulated other comprehensive loss includes activity related to the Company's available-for-sale debt securities. There were no material realized gains or losses recognized on the sale or maturity of available-for-sale securities during the nine months ended September 30, 2019 or 2020.

The Company measures the fair value of money market funds based on quoted prices in active markets for identical assets or liabilities. The Level 2 marketable securities include U.S. government, agency securities and corporate debt securities and are valued either based on recent trades of securities in inactive markets or based on quoted market prices of similar instruments and other significant inputs derived from or corroborated by observable market data.

The following table sets forth a summary of the changes in the fair value of the Company's Level 3 financial liabilities:

	Contingent License Payment	Contingent Consideration	Success Payment Liabilities
		(in thousands)	
Balance as of December 31, 2019	$ 4,557	$ 69,108	$ 4,352
Payments	(6,000)	—	—
Changes in fair value	1,443	16,672	40,637
Balance as of September 30, 2020	$ —	$ 85,780	$ 44,989

The initial recognition of the Cobalt Contingent Consideration and Cobalt Success Payment liability was recorded as part of the purchase price as an increase to goodwill and accrued liabilities. Subsequent changes in fair value of the Cobalt Contingent Consideration and Cobalt Success Payment liability is recorded in research and development expense. The fair value of the Harvard Success Payment and contingent license payment are recorded in research and development expense.

Contingent license payment

The Company utilized estimates and assumptions in determining the estimated contingent license liability and associated expense at each balance sheet date. The assumptions used to calculate the fair value of the contingent license payment were subject to a significant amount of judgment including the expected probability of the Company's Series B convertible preferred stock financing occurring and estimated timing of achievement. The Series B convertible preferred stock financing closed in June 2020, and the Company paid Harvard $6.0 million in cash, and recognized an additional $1.4 million in research and development expense for the nine months ended September 30, 2020.

Contingent consideration

In connection with the acquisition of Cobalt, the Company may be required to pay future consideration that is contingent upon the achievement of certain pre-specified development milestones. The valuation of contingent

consideration uses assumptions the Company believes would be made by a market participant. The fair value of the Cobalt Contingent Consideration was determined by calculating the probability-weighted estimated value of the pre-specified development milestone payments based on the assessment of the likelihood and estimated timing that certain milestones would be achieved, and the estimated discount rates. The discount rate captures the credit risk associated with the payment of the contingent consideration when earned and due. The Company assesses these estimates on an on-going basis as additional data impacting the assumptions is obtained.

As of September 30, 2020, the fair value of the Cobalt Contingent Consideration was calculated using the following unobservable inputs:

Unobservable Input	Range	Weighted-Average
Discount rates	14.4%-15.5%	15%
Probability of milestone achievement	2.5%-50.0%	22%

The weighted-average unobservable inputs were based on the relative value of the Cobalt Contingent Consideration. The estimated fair value of the Cobalt Contingent Consideration may change significantly as development progresses and additional data are obtained, impacting the assumptions regarding probabilities of successful achievement of the milestones used to estimate the fair value of the liability and the timing in which they are expected to be achieved. In evaluating the fair value information, judgment is required to interpret the market data used to develop the estimates. The estimates of fair value may not be indicative of the amounts that could be realized in a current market exchange. Accordingly, the use of different market assumptions and/or different valuation techniques could result in materially different fair value estimates. Significant increases or decreases in any of the inputs would result in a significantly higher or lower fair value measurement.

Success payments

The estimated fair value of the Cobalt and Harvard Success Payments was determined using a Monte Carlo simulation model in which the Company utilizes significant estimates and assumptions in determining the estimated success payment liability and associated expense or gain at each balance sheet date. The assumptions used to calculate the fair value of the success payments are subject to a significant amount of judgment including the estimated future value of the Company's Series A convertible preferred stock, the estimated future value of the Company implied by the estimated future per share value of the Company's Series B convertible preferred stock at issuance, the expected volatility, estimated term, and estimated number and timing of valuation measurement dates.

As of September 30, 2020, the fair value of the Cobalt and Harvard Success Payments was calculated using the following unobservable inputs:

Unobservable Input	Cobalt	Harvard
Expected stock price volatility	70%	70%
Expected term (years)	18	10

A small change in the assumptions and other inputs used to calculate the estimated fair value of the success payments may result in a relatively large change in the estimated valuation and associated liability and expense or gain.

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8. Property and equipment, net

Property and equipment, net consists of the following:

	December 31, 2019	September 30, 2020
	(in thousands)	
Laboratory equipment	$ 15,046	$ 23,558
Leasehold improvements	10,624	11,061
Construction in progress	3,421	10,424
Computer equipment, software and other	636	709
Total property and equipment, at cost	29,727	45,752
Less: Accumulated depreciation	(1,816)	(5,982)
Property and equipment, net	$ 27,911	$ 39,770

Depreciation expense related to property and equipment was $0.8 million and $4.2 million for the nine months ended September 30, 2019 and 2020, respectively.

9. Accrued liabilities

Accrued compensation and accrued expenses and other current liabilities consist of the following:

	December 31, 2019	September 30, 2020
	(in thousands)	
Accrued compensation:		
Accrued bonuses	$ 6,035	$ 6,696
Other accrued compensation	2,059	4,216
Total accrued compensation	$ 8,094	$ 10,912
Accrued expenses and other current liabilities:		
Accrued contingent license payment	$ 4,557	$ —
Accrued property and equipment	2,257	3,196
Accrued professional fees	1,131	1,550
Accrued research and development	309	2,530
Other	1,633	1,271
Total accrued expenses and other current liabilities	$ 9,887	$ 8,547

10. Commitments and contingencies

Lease commitments

The Company's lease portfolio is primarily comprised of operating leases for office and laboratory space located in Seattle, WA, Cambridge, MA, and South San Francisco, CA with contractual periods expiring between November 2025 and April 2030. In January and September 2020, the Company entered into two new leases for 31,563 and 22,188 square feet of office and laboratory space in Cambridge, MA and Seattle, WA, and expire in February and April 2028, respectively. The new leases provide the right to make tenant improvements and include lease incentive allowances.

Throughout the term of the lease agreements, the Company is responsible for paying certain operating costs, in addition to rent, such as common area maintenance, taxes, utilities, and insurance. These additional charges are considered variable lease costs and are recognized in the period in which the costs are incurred.

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For the nine months ended September 30, 2019, rent expense for the Company's operating leases was $6.7 million, which consisted of $3.5 million for straight-line recognition of fixed payments and $3.2 million associated with short-term leases. For the nine months ended September 30, 2020, rent expense for the Company's operating leases was $9.3 million, which consisted of $7.9 million straight-line recognition of fixed payments and $1.4 million associated with short-term leases. Variable lease payments for operating expenses were $1.1 million and $2.3 million for the nine months ended September 30, 2019 and 2020, respectively.

The following table presents the scheduled maturities of the Company's operating lease liabilities by fiscal year and the present value of those lease liabilities as of September 30, 2020 (in thousands):

2020 (remaining 3 months)	$ 3,110
2021	13,897
2022	14,438
2023	14,892
2024	15,361
2025 and thereafter	58,236
Total lease payments	119,934
Less: imputed interest	(40,769)
Less: tenant improvement allowances	(8,515)
Present value of lease liabilities	$ 70,650

11. Convertible preferred stock

Series A-1 convertible preferred stock financing

In October 2018, the Company executed an agreement to sell up to 45,850,000 shares of its Series A-1 convertible preferred stock at a price of $1.00 per share. The Company issued 45,850,000 shares in October 2018 for gross proceeds of $45.9 million.

Upon certain change in control events that are outside of the Company's control, holders of the convertible preferred stock can cause its redemption. This requires the Company's convertible preferred stock to be classified outside of stockholders' deficit on the accompanying condensed consolidated balance sheets.

Series A-2 and Series B convertible preferred stock financing

In February 2019, the Company executed an agreement for 216,147,467 shares of its Series A-2 convertible preferred stock at a price of $1.00 per share, for gross proceeds of $216.1 million. In October 2019, an additional 7,866,669 the Company's Series A-2 convertible preferred stock were sold at a price of $1.00 per share, for gross proceeds of $7.9 million. The Series A-2 convertible preferred agreement also committed these investors to a Series B convertible preferred stock financing with the issuance of up to 110,227,706 shares of the Company's Series B convertible preferred stock at a price of $4.00 per share contingent upon the occurrence of certain clinical milestones or the unanimous approval of the Company's board of directors. Additionally, in the event the clinical milestones were not achieved, the agreement stated at least two large Series B convertible preferred stock investors, defined as investors with at least a $29.0 million Series B convertible preferred stock investment, have the right to object to the board of directors' decision to call the Series B convertible preferred stock closing within seven days.

In connection with this financing, the Company amended and restated its certificate of incorporation and amended the investors' rights agreement and voting agreement with its stockholders. Under the amended and

restated certificate of incorporation, the authorized capital stock of the Company increased to 700,000,000 shares, each with a par value of $0.0001 per share. The authorized shares consisted of 162,213,794 shares designated as common stock and 537,786,206 shares designated as convertible preferred stock.

In June 2020, the Company completed the Series B convertible preferred stock financing selling 108,892,708 shares of Series B convertible preferred stock at $4.00 per share for gross proceeds of $435.6 million.

The Company recorded its convertible preferred stock at the issuance price on the dates of issuance, net of issuance costs.

Rights issued with Series A-1, Series A-2, and Series B convertible preferred stock

The Company assessed the Series A-1, Series A-2, and Series B convertible preferred stock for any beneficial conversion features or embedded derivatives, including the conversion option, that would require bifurcation from the convertible preferred stock and receive separate accounting treatment. On the dates of the issuances, the fair value of the common stock into which the convertible preferred stock was convertible was less than the effective conversion price of the Series A-1, Series A-2, and Series B convertible preferred stock; as such, there was no intrinsic value of the conversion option on the commitment date.

Conversion

Shares of the Company's Series A-1, Series A-2, and Series B convertible preferred stock are convertible into shares of the Company's common stock based on a defined conversion ratio, set at one-for-one, adjustable for certain dilutive events. The conversion ratio for the convertible preferred stock is subject to change in accordance with anti-dilution provisions contained in the Company's certificate of incorporation.

The Company's Series A-1, Series A-2, and Series B convertible preferred stock is convertible at the option of the holder at any time without any additional consideration. The convertible preferred stock will automatically convert into shares of the Company's common stock at the then effective applicable conversion rate, upon the closing of the sale of shares of common stock to the public in an underwritten public offering at a price that generates at least $75.0 million in gross proceeds pursuant to an effective registration statement under the Securities Act of 1933, as amended, provided that the Company's common stock is listed for trading on a national securities exchange. In addition, the convertible preferred stock will automatically convert into shares of common stock upon the vote or written consent of the holders of at least 61% of the outstanding convertible preferred stock, voting together as a single class on an as-converted basis, and which must include a majority of the Series B preferred stock then held by the Series B investors that purchased at least $29.0 million in the Series B convertible preferred stock financing (Series B Large Investors).

Dividends

Each holder of the Company's Series A-1, Series A-2, and Series B convertible preferred stock is entitled to receive non-cumulative dividends, when and if declared by the Company's board of directors, at an annual rate of 6% of the original issue price prior to and in preference to the payment of a dividend on common stock. Any additional dividends shall be distributed among the holders of common stock pro rata based on the number of shares of common stock (on an as-converted basis). No dividends have been declared to date.

Liquidation preference

The Company may be liquidated voluntarily by the Company's board of directors with consent of the holders of at least 61% of the outstanding convertible preferred stock, voting together as a single class on an

as-converted basis, and which must include the holders of at least a majority of the Series B preferred stock then held by the Series B Large Investors.

In the event that the Company is liquidated either voluntarily or involuntarily, or if any event occurs that is deemed a liquidation under the Company's certificate of incorporation, each holder of the Company's Series A-1, Series A-2, and Series B convertible preferred stock will be entitled to receive a liquidation preference out of any proceeds from the liquidation before any distributions are made to the holders of common stock. The liquidation preference for each share of the Series A-1, Series A-2 and Series B convertible preferred stock is equal to the greater of a) the original issue price (plus any declared but unpaid dividends), or b) such amount per share as would have been payable had all the Series A-1, Series A-2, and Series B convertible preferred stock been converted into common stock immediately prior to a liquidation event.

Voting rights

Each of the Company's Series A-1, Series A-2, and Series B convertible preferred stock vote (on an as-converted to common stock basis) with the other voting stock of the Company.

The consent of the holders of at least 61% of the Company's outstanding convertible preferred stock, voting together as a single class on an as-converted basis, and which must include the holders of at least a majority of the Series B preferred stock then held by the Series B Large Investors, is required for any of the following actions: the amendment or waiver of any provision of the certificate of incorporation or bylaws of the Company in a manner that adversely affects the rights, preferences or privileges of the Series A-1, Series A-2, and Series B convertible preferred stock; any change in the authorized number of Series A-1, Series A-2, and Series B convertible preferred stock, or any other class of stock of the Company; the creation of any new class or series of shares having rights, preferences or privileges senior to or on a parity with the Series A-1, Series A-2, and Series B convertible preferred stock; the approval of any change in control event; the redemption of any securities of the Company, other than repurchases of common stock upon termination of a consultant, director or employee approved by the Company's board of directors; any increase or decrease in the authorized size of the Company's board of directors; the declaration or payment of any dividend or distribution on the Series A-1, Series A-2, and Series B convertible preferred stock (except as provided in the certificate of incorporation) or common stock; or the liquidation or dissolution of the Company.

In addition, the stockholders of the Company have entered into a voting agreement pursuant to which the Company's Series A-1, Series A-2, and Series B convertible preferred stock and common stockholders each elected five members to its board of directors, respectively.

Reorganization

Any change in control event, including any change in the holders of a majority of the equity of the Company by merger, consolidation, reorganization or otherwise, or any sale or exclusive license of substantially all the assets of the Company, will be deemed a liquidation under the Company's certificate of incorporation unless waived by the holders of at least 61% of the Company's outstanding convertible preferred stock, voting together as a single class on an as-converted basis, and which must include the holders of at least a majority of the Series B preferred stock then held by the Series B Large Investors.

After liquidation preferences for the Company's Series A-1, Series A-2, and Series B convertible preferred stock described above have been satisfied, any additional proceeds from any deemed liquidation will be distributed among the holders of common stock pro rata based on the number of shares of common stock (on an as-converted basis).

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12. Common stock

As of September 30, 2020, there were 57,001,580 shares of the Company's common stock outstanding, excluding the 47,806,730 shares of restricted common stock outstanding that are subject to vesting requirements.

As of September 30, 2020, the Company had reserved 536,450,939 shares of its common stock for future issuance upon the conversion of its Series A-1, Series A-2, and Series B convertible preferred stock outstanding.

13. Stock-based compensation

Equity Incentive Plan

In October 2018, the Company adopted the 2018 Equity Incentive Plan (the 2018 Plan) under which it may grant incentive stock options, non-statutory stock options, RSAs, RSUs, and other stock-based awards to any person, including officers, directors, and consultants. Terms of stock agreements, including vesting requirements, are determined by the Company's board of directors, or by a committee appointed by the board of directors, subject to the provisions of the 2018 Plan.

Generally, awards granted by the Company vest over four years and have an exercise price equal to the estimated fair value of the common stock as determined by the board of directors with consideration given to contemporaneous valuations of the Company's common stock prepared by an independent third party valuation firm in accordance with the guidance provided by the AICPA Guide.

As of September 30, 2020, there were 1,426,521 shares available for future issuance under the 2018 Plan.

RSU Plan

In March 2019, pursuant to the terms of the Cobalt merger agreement, the Company adopted a restricted stock unit plan (RSU Plan) under which it may grant RSUs to certain employees and consultants. The RSU Plan provides for up to 1,397,018 shares of common stock to be awarded. As of September 30, 2020, there were 94,300 shares available for future issuance under the RSU Plan.

Stock-based compensation expense

Stock-based compensation expense is recognized in the condensed consolidated statements of operations as follows:

	Nine Months Ended September 30,	
	2019	2020
	(in thousands)	
Research and development	$ 833	$ 2,555
General and administrative	177	482
Total stock-based compensation expense	$ 1,010	$ 3,037

Unrecognized stock-based compensation costs related to unvested awards and the weighted-average period over which the costs are expected to be recognized as of September 30, 2020 are as follows:

	Stock Options	RSAs
Unrecognized stock-based compensation expense (thousands)	$ 14,578	$3,673
Expected weighted-average period compensation costs to be recognized (years)	3.3	2.1

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As of September 30, 2020, the Company had $0.5 million of unrecognized stock-based compensation costs related to RSUs originating from the Cobalt acquisition that are subject to (i) service-based vesting over four years, (ii) achievement of the first milestone which occurred in July 2019, and (iii) a liquidity event. The estimated compensation expense will be recognized ratably over the service period, or remaining service period, if and when it becomes probable that the vesting conditions will be satisfied. As of September 30, 2020, no stock-based compensation expense was recognized related to RSUs.

Stock options

A summary of the Company's stock option activity is as follows:

	Stock Options	Weighted-Average Exercise Price per Share	Weighted-Average Remaining Contractual Life (years)	Aggregate Intrinsic Value (in thousands)
Outstanding as of December 31, 2019	14,195,999	$ 0.36	9.6	$ 142
Granted	25,168,613	0.69		
Exercised	(128,644)	0.36		
Forfeited/Cancelled	(526,635)	0.36		
Outstanding as of September 30, 2020	38,709,333	$ 0.58	9.3	$ 53,221
Exercisable as of September 30, 2020	3,957,275	$ 0.36	8.5	$ 6,292

The fair value of stock options granted to employees, directors, and consultants was estimated on the date of grant using the Black-Scholes option pricing model using the following assumptions:

	Nine Months Ended September 30,	
Assumptions	2019	2020
Risk free interest rate	1.53%-2.62%	0.36%-1.51%
Expected volatility	70%	70%
Expected term (years)	6.25	6.25-6.75
Expected dividend	0%	0%

During the nine months ended September 30, 2019 and 2020, the weighted-average grant date fair value of the options granted was $0.23 and $0.54 per share, respectively.

Restricted stock awards

A summary of the Company's RSAs activity is as follows:

	RSAs	Weighted-Average Grant Date Fair Value per Share
Unvested shares as of December 31, 2019	68,560,627	$ 0.07
Vested	(16,609,512)	0.04
Forfeited	(4,144,385)	0.03
Unvested shares as of September 30, 2020	47,806,730	$ 0.09

The fair value of vested RSAs was $0.3 million and $0.6 million for the nine months ended September 30, 2019 and 2020, respectively.

During the nine months ended September 30, 2020, there were zero RSUs granted, zero vested, and 77,061 cancelled. As of September 30, 2020 there are 1,302,718 RSUs unvested.

14. Income taxes

The Company's income tax provision for interim periods is determined using an estimate of the Company's annual effective tax rate, adjusted for discrete items arising in the quarter. The Company's effective tax rate differs from the U.S. statutory tax rate primarily due to valuation allowances on the deferred tax assets in all jurisdictions as it is more likely than not that the Company's deferred tax assets will not be realized.

In connection with the 2019 Cobalt acquisition, the Company recorded a deferred tax liability of $7.5 million associated with the acquired intangible asset. During the nine months ended September 30, 2019, the Company recorded a tax benefit of $6.2 million related to the release of valuation allowance on U.S. deferred tax assets as a result of deferred tax liabilities established for intangible assets from the acquisition of Cobalt.

15. Net loss per share

Basic and diluted net loss per common share is calculated by dividing net loss applicable to common stockholders by the weighted-average number of common shares outstanding during the period, without consideration for common stock equivalents. The Company was in a loss position for all periods presented, therefore basic net loss per share was the same as diluted net loss per share for all periods as the inclusion of all potential common securities outstanding would have been anti-dilutive.

The following table sets forth the computation of basic and diluted net loss per share of common stock:

	Nine Months Ended September 30,	
	2019	2020
	(in thousands, except share and per share amounts)	
Net loss applicable to common stockholders	$ (87,733)	$ (172,135)
Weighted-average common shares used in net loss per share applicable to common stockholders, basic and diluted	14,480,086	48,997,930
Net loss per share applicable to common stockholders, basic and diluted	$ (6.06)	$ (3.51)

The amounts in the table below were excluded from the calculation of diluted net loss per share, prior to the use of the treasury stock method, due to their anti-dilutive effect:

	September 30,	
	2019	2020
Series A-1 convertible preferred stock	45,850,000	45,850,000
Series A-2 convertible preferred stock	373,841,562	381,708,231
Series B convertible preferred stock	—	108,892,708
Unvested restricted common stock	71,046,236	47,806,730
Options to purchase common stock	11,238,999	38,709,333
Unvested RSUs	1,379,779	1,302,718
Total	503,356,576	624,269,720

Sana Biotechnology, Inc.
Notes to Unaudited Condensed Consolidated Financial Statements

16. Employee benefit plan

In January 2019, the Company adopted a 401(k) retirement and savings plan (the 401(k) Plan) covering all employees. The 401(k) Plan allows employees to make pre- and post-tax contributions up to the maximum allowable amount set by the IRS. As of September 30, 2020, the Company has not made any matching contributions to the 401(k) Plan on behalf of participants.

17. Subsequent events

In December 2020, the Company amended and restated its certificate of incorporation to increase the authorized capital stock of the Company to 707,000,000 shares, each with a par value of $0.0001 per share. In addition, the Company's board of directors granted stock options from October to December 2020 to purchase an aggregate of 23,410,081 of common stock with an exercise price of $1.95 per share, after which there were 1,783,974 shares available for future issuance under the 2018 Plan.

Shares

Common Stock

Prospectus

Morgan Stanley **Goldman Sachs & Co. LLC** **J.P. Morgan** **BofA Securities**

, 2021

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth the costs and expenses, other than underwriting discounts and commissions, payable by us in connection with the sale of the common stock being registered. All amounts are estimates except for the Securities and Exchange Commission (SEC) registration fee, the Financial Industry Regulatory Authority (FINRA) filing fee and the Nasdaq Global Select Market (Nasdaq) listing fee.

	Amount Paid or to Be Paid
SEC registration fee	$ *
FINRA filing fee	*
Nasdaq listing fee	*
Transfer agent's fees and e	*
Printing and engraving expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Blue Sky fees and expenses	*
Miscellaneous	*
Total	$ *

* To be completed by amendment.

Item 14. Indemnification of Directors and Officers

Section 145 of the Delaware General Corporation Law provides that a corporation may indemnify directors and officers as well as other employees and individuals against expenses (including attorneys' fees), judgments, fines, and amounts paid in settlement actually and reasonably incurred by such person in connection with any threatened, pending, or completed actions, suits, or proceedings in which such person is made a party by reason of such person being or having been a director, officer, employee, or agent to the registrant. The Delaware General Corporation Law provides that Section 145 is not exclusive of other rights to which those seeking indemnification may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise. Article 9 of the registrant's amended and restated certificate of incorporation provides for indemnification by the registrant of its directors, officers, and employees to the fullest extent permitted by the Delaware General Corporation Law. The registrant has entered into indemnification agreements with each of its current directors, executive officers, and certain other officers to provide these directors and officers additional contractual assurances regarding the scope of the indemnification set forth in the registrant's amended and restated certificate of incorporation and amended and restated bylaws and to provide additional procedural protections. There is no pending litigation or proceeding involving a director or executive officer of the registrant for which indemnification is sought.

Section 102(b)(7) of the Delaware General Corporation Law permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) for unlawful payments of dividends or unlawful stock repurchases, redemptions, or other distributions, or (iv) for any transaction from which the director derived an improper personal benefit. The registrant's amended and restated certificate of incorporation provides for such limitation of liability.

The registrant maintains standard policies of insurance under which coverage is provided (a) to its directors and officers against loss rising from claims made by reason of breach of duty or other wrongful act, and (b) to the

registrant with respect to payments that may be made by the registrant to such officers and directors pursuant to the above indemnification provision or otherwise as a matter of law.

The proposed form of underwriting agreement to be filed as Exhibit 1.1 to this registration statement provide for indemnification of directors and officers of the registrant by the underwriters against certain liabilities.

Item 15. Recent Sales of Unregistered Securities

Since its inception in July 2018, the registrant has sold the following securities without registration under the Securities Act of 1933:

(a) From July 2018 to September 2018, the registrant issued 89,553,000 shares of its common stock for proceeds of approximately $1,000.

(b) In September 2018, the registrant issued convertible promissory notes for an aggregate principal amount of $1.1 million.

(c) In October 2018, the registrant issued 45,850,000 shares of its Series A-1 convertible preferred stock at a price of $1.00 per share for aggregate proceeds of $45.9 million, including conversion of the convertible promissory notes of an aggregate principal amount of $1.1 million issued in September 2018.

(d) In February 2019, the registrant issued 216,147,467 shares of its Series A-2 convertible preferred stock at $1.00 per share for gross proceeds of $216.1 million, issued 145,766,384 shares of its Series A-2 convertible preferred stock, and 2,766,578 shares of its restricted common stock awards in connection with its acquisition of Cobalt Biomedicine, Inc.

(e) In February and March 2019, the registrant issued an aggregate of 11,927,711 shares of its Series A-2 convertible preferred stock in connection with the entry into certain intellectual property license arrangements.

(f) In October 2019, the registrant issued 7,866,669 shares of its Series A-2 convertible preferred stock at $1.00 per share for gross proceeds of $7.9 million.

(g) In June 2020, the registrant issued 108,892,708 shares of its Series B convertible preferred stock at $4.00 per share for gross proceeds of $435.6 million.

(h) In June and December 2020, the registrant issued 400,000 shares of its common stock in connection with the entry into an intellectual property license arrangements.

(i) the registrant has granted equity awards to 292 individuals consisting of its directors, officers, employees, and consultants, which awards consisted of 62,240,254 options to purchase an aggregate of 62,240,254 shares of its common stock at exercise prices ranging from $0.36 to $1.95 per share, 27,357,485 restricted stock awards issued at prices ranging from $0.12 to $0.36 per share, and 1,383,288 restricted stock units at $0.36 per share; and

(j) the registrant has issued an aggregate of 243,899 shares of its common stock upon the exercise of options for aggregate proceeds of approximately $87,804.

The offers, sales, and issuances of the securities described in Item 15(a) through 15(e) were exempt from registration under the Securities Act in reliance upon Section 4(a)(2) of the Securities Act or Regulation D promulgated thereunder as transactions by an issuer not involving any public offering. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed upon the stock certificates issued in these transactions. All recipients had adequate access, through their relationships with us, to information about our company.

The offers, sales, and issuances of the securities described in Item 15(f) through 15(g) were exempt from registration under the Securities Act under either Rule 701, in that the transaction were under compensatory benefit plans and contracts relating to compensation, or under Section 4(a)(2) of the Securities Act in that the transactions were between an issuer and members of its senior executive management and did not involve any public offering within the meaning of Section 4(a)(2). The recipients of such securities were our employees, directors or consultants. Appropriate legends were affixed to the securities issued in these transactions.

Item 16. Exhibits and Financial Statement Schedules

See the Exhibit Index attached to this registration statement, which Exhibit Index is incorporated herein by reference.

Schedules not listed above have been omitted because the information required to be set forth therein is not applicable or is shown in the financial statements or notes thereto.

Item 17. Undertakings

(a) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers, and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer, or controlling person of the registrant in the successful defense of any action, suit, or proceeding) is asserted by such director, officer, or controlling person in connection with the securities being registered hereunder, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

(b) The undersigned registrant hereby undertakes that:

(i) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(ii) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

EXHIBIT INDEX

Exhibit Number	Exhibit Description
1.1*	Form of Underwriting Agreement
2.1(a)**	Agreement and Plan of Merger, dated as of December 20, 2018, by and among the Registrant, Sana Biotechnology IV, Inc. (Merger Sub), Cobalt Biomedicine, Inc. (Cobalt), and VentureLabs VI, Inc., solely in its capacity as the Stockholders' Representative (the Stockholders' Representative)
2.1(b)**	First Amendment to Agreement and Plan of Merger, dated as of January 29, 2019, by and among the Registrant, Merger Sub, Cobalt, and the Stockholders' Representative
2.1(c)**	Second Amendment to Agreement and Plan of Merger, dated as of February 8, 2019, by and among the Registrant, Merger Sub, Cobalt, and the Stockholders' Representative
2.2**	Stock Purchase Agreement, dated as of November 12, 2019, by and among the Registrant, Cytocardia, Inc. (Cytocardia), each of the stockholders of Cytocardia, and Scott Thies, as Sellers' Representative
2.3**	Stock Purchase Agreement, dated as of September 10, 2020, by and among the Registrant, Oscine Holdings, LLC (Oscine), and each of the members of Oscine
3.1(a)**	Amended and Restated Certificate of Incorporation, as amended, currently in effect
3.1(b)**	Certificate of Amendment to the Amended and Restated Certificate of Incorporation, dated as of October 3, 2019
3.1(c)**	Certificate of Amendment to the Amended and Restated Certificate of Incorporation, dated as of November 9, 2020
3.1(d)**	Certificate of Amendment to the Amended and Restated Certificate of Incorporation, dated as of December 4, 2020
3.2*	Form of Amended and Restated Certificate of Incorporation, to be in effect immediately prior to the completion of this offering
3.3**	Amended and Restated Bylaws, currently in effect
3.4*	Form of Amended and Restated Bylaws, to be in effect immediately prior to the completion of this offering
4.1	Reference is made to Exhibits 3.1 through 3.4
4.2*	Form of Common Stock Certificate
5.1*	Opinion of Latham & Watkins LLP
10.1**	Amended and Restated Investors' Rights Agreement, dated February 13, 2019, by and among the Registrant and the investors listed therein
10.2*	Form of Indemnification and Advancement Agreement for directors and officers
10.3(a)#**	2018 Equity Incentive Plan, as amended
10.3(b)#**	First Amendment to 2018 Equity Incentive Plan, dated as of November 9, 2020
10.3(c)#**	Second Amendment to 2018 Equity Incentive Plan, dated as of December 4, 2020
10.3(d)#**	Form of Stock Option Agreement under 2018 Equity Incentive Plan
10.4(a)#*	2021 Incentive Award Plan

Exhibit Number	Exhibit Description
10.4(b)#*	Form of Stock Option Grant Notice and Stock Option Agreement under the 2021 Incentive Award Plan
10.4(c)#*	Form of Restricted Stock Award Grant Notice and Restricted Stock Award Agreement under the 2021 Incentive Award Plan
10.4(d)#*	Form of Restricted Stock Unit Award Grant Notice and Restricted Stock Unit Award Agreement under the 2021 Incentive Award Plan
10.5#*	Employee Stock Purchase Plan
10.6#**	Offer Letter and Employment Agreement by and between the Registrant and Steven D. Harr, M.D., dated as of September 27, 2018
10.7#**	Offer Letter and Employment Agreement by and between the Registrant and Richard Mulligan, Ph.D., dated as of April 23, 2020
10.8#**	Offer Letter and Employment Agreement by and between the Registrant and Christian Hordo, dated as of November 10, 2018
10.9#**	Offer Letter and Employment Agreement by and between the Registrant and Nathan Hardy, dated as of October 8, 2018
10.10#**	Offer Letter and Employment Agreement by and between the Registrant and James J. MacDonald, dated as of October 2, 2018
10.11#*	Non-Employee Director Compensation Program
10.12(a)†*	License Agreement, effective as of February 17, 2016, by and between Flagship Pioneering Innovations V, Inc. (Flagship Innovations V) and Cobalt Biomedicine, Inc. (Cobalt)
10.12(b)†*	First Amendment to License Agreement, dated as of February 14, 2019, by and between Flagship Innovations V and Cobalt
10.13(a)†*	Patents Sub-License Agreement, dated August 16, 2018, by and between La Societe Pulsalys (Pulsalys) and Cobalt
10.13(b)†*	Amendment No. 1 to Patents Sub-License Agreement, dated May 26, 2020, by and between Pulsalys and Cobalt
10.14†**	Exclusive License Agreement, dated March 22, 2019, by and between the Registrant and the Regents of the University of California (The Regents) acting through the Technology Development Group of the University of California, Los Angeles (UCLA)
10.15(a)†*	License Agreement, dated as of March 19, 2019, by and between the Registrant and President and Fellows of Harvard College (Harvard)
10.15(b)†*	Amendment No. 1 to License Agreement, dated as of June 10, 2019, by and between the Registrant and Harvard
10.15(c)†*	Amendment No. 2 to License Agreement, dated as of December 15, 2020, by and between the Registrant and Harvard
10.16(a)†*	Exclusive License Agreement, effective on January 2, 2019, by and between the Registrant and The Regents, acting through its Office of Technology Management, University of California San Francisco (UCSF)
10.16(b)†*	Amendment No. 1 to Exclusive License Agreement, effective on December 3, 2020, by and between the Registrant and UCSF
10.17†**	Exclusive License Agreement, effective on November 14, 2019, by and between the Registrant and Washington University

Exhibit Number	Exhibit Description
10.18†**	Exclusive License Agreement, effective on September 1, 2020, by and between the Registrant and Washington University
10.19†*	Amended and Restated Exclusive Patent License Agreement, dated September 10, 2020, by and among the Registrant, Oscine Corp., and University of Rochester
10.20(a)†*	Seed Bank Supply Agreement, dated as of July 9, 2018, by and between Oscine Therapeutics (U.S.) Inc. (Oscine Affiliate) and Hadasit Medical Research Services and Development Ltd. (Hadasit)
10.20(b)†*	Amendment No. 1 to Seed Bank Supply Agreement, dated as of July 9, 2018, by and among the Registrant, Oscine Affiliate, and Hadasit
10.21(a)†*	Exclusive Start-Up License Agreement, effective on October 9, 2018, by and between Cytocardia, Inc. (Cytocardia) and the University of Washington, acting through UW CoMotion (UW)
10.21(b)†*	Amendment No. 1 to Exclusive Start-Up License Agreement, effective on November 6, 2019, by and between Cytocardia and UW
21.1*	List of subsidiaries
23.1*	Consent of Independent Registered Public Accounting Firm
23.2*	Consent of Latham & Watkins LLP (included in Exhibit 5.1)
24.1*	Power of Attorney (reference is made to the signature page to the Registration Statement)

* To be filed by amendment.
** Filed herewith.
# Indicates management contract or compensatory plan.
† Certain portions of this document that constitute confidential information have been redacted in accordance with Regulation S-K, Item 601(b)(10).

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Seattle, State of Washington, on the day of , 2021.

SANA BIOTECHNOLOGY, INC.

By: _____

Name: Steven D. Harr, M.D.
Title: President and Chief Executive Officer

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Steven D. Harr, M.D., Nathan Hardy and James J. MacDonald, and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place, and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement and any and all additional registration statements pursuant to Rule 462(b) of the Securities Act of 1933, and to file the same, with all exhibits thereto, and all other documents in connection therewith, with the Securities and Exchange Commission, granting unto each said attorney-in-fact and agents full power and authority to do and perform each and every act in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or either of them or their or his or her substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
Steven D. Harr, M.D.	Chief Executive Officer and Director (principal executive officer)	, 2021
Nathan Hardy	Chief Financial Officer (principal financial and accounting officer)	, 2021
Hans E. Bishop	Chairman of the Board	, 2021
Joshua H. Bilenker, M.D.	Director	, 2021
Douglas Cole, M.D.	Director	, 2021
Richard Mulligan, Ph.D.	Director	, 2021
Robert Nelsen	Director	, 2021
Alise S. Reicin, M.D.	Director	, 2021
Michelle Seitz	Director	, 2021

Signature	Title	Date
Geoffrey von Maltzahn, Ph.D.	Director	, 2021
Mary Agnes (Maggie) Wilderotter	Director	, 2021
Patrick Y. Yang, Ph.D.	Director	, 2021

Exhibit 2.1(a)

AGREEMENT AND PLAN OF MERGER

by and among

SANA BIOTECHNOLOGY, INC.,

SANA BIOTECHNOLOGY IV, INC.,

COBALT BIOMEDICINE, INC.

and

VENTURELABS VI, INC.,
solely in its capacity as the Stockholders' Representative

Dated as of December 20, 2018

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Exhibits

Schedules

AGREEMENT AND PLAN OF MERGER

This AGREEMENT AND PLAN OF MERGER (this "Agreement"), dated as of December 20, 2018, is by and among Sana Biotechnology, Inc., a Delaware corporation ("Parent"), Sana Biotechnology IV, Inc., a Delaware corporation and a wholly owned subsidiary of Parent ("Merger Sub"), Cobalt Biomedicine, Inc., a Delaware corporation (the "Company"), and VentureLabs VI, Inc., a Delaware corporation, solely in its capacity as the Stockholders' Representative ("Stockholders' Representative").

RECITALS

WHEREAS, each of Parent, Merger Sub and the Company desire to effect the acquisition of the Company by Parent through the merger of Merger Sub with and into the Company (the "Merger");

WHEREAS, concurrently with the closing of the transactions contemplated by this Agreement and as part of a single integrated plan, Parent intends to consummate a Series A-2 Preferred Stock financing transaction (the "Series A-2 Financing") in accordance with the terms of the Series A-2 and B Preferred Stock Purchase Agreement substantially in the form attached hereto as Exhibit A (as may be amended from time to time, the "Parent Series A-2/B Purchase Agreement");

WHEREAS, the parties intend for the Merger and the Series A-2 Financing, taken together, to qualify as an exchange satisfying the requirements of Section 351 of the Internal Revenue Code of 1986, as amended (the "Code");

WHEREAS, the parties intend that immediately following the Merger, the Company shall be the Surviving Corporation of the Merger, all pursuant to the terms and subject to the conditions hereinafter set forth and in accordance with the General Corporation Law of the State of Delaware (the "DGCL");

WHEREAS, the board of directors of the Company (the "Company Board") has carefully considered the terms of this Agreement and has (i) determined that the transactions contemplated hereby are advisable and in the best interests of the Company and its stockholders, (ii) approved and declared advisable this Agreement and the transactions contemplated hereby, including the Merger, and (iii) adopted a resolution directing that the adoption of this Agreement be submitted to the Company Stockholders for consideration and recommending that all of the Company Stockholders adopt this Agreement and approve the Merger;

WHEREAS, the board of directors of Merger Sub has carefully considered the terms of this Agreement and has (i) determined that the transactions contemplated hereby are advisable and in the best interests of Merger Sub and its sole stockholder, (ii) approved and declared advisable this Agreement and the transactions contemplated hereby, including the Merger, and (iii) adopted a resolution directing that the adoption of this Agreement be submitted to Parent, as the sole stockholder of Merger Sub, for consideration and recommending that Parent adopt this Agreement and approve the Merger;

WHEREAS, the board of directors of Parent (the "Parent Board") has (i) determined that the transactions contemplated hereby are advisable and in the best interests of Parent and its stockholders and (ii) approved and declared advisable this Agreement and the transactions contemplated hereby, including the issuance of the Parent Series A-2 Preferred Shares who are Accredited Investors or a cash payment of equivalent value to Indemnifying Stockholders who are Non-Accredited Persons, pursuant to the terms of this Agreement;

WHEREAS, immediately following the execution and delivery of this Agreement, the Company shall seek to obtain and deliver to Parent a written consent in substantially the form attached hereto as Exhibit B (the "Written Consent"), duly executed by Company Stockholders necessary to obtain the Requisite Stockholder Approval; and

WHEREAS, the parties desire to make certain representations, warranties, covenants and agreements in connection with the Merger.

AGREEMENT

NOW THEREFORE, in consideration of the respective covenants and promises contained herein and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties hereto agree as follows:

ARTICLE I.
THE MERGER

1.1 The Merger. Pursuant to the terms and subject to the conditions of this Agreement, at the Effective Time, the Company and Merger Sub shall consummate the Merger in accordance with the DGCL pursuant to which (a) Merger Sub shall be merged with and into the Company and the separate corporate existence of Merger Sub shall thereupon cease; (b) the Company shall be the successor or Surviving Corporation in the Merger; (c) the separate corporate existence of the Company with all its rights, privileges, immunities, powers and franchises shall continue unaffected by the Merger; and (d) the Company shall succeed to and assume all the rights and obligations of Merger Sub. The corporation surviving the Merger (and any successor or assign thereof) is sometimes hereinafter referred to as the "Surviving Corporation." The Merger shall have the effects set forth in the applicable provisions of the DGCL.

1.2 Effective Time. Concurrently with the Closing on the Closing Date, the parties shall file a Certificate of Merger in the form attached hereto as Exhibit C (the "Certificate of Merger") with the Secretary of State of the State of Delaware in accordance with the relevant provisions of the DGCL. The Merger shall become effective upon the filing and acceptance by the Secretary of State of the State of Delaware of the Certificate of Merger or at such later time as is agreed to by Parent and the Company and specified in the Certificate of Merger (the time at which the Merger becomes effective is herein referred to as the "Effective Time"). At the Effective Time, by virtue of the Merger and without any action of the part of Parent, Merger Sub, the Company or any other Person: (a) each share of common stock of Merger Sub issued and outstanding immediately prior to the Effective Time shall be converted into and exchanged for one share of common stock of the Surviving Corporation; and (b) each share of Company Capital Stock issued and outstanding immediately prior to the Effective Time shall be converted into the right to receive the consideration described in Section 1.5.

1.3 Effects of the Merger. At the Effective Time, and without any further action on the part of Parent, Merger Sub, the Company or any other Person:

(a) the certificate of incorporation of the Company, as in effect immediately prior to the Effective Time (the "Company Certificate"), shall be amended and restated in the Merger to read as set forth on Exhibit A to the Certificate of Merger, and, as so amended and restated, such certificate of incorporation shall be the certificate of incorporation of the Surviving Corporation until thereafter amended as provided therein or by applicable Law;

(b) the bylaws of the Company, as in effect immediately prior to the Effective Time, shall be amended and restated in the Merger to read as set forth on Exhibit D, and, as so amended and restated, such bylaws shall be the bylaws of the Surviving Corporation until thereafter amended as provided therein or by applicable Law; and

(c) the Merger shall, from and after the Effective Time, have all of the effects provided by the DGCL and applicable Law. Without limiting the generality of the foregoing, and subject thereto, at the Effective Time, all the properties, rights, privileges and powers of the Company and Merger Sub shall vest in the Surviving Corporation, and all debts, liabilities and duties of the Company and Merger Sub shall become the debts, liabilities and duties of the Surviving Corporation.

1.4 Subsequent Actions. If at any time after the Effective Time the Surviving Corporation shall determine, in its sole discretion, or shall be advised, that any deeds, bills of sale, instruments of conveyance, assignments, assurances or any other actions or things are necessary or desirable to vest, perfect or confirm of record or otherwise in the Surviving Corporation its right, title or interest in, to or under any of the rights, properties or assets of the Company acquired or to be acquired by the Surviving Corporation as a result of, or in connection with, the Merger or otherwise to carry out this Agreement, then the officers of the Surviving Corporation shall be authorized to execute and deliver, in the name and on behalf of the Company, all such deeds, bills of sale, instruments of conveyance, assignments and assurances and to take and do, in the name and on behalf of the Company or otherwise, all such other actions and things as may be necessary or desirable to vest, perfect or confirm any and all right, title or interest in, to and under such rights, properties or assets in the Surviving Corporation or otherwise to carry out this Agreement.

1.5 Conversion of Company Capital Stock.

(a) Company Restricted Shares. Upon the terms and subject to the conditions of this Section 1.5 and elsewhere in this Agreement, at the Effective Time, by virtue of the Merger and without any action on the part of Parent, Merger Sub, the Company or the holders of shares of Company Capital Stock, each Company Restricted Share that is outstanding as of immediately prior to the Effective Time, held by a service provider of the Company who will continue to provide services to Parent or its Affiliates following the Closing and is subject to a substantial risk of forfeiture as of the Closing will be cancelled and will be converted automatically into the non-transferable right to receive the Rollover Per Share Closing Consideration; provided,

that each share of Parent Common Stock issued pursuant to this Section 1.5(a) in respect of a Company Restricted Share, shall remain subject to the Company Plan or agreement pursuant to which the Company Restricted Share was issued and continue to have, and be subject to, substantially similar terms and conditions as applied to the applicable Company Restricted Share immediately prior to the Effective Time, except that the risk of forfeiture or right of repurchase thereon shall be in favor of Parent and shall lapse based on the holder's continued service to Parent and its Affiliates. At the Effective Time, Parent shall assume each agreement evidencing a Company Restricted Share that is issued pursuant to this Section 1.5(a).

(b) Preferred and Common Stock Held by Accredited Investors. Upon the terms and subject to the conditions of this Section 1.5 and elsewhere in this Agreement, except as set forth in Section 1.5(c), at the Effective Time, by virtue of the Merger and without any action on the part of Parent, Merger Sub, the Company or the holders of shares of Company Capital Stock, each share of Company Capital Stock (other than Company Restricted Shares or Dissenting Shares) issued and outstanding immediately prior to the Effective Time will be cancelled and will be converted automatically into the non-transferable right to receive the Preferred Per Share Closing Consideration.

(c) Shares Held by Non-Accredited Investors. Upon the terms and subject to the conditions of this Section 1.5 and elsewhere in this Agreement, at the Effective Time, by virtue of the Merger and without any action on the part of Parent, Merger Sub, the Company or the holders of shares of Company Capital Stock, each share of Company Capital Stock (other than Company Restricted Shares or Dissenting Shares) issued and outstanding immediately prior to the Effective Time that is held by the non-employee Persons identified on Schedule A, which schedule may be modified by Parent from time to time prior to the Effective Time (a "Non-Accredited Person") to the extent Parent has not received an Accredited Investor Certification and the other documents and agreements contemplated by Section 1.9(a) from any non-employee holder of Company Capital Stock prior to such time, will be cancelled and will be converted automatically into the non-transferable right to receive an amount in cash equal to the Per Share Closing Cash Consideration.

(d) No Further Ownership Rights in Company Securities. At the Effective Time, each holder of issued and outstanding Company Capital Stock immediately prior to the Effective Time shall cease to have any rights as a holder of securities of the Company. After the Effective Time, there shall be no further registration of transfers on the transfer books of the Surviving Corporation of the Company Capital Stock outstanding immediately prior to the Effective Time. If, after the Effective Time, a valid certificate previously representing any of such shares of Company Capital Stock (a "Company Stock Certificate") is presented to the Surviving Corporation or Parent, such Company Stock Certificate shall be canceled (as applicable) and shall be exchanged as provided in Section 1.9.

(e) No Fractional Shares. No fractional Parent Series A-2 Preferred Shares or shares of Parent Common Stock shall be issued in connection with the Merger, and the number of Parent Series A-2 Preferred Shares or shares of Parent Common Stock issuable to each Company Stockholder pursuant to Section 1.5, 1.7, 1.14 or 8.3(b)(iii) or elsewhere in this Agreement shall be rounded down to the nearest whole number of Parent Series A-2 Preferred Shares or shares of Parent Common Stock, as applicable, for each such issuance, with no cash being paid for any fractional share eliminated by such rounding.

1.6 Company Option Treatment. The Company shall take such actions as are necessary to provide that as of immediately prior to the Closing, each Company Option then outstanding shall be terminated in exchange for no consideration.

1.7 Assumption of Company Warrants. At the Closing, (i) each Company Warrant outstanding immediately prior to the Closing shall be assumed by Parent, and (ii) each such Company Warrant shall be converted into the right to receive Parent Series A-2 Preferred Stock in accordance with the provisions set forth below:

(a) Each Company Warrant outstanding immediately prior to the Closing Date, whether vested or unvested, shall be assumed by Parent. Except as provided in Section 1.7(b), each Company Warrant so assumed by Parent shall continue to have, and be subject to, the same terms and conditions as were applicable to such Company Warrant immediately prior to the Closing Date, provided that (i) such Company Warrant shall be exercisable for that number of whole shares of Parent Series A-2 Preferred Stock (rounded down to the nearest whole number) equal to the product of the number of shares of Company Preferred Stock that were issuable upon exercise of such Company Warrant immediately prior to the Closing Date multiplied by the Preferred Exchange Ratio and (ii) the per share exercise price for the shares of Parent Series A-2 Preferred Stock issuable upon exercise of such assumed Company Warrant shall be equal to the quotient (rounded up to the nearest whole cent) of the exercise price per share of Company Preferred Stock applicable to such Company Warrant immediately prior to the Closing Date, divided by the Preferred Exchange Ratio.

(b) Prior to the Closing, Parent will reserve a sufficient number of shares of Parent Series A-2 Preferred Stock to permit the exercise of the assumed Company Warrant.

(c) As soon as practicable after the Closing Date, Parent shall deliver to the holders of Company Warrants notice evidencing that such Company Warrants have been assumed by Parent and shall continue in effect on the same terms and conditions (subject to the adjustments required by this Section 1.7).

1.8 Dissenting Shares. Notwithstanding anything in this Agreement to the contrary, shares of Company Capital Stock that are issued and outstanding immediately prior to the Effective Time and that are held by Company Stockholders properly exercising appraisal rights available under Section 262 of the DGCL (the "Dissenting Shares") shall not be converted into or be exchangeable for the right to receive any consideration pursuant to Section 1.5, unless and until such holders shall have failed to perfect or shall have effectively withdrawn or lost their rights to appraisal under the DGCL. Dissenting Shares shall be treated in accordance with Section 262 of the DGCL. If any such holder shall have failed to perfect or shall have effectively withdrawn or lost such right to appraisal, such holder's shares of Company Capital Stock shall thereupon be converted into and become exchangeable only for the right to receive, as of the later of the Effective Time and the time that such right to appraisal shall have been irrevocably lost, withdrawn or expired, the consideration in respect thereof set forth in Section 1.5, without any interest

thereon. The Company shall give Parent and Merger Sub (a) prompt notice of any written demands for appraisal of any shares, attempted withdrawals of such demands and any other instruments served pursuant to the DGCL and received by the Company relating to rights to be paid the "fair value" of Dissenting Shares, as provided in Section 262 of the DGCL, and (b) the opportunity to direct all negotiations and proceedings with respect to demands for appraisal under the DGCL. The Company shall not, except with the prior written consent of Parent (which shall not be unreasonably withheld, conditioned or delayed), voluntarily make or agree to make any payment with respect to any demands for appraisals of Company Capital Stock, offer to settle or settle any such demands or approve any withdrawal of any such demands.

1.9 Surrender Procedures.

(a) Promptly after the Effective Time, Parent shall send, to each Company Stockholder that has not delivered a Letter of Transmittal and Accredited Investor Certification to Parent prior to the Effective Time, at the address and email address provided by the Company in the Consideration Schedule a letter of transmittal in the form of Exhibit E attached hereto (the "Letter of Transmittal") for use in such exchange. The parties acknowledge that the terms of the Letter of Transmittal include (i) an agreement to be bound by the terms of this Agreement, including Article VIII and Section 9.19 hereof, (ii) other than with respect to a Company Stockholder who will provide services to Parent and its Affiliates after the Closing, a written certification of status as an Accredited Investor, in the form of Exhibit F attached hereto (an "Accredited Investor Certification"), (iii) a joinder to the Parent A-2/B Investor Agreements for Stock Converting Holders, (iv) a release of claims against the Company and related parties, (v) a duly executed Stock Restriction Agreement for Stock Converting Holders and (vi) instructions for use in effecting the surrender of Company Stock Certificates.

(b) Upon surrender of a Company Stock Certificate for cancellation to Parent, together with the Letter of Transmittal, duly completed and validly executed in accordance with the instructions thereto, the holder of such Company Stock Certificate shall be entitled to receive in exchange for the applicable consideration payable in respect of such share of Company Capital Stock pursuant to Section 1.5, and the Company Stock Certificate so surrendered shall forthwith be canceled. Parent shall, promptly after receipt of each properly surrendered Company Stock Certificate, (A) cause the Per Share Closing Cash Consideration, if any, payable with respect to each share represented by such Company Stock Certificate to be sent by wire transfer of immediately available funds to the account designated by such holder in the Letter of Transmittal delivered with such Company Stock Certificate (other than any such amounts which are payable through the Surviving Corporation's or Parent's payroll system pursuant to this Agreement) and (B) issue the Preferred Per Share Closing Consideration (which, for the avoidance of doubt, may be delivered in a book-entry or similar position), if any, issuable with respect to each share represented by such Company Stock Certificate. Until so surrendered, each outstanding Company Stock Certificate that prior to the Effective Time represented shares of Company Capital Stock will be deemed from and after the Effective Time, for all purposes, to evidence only the right to receive upon such surrender the applicable consideration payable in respect of such share of Company Capital Stock pursuant to Section 1.5 (upon the terms and subject to the conditions set forth in this Agreement).

(c) If any Company Stock Certificate shall have been lost, stolen or destroyed, Parent may, in its discretion and as a condition precedent to the payment of any portion of the Per Share Closing Consideration, require the owner of such lost, stolen or destroyed Company Stock Certificate to provide an appropriate affidavit, which affidavit will include an obligation to indemnify Parent and the Surviving Corporation against any claim that may be made against Parent or the Surviving Corporation with respect to such Company Stock Certificate.

(d) Notwithstanding anything to the contrary in this Agreement, none of Parent or the Surviving Corporation shall be liable to any holder or former holder of shares of Company Capital Stock for the Per Share Closing Consideration attributable to each of such shares or for any other cash amounts, delivered to any public official pursuant to any applicable abandoned property, escheat or similar Law.

1.10 Tax Consequences. For U.S. federal and applicable state and local income tax purposes, it is intended that the Merger and the Series A-2 Financing are part of a single integrated transaction qualifying as a tax-deferred exchange satisfying the requirements of Section 351 of the Code and the Treasury Regulations thereunder. Each party hereto shall report the Merger and the Series A-2 Financing consistent with the treatment described in this Section 1.10, and none of them shall take any position on their Tax Returns or take any other tax reporting position that is inconsistent with the foregoing, unless otherwise required by a "determination" within the meaning of Section 1313(a)(1) of the Code or any similar provision of any state or local Law. For the avoidance of doubt, neither Parent nor Merger Sub (nor any Representative thereof) has provided or will provide any representations or warranties regarding the tax consequences of the Merger and the transactions contemplated hereunder or any tax advice; provided that the parties acknowledge that Parent and Merger Sub (and any Representative thereof) have provided representations and warranties that may affect the tax consequences of the Merger, the Series A-2 Financing, and the transactions contemplated hereunder and the Company, Company Stockholders, and their Affiliates shall be entitled to rely on such representations or warranties. The Company acknowledges that the Company and the Company Stockholders are relying solely on their own Tax advisors in connection with this Agreement, the Merger and the other transactions and the other agreements contemplated by this Agreement.

1.11 Withholding. Each of Parent, Merger Sub, the Surviving Corporation and any other applicable withholding agent shall be entitled to deduct or withhold from the amounts payable or issuable (including Parent Series A-2 Preferred Shares deliverable) under this Agreement such amounts as are required to be deducted or withheld in accordance with the Code and any applicable Tax Law. Any such withheld or deducted amounts shall be treated as though such amount had been paid to the Person in respect of whom such deduction and withholding was made; provided such amounts are paid to the appropriate Governmental Authority. Any compensatory payments contemplated to be made hereunder shall be made through the payroll procedures of the applicable Person.

1.12 Equitable Adjustments. In the event of any stock split, reverse stock split, stock dividend (including any dividend or distribution of securities convertible into capital stock), reorganization, reclassification, combination, recapitalization or other like change with respect to the Company Capital Stock or Parent Series A-2 Preferred Shares occurring after the date of this Agreement and prior to the Effective Time, all references in this Agreement to specified numbers

of shares of any class or series affected thereby, and all calculations provided for that are based upon numbers of shares of any class or series affected thereby, shall be equitably adjusted to the extent necessary to provide the parties the same economic effect as contemplated by this Agreement prior to such stock split, reverse stock split, stock dividend, reorganization, reclassification, combination, recapitalization or other like change.

1.13 Alternative Transaction Structure. If the Series A-2 Financing has not been consummated on or prior to January 31, 2019 in a manner that satisfies the condition set forth in Section 6.1(d), the Company may provide written notice to Parent that it is triggering the alternative transaction structure mechanics described in this Section 1.13. Upon delivery of such notice, Parent and the Company shall negotiate in good faith and execute an alternative agreement and plan of merger (the "Alternative Merger Agreement") that (a) is structured, at Parent's discretion, in either the manner described on Schedule B or the manner described on Schedule C, (b) provides for a pro forma capitalization of New Holdco (as defined in Schedule B or Schedule C, as applicable) that is consistent with the pro forma capitalization of Parent immediately following the consummation of the Merger, and (c) contains terms and conditions consistent with those set forth in this Agreement (provided, that such alternative agreement shall not contain the condition set forth in Section 6.1(d) and shall otherwise be modified to effect the structure set forth on Schedule B or Schedule C, as applicable). In such circumstances, the parties hereto shall promptly (i) execute the Alternative Merger Agreement, (ii) immediately following the execution of such Alternative Merger Agreement, provide to the other parties evidence that each of the Requisite Stockholder Approval and the approval of the holders of Parent Common Stock in accordance with the DGCL have been obtained, and (iii) terminate this Agreement in accordance with Section 7.1(a).

1.14 Milestone Payments.

(a) At the Closing, Parent will issue to each Milestone Payment Recipient that is an Indemnyfing Stockholder its Contingent Allocation of the First Milestone Payment in the form of restricted Parent Series A-2 Preferred Shares (the "First Milestone Shares"), valued at the Parent Preferred Per Share Price; provided, however, that to the extent any Milestone Payment Recipient is a Non-Accredited Person, Parent shall pay to such recipient, as soon as practicable following the occurrence of the First Milestone, a cash payment in amount of his or her Contingent Allocation of the First Milestone Shares in lieu of such shares. The First Milestone Shares shall initially be restricted in accordance with the Stock Restriction Agreement in substantially the form attached hereto as Exhibit G (the "Stock Restriction Agreement") and shall become fully vested Parent Series A-2 Preferred Shares only upon the occurrence of the First Milestone. Upon the occurrence of the First Milestone, Parent shall promptly (and in any event, no later than fifteen (15) days thereafter) deliver a notice to the Stockholders' Representative of such occurrence, which notice shall include an express reference that the restrictions set forth in the Stock Restriction Agreement have been released. In the event that the First Milestone has not occurred prior to December 31, 2025 (the "Surrender Time"), the First Milestone Shares shall be automatically canceled and extinguished effective as of the Surrender Time without any consideration payable therefor. Notwithstanding anything to the contrary in this Agreement, in the event that the Company delivers notice to Parent prior to the Closing that the First Milestone has occurred, the First Milestone Shares shall be issued to the Milestone Payment Recipients at Closing without restriction and not subject to the Stock Restriction Agreement, and such First Milestone Shares shall be fully vested Parent Series A-2 Preferred Shares as of such issuance.

(b) Upon the occurrence of each of the events set forth in Table 1.14 under "Additional Milestone Trigger Event" (each an "Additional Milestone Trigger Event") by Parent, its Affiliates, licensees or sublicensees, Parent shall promptly (and in any event, no later than thirty (30) days thereafter) deliver a notice to the Stockholders' Representative of such occurrence and, within fifteen (15) days of such notice, deposit or release, or cause to be deposited or released, as applicable, the applicable Milestone Payment set forth in Table 1.14 under "Additional Milestone Payment" opposite such Additional Milestone Trigger Event (each, an "Additional Milestone Payment") with the Stockholders' Representative or its designated agent, in each case subject to the provisions of Section 1.14(c) and Section 1.14(d) and withholding rights set forth in Section 1.11 and less the portion of such amounts, if any, allocable to Dissenting Shares. In the event Parent elects to pay any portion of an Additional Milestone Payment in cash, such cash consideration shall be paid by or on behalf of Parent in immediately available funds by wire transfer to an account of the Stockholders' Representative or its designated agent with a bank designated by the Stockholders' Representative by notice to Parent, which notice shall be delivered within three (3) Business Days of the Stockholders' Representative's receipt of notice of the Additional Milestone Trigger Event and shall include the name of the Stockholders' Representative's designated agent, if any. Upon receipt of any such Additional Milestone Payment made in cash, the Stockholders' Representative shall pay or cause to be paid to each Milestone Payment Recipient entitled to receive such payment in cash, and in any event within fifteen (15) Business Days of such receipt, its Contingent Allocation with respect to the Additional Milestone Payment. Following the payment of any Milestone Payment to the Stockholders' Representative or its designated agent, each Milestone Payment Recipient shall look only to the Stockholders' Representative (and not to Parent, the Surviving Corporation or any of their respective Affiliates) to receive such Milestone Payment Recipient's Contingent Allocation with respect to such Milestone Payment. It is expressly understood and agreed that Parent, the Surviving Corporation and their respective Affiliates shall have no Liability to any Milestone Payment Recipient for its Contingent Allocation with respect to any Milestone Payment so long as such Milestone Payment has been paid by or on behalf of Parent to the Stockholders' Representative or its designated agent. Parent shall pay interest on any Additional Milestone Payment that is not paid on or before the date such payments are due under this Agreement at an annual rate equal (a) the prime rate as published in the *Wall Street Journal, Eastern Edition* in effect from time to time during such period plus (b) one percent (1%), calculated on the total number of days payment is delinquent. Prior to a Parent IPO, to the extent any Additional Milestone Payment is comprised of Milestone Stock Consideration, Parent shall pay to any Milestone Payment Recipient who is a Non-Accredited Person, in lieu of such Milestone Stock Consideration, a cash payment equal to his or her Contingent Allocation of Milestone Stock Consideration.

The Additional Milestone Trigger Events and Additional Milestone Payments are as follows:

Table 1.14

	Additional Milestone Trigger Event:	Additional Milestone Payment:
(1)	Qualifying Valuation Milestone	$500,000,000
(2)	The first three (3) occurrences of the IND Milestone in any country in the world after the Closing Date	First occurrence of the IND Milestone: $75,000,000 Second occurrence of the IND Milestone: $50,000,000 Third occurrence of the IND Milestone: $25,000,000
(3)	The first three (3) occurrences of the Pivotal Trial Milestone after the Closing Date	First occurrence of the Pivotal Trial Milestone: $150,000,000 Second occurrence of the Pivotal Trial Milestone: $100,000,000 Third occurrence of the Pivotal Trial Milestone: $50,000,000
(4)	Japan Regulatory Milestone	$100,000,000
(5)	Regulatory Milestone	$500,000,000, less any Additional Milestone Payments paid in (2), (3) and (4) above

(c) Notwithstanding anything in this Section 1.14 to the contrary, no Additional Milestone Payment in respect of an IND Milestone, a Pivotal Trial Milestone or the Japan Regulatory Milestone shall be payable or paid hereunder unless the applicable Additional Milestone Trigger Event shall have occurred prior to the occurrence of the Regulatory Milestone. From and after the payment of the Additional Milestone Payment following the occurrence of the Regulatory Milestone, no further payments shall be payable or paid and no notice shall be required pursuant to Section 1.14(c) in respect of any IND Milestone, any Pivotal Trial Milestone or the Japan Regulatory Milestone.

(d) For the avoidance of doubt, (i) the maximum aggregate amount Parent and any of its Affiliates shall be obligated to pay pursuant to this Section 1.14, Section 5.11(e), Section 5.11(f), Section 5.11(g) or any other payments to Milestone Payment Recipients with respect to the Milestones shall be $1,000,000,000 and (ii) other than the Additional Milestone Payments in connection with the IND Milestone and the Pivotal Trial Milestone (each of which may consist of up to three (3) Additional Milestone Payments as set forth in Table 1.14), none of the Milestone Payments shall be payable more than one time.

(e) Parent may at its option elect to pay any Additional Milestone Payment in Milestone Stock Consideration or in cash; provided that the Stockholders' Representative may elect to have each Indemnifying Stockholder receive a portion of any Additional Milestone Payment in cash up to the amount of cash equal to 50% of the imputed interest reported in connection with such Milestone Stock Consideration paid to each Indemnifying Stockholder; provided, further, that Milestone Stock Consideration shall only be payable to Persons who deliver an Accredited Investor Certification and, as applicable, a joinder to the Parent

A-2/B Investor Agreements pursuant to which such Person would be joined as a party to such agreements in the same capacity as the investors who purchased the applicable class or series of security issued as Milestone Stock Consideration, and any other Persons shall receive the Additional Milestone Payment in cash. The First Milestone Shares and any shares issued in satisfaction of any Additional Milestone Payments will be validly issued, fully paid and nonassessable and free of restrictions on transfer other than restrictions on transfer under the Stock Restriction Agreement, any applicable Parent investor agreements, applicable state and federal securities Laws and Encumbrances created by or imposed by a Milestone Payment Recipient. Notwithstanding the foregoing, any Additional Milestone Payment for the Qualifying Valuation Milestone to be paid in connection with a Change of Control pursuant to Section 1.14(j)(ii)(a) shall be paid in a form consistent with the consideration received by Parent equity holders pursuant to the terms of the definitive agreements effecting such Change of Control transaction (whether such consideration is cash, securities or a combination of cash and securities).

(f) From and after the Closing, Parent shall and shall cause its Affiliates (including the Surviving Corporation) to use Commercially Reasonable Efforts to achieve (or cause its Affiliates, licensees or sublicensees with respect to rights to develop or commercialize any Company Product to achieve) each of the Milestones. For purposes of determining whether or not Parent is complying with its obligations under the first sentence of this Section 1.14(f), (i) the Parent's efforts with respect to the Company Product shall be considered in the aggregate, and not by separate Company Product or component thereof, and (ii) Parent's efforts shall be measured on a periodic basis of periods no shorter than six calendar months, and Parent shall not be deemed to be in breach of this Section 1.14(f) for any such period unless Parent's efforts during such period, taken as a whole, are not commercially reasonable, with such efforts to be measured based on the information known and available to the parties at the time such efforts are expended; provided that this clause (ii) shall not diminish the obligations of Parent in the first sentence of this Section 1.14(f) except with respect to the efforts within any such six-month period.

(g) Following the Closing until all Additional Milestone Payments have been made, Parent shall provide the Stockholders' Representative, within forty-five (45) days following January 1st of each calendar year, with an annual written report of the efforts of Parent and any of its Affiliates, licensees or sublicensees to achieve the Milestones and their progress with respect thereto, which report shall list the status of the development of any Company Products. In addition, Parent shall conduct a telephone conference with the Stockholders' Representative or its designee(s) upon reasonable advance written notice from the Stockholders' Representative and during normal business hours for the purposes of discussing Parent's progress toward achievement of the Milestones; provided, however, that the Stockholders' Representative shall not request such telephone conference, and Parent shall have no obligation to participate in any such telephone conference, more than one (1) time during any calendar year. Parent shall keep, and shall cause its Affiliates and sublicensees to keep, adequate books and records of accounting for the purpose of confirming whether any Milestone has occurred for a period of five (5) years following the end of the calendar year to which such books and records pertain.

(h) In the event that the Stockholders' Representative believes in good faith that any Milestone has been achieved, it shall notify Parent in writing of such belief. To the extent Parent agrees, Parent shall make (or cause to be made) to Milestone Payment Recipients the corresponding Milestone Payment in accordance with Section 1.14(b) within ten (10) Business

Days of such notice, subject to the late payment interest set forth therein. To the extent Parent disagrees and disputes such achievement, the parties shall discuss and attempt to resolve such dispute. If the parties are unable to resolve such dispute within thirty (30) days of notification by Stockholders' Representative of its belief, the parties will submit such matter for resolution by binding expert determination in accordance with the procedures set forth on Exhibit H. The Expert will make a determination as to whether or not such Additional Milestone Trigger Event has been achieved based on the data and information presented by the parties. If such Expert determines that such Milestone has been achieved, Parent shall pay the corresponding Milestone Payment to the Milestone Payment Recipients in accordance with Section 1.14(b), subject to the late payment interest set forth therein. Conversely, if such Expert determines that such Milestone has not been achieved, Parent shall not be obligated to pay the corresponding Milestone Payment until such Milestone has been achieved.

(i) The right of each Milestone Payment Recipient to receive such Milestone Payment Recipient's Contingent Allocation with respect to any Milestone Payment shall not be evidenced by any form of certificate or instrument, and does not represent any ownership or equity interest in the Surviving Corporation, Parent or any of their respective Affiliates, and does not entitle any Milestone Payment Recipient to voting rights or rights to dividend payments. The right of each Milestone Payment Recipient to receive such Milestone Payment Recipient's Contingent Allocation with respect to any Milestone Payment shall not be assignable or transferable except by (i) will, (ii) the Laws of intestacy, (iii) other operation of Laws or (iv) if such Milestone Payment Recipient is a partnership or a limited liability company, pursuant to (A) a Permitted Disposition to one or more partners or members of such Milestone Payment Recipient or (B) an assignment or transfer to one or more Affiliates of such Milestone Payment Recipient (excluding for purposes hereof, any portfolio company of such Milestone Payment Recipient); provided that, in each case, written notice of such assignment and transfer shall be promptly delivered to each of Parent and the Stockholders' Representative by the transferor or assignor (or such transferor's or assignor's estate), which notice shall expressly set forth the transferor or assignor and the transferee or assignee, the rights to which such transfer or assignment related and the effective date of such transfer; and, provided, further, that as a condition to such transfer or assignment, the parties to such transfer or assignment shall (1) enter into a joinder to the Parent A-2/B Investor Agreements and (2) agree to provide to each of Parent and the Stockholders' Representative, at their respective request, any additional evidence of the transfer or assignment that Parent or the Stockholders' Representative, as the case may be, may reasonably request. None of Parent, the Surviving Corporation or the Stockholders' Representative shall give effect to any purported assignment or transfer made in contravention of this Section 1.14(i). A "Permitted Disposition" means (A) a transfer or assignment by a venture capital fund to its limited partners pursuant to a distribution and (B) a transfer or assignment to a third party approved in writing in advance by Parent, such approval not to be unreasonably withheld, conditioned or delayed; provided that notwithstanding anything set forth in this Agreement, Parent shall have no obligation to approve any such transfer or assignment pursuant to the foregoing clause (B) if such transfer or assignment cannot, individually or taken together with any prior transfer or assignment and any potential future transfers or assignments and other facts and circumstances, be accomplished in a transaction that is, in Parent's reasonable judgment, exempt from registration and qualification under, or would result in any other material adverse consequences under, U.S. federal and state securities laws or any other Law or would have an adverse Tax effect on Parent or its Affiliates (including the Surviving Corporation).

(j) Change of Control.

(i) During the period beginning at the Effective Time and ending on the date on which each applicable Additional Milestone Payment shall have been delivered to the Stockholders' Representative or its designated agent for the benefit of the Milestone Payment Recipients, (A) Parent, the Surviving Corporation and their respective Affiliates may not directly or indirectly consummate a Change of Control unless the acquirer in such Change of Control explicitly and in writing assumes and succeeds to the obligations of Parent and the Surviving Corporation set forth in this Section 1.14 or such obligations are transferred to such acquirer by operation of law and (B) Parent shall provide written notice to the Stockholders' Representative of any anticipated Change of Control not less than fifteen (15) Business Days prior to the consummation of such Change of Control.

(ii) In the event of a Change of Control of Parent, the Surviving Corporation or their respective Affiliates in accordance with Section 1.14(j)(i), the following shall apply:

(a) If at the time of the consummation of a Change of Control at least one Company Product (i) is the subject of an ongoing clinical trial being conducted pursuant to an active IND; (ii) has completed clinical trials under an active IND and is in the process of filing for, or has filed, an NDA or a BLA for a Company Product; (iii) has received Regulatory Approval; or (iv) is the subject of an active research program (but does not meet the requirements of clauses (i), (ii) or (iii) of this sentence), the Qualifying Valuation Milestone will be deemed to have occurred immediately prior to the consummation of such Change of Control and, except as set forth below, payment of the corresponding Additional Milestone Payment shall be made concurrently with payment to Parent equity holders receiving consideration pursuant to the terms of the definitive agreements effecting such Change of Control; provided that, the corresponding Additional Milestone Payment for such Qualifying Valuation Milestone shall be adjusted as follows: if the Change of Control transaction represents a valuation of Parent (excluding the value of any earn-outs or similar contingent payments that may be included in the terms of the applicable Change of Control transaction unless such payments are reasonably expected to be received within six (6) months of such Change of Control event as determined in good faith by Parent's board of directors) in an amount (w) equal to or greater than three (3) times the QVM Valuation, then the Additional Milestone Payment payable shall equal five hundred million dollars ($500,000,000); (x) equal to or greater than two and three-quarters (2.75), but less than three (3) times the QVM Valuation, then the Additional Milestone Payment payable shall equal one hundred and fifty million dollars ($150,000,000); (y) equal to or greater than two and a half (2.5), but less than two and three-quarters (2.75) times the QVM Valuation, then the Additional Milestone Payment payable shall equal one hundred million dollars ($100,000,000); and (z) less than two and a half (2.5) times the QVM Valuation, then an Additional Milestone Payment payable shall equal zero dollars ($0); provided further that, in the case of clause (iv) of this sentence, payment of the Additional Milestone Payment for such Qualifying Valuation Milestone shall be made within fifteen (15) days after any Company Product first becomes the subject of a clinical trial conducted pursuant to an active IND. The "Residual Amount" shall mean the following: (I) in the case of a Change of Control described in subsection (x) above, $850,000,000 minus the aggregate amount

of Milestone Payments paid hereunder prior to the consummation of such Change of Control transaction (excluding for this purpose the amount of any Additional Milestone Payment as a result of the deemed Qualifying Valuation Milestone); (II) in the case of a Change of Control described in subsection (y) above, $900,000,000 minus the aggregate amount of Milestone Payments paid hereunder prior to the consummation of such Change of Control transaction (excluding for this purpose the amount of any Additional Milestone Payment as a result of the deemed Qualifying Valuation Milestone) and (III) in the case of a Change of Control described in subsection (z) above, $1,000,000,000 minus the aggregate amount of Milestone Payments paid hereunder prior to the consummation of such Change of Control transaction. For clarity, the occurrence of a Change of Control described in subsection (w) above shall not give rise to a Residual Amount and the foregoing Sections 1.14(j)(ii)(b)-(g) shall not apply following such Change of Control; provided that, for the avoidance of doubt, the remainder of this Section 1.14 will continue to apply. Notwithstanding any provision in this Agreement to the contrary, following the consummation of a Change of Control transaction, the maximum aggregate amount of Additional Milestone Payments that may be paid pursuant to this Section 1.14 (including under the Carveout Plan or any other payments to Milestone Payment Recipients with respect to the Milestones, but excluding the amount of any Additional Milestone Payment as a result of the deemed Qualifying Valuation Milestone) will be equal to the Residual Amount.

(b) Section 1.14(c) shall no longer apply, but shall be replaced in its entirety with the following: "Notwithstanding anything in this Section 1.14 to the contrary, no Additional Milestone Payment in respect of an IND Milestone, a Pivotal Trial Milestone or the Japan Regulatory Milestone shall be payable or paid hereunder unless the applicable Additional Milestone Trigger Event shall have occurred prior to such time as the Milestone Payment Recipients have received an aggregate amount of Additional Milestone Payments following the Change of Control equal to the Residual Amount. From and after such time as the Milestone Payment Recipients have received an aggregate amount of Additional Milestone Payments following the Change of Control equal to payment of the Residual Amount, no further payments shall be payable or paid and no notice shall be required pursuant to Section 1.14(c) in respect of any Milestone."

(c) The phrase "less any Additional Milestone Payments paid in (2), (3) and (4) above" shall be removed from the Additional Milestone Payment corresponding to the Regulatory Milestone ((5) in Table 1.14) in Table 1.14.

(d) Subject to the last sentence of Section 1.14(j)(ii)(a), the Additional Milestone Payments to be paid upon the achievement of an IND Milestone ((2) in Table 1.14) shall be payable an additional three (3) times, such that the Additional Milestone Payment for the IND Milestone is payable upon the first six (6) occurrences of the IND Milestone in total, in the following amounts following the first three occurrences: (x) fourth occurrence, $75,000,000, (y) fifth occurrence, $50,000,000 and (z) sixth occurrence, $25,000,000. Any prior achievement of an IND Milestone is to be taken into account when determining the amount of the Additional Milestone Payment corresponding to the IND Milestone following a Change of Control. For example, if the Additional Milestone Payment for the first occurrence of the IND Milestone (i.e., $75,000,000) is paid prior to the Change of Control, then upon the second occurrence of the IND Milestone occurring following the Change of Control, the Additional Milestone Payment for the second occurrence (i.e., $50,000,000) will be payable.

(e) Subject to the last sentence of Section 1.14(j)(ii)(a), the Additional Milestone Payments in connection with the Pivotal Trial Milestone ((3) in Table 1.14) shall be payable an additional three (3) times, such that the Additional Milestone Payment for the Pivotal Trial Milestone is payable upon the first six (6) occurrences of the Pivotal Trial Milestone in total, in the following amounts following the first three occurrences: (x) fourth occurrence, $150,000,000, (y) fifth occurrence, $100,000,000 and (z) sixth occurrence, $50,000,000. Any prior achievement of a Pivotal Trial Milestone is to be taken into account when determining the amount of the Additional Milestone Payment corresponding to the Pivotal Trial Milestone following a Change of Control. For example, if the Additional Milestone Payment for the first occurrence of the Pivotal Trial Milestone (i.e., $150,000,000) is paid prior to the Change of Control, then upon the second occurrence of the Pivotal Trial Milestone occurring following the Change of Control, the Additional Milestone Payment for the second occurrence (i.e., $100,000,000) will be payable.

(f) The Additional Milestone Payments payable in connection with the Japan Regulatory Milestone and Regulatory Milestone may be payable more than once, upon subsequent occurrences of the applicable Additional Milestone Trigger Event, but, in all events, subject to Section 1.14(c) (as revised in Section 1.14(j)(ii)(b) above) and the last sentence of Section 1.14(j)(ii)(a).

(g) Section 1.14(d)(ii) shall no longer apply and shall be deleted in its entirety; for clarity, Section 1.14(d)(i) shall remain and continue to apply.

(h) Section 1.14(e) shall no longer apply to any future Additional Milestone Payments such Additional Milestone Payments shall be payable in cash only.

(i) In addition to Section 1.14(j)(i) above, and, for clarity, the acquirer's assumed obligations in Section 1.14(f), Parent shall use commercially reasonable efforts to negotiate with the acquirer additional diligence obligations, in respect of any remaining Milestones, that are consistent with and appropriate for the applicable stage of the Company Products at such time.

(j) The written reports required to be provided to Stockholders' Representative pursuant to the first sentence of Section 1.14(g) shall be provided on a quarterly basis within thirty (30) days following the end of each calendar quarter.

(k) The telephone conference with the Stockholders' Representative or its designee(s) required by the second sentence of Section 1.14(g) shall not occur more than four (4) times in any calendar year.

(l) In addition to the reporting requirements in Section 1.14(g), following such Change of Control until all Additional Milestone Payments have been made, Parent (or its Affiliate, including the acquirer) shall promptly notify (and, in any event, within fifteen (15) Business Days of such occurrence) Stockholders' Representative of any material adverse development with respect to any Company Product.

1.15 Set-Off Right. Notwithstanding any provision of this Agreement to the contrary, the parties hereby acknowledge and agree that, in addition to any other right hereunder, Parent shall have the right, but not the obligation, from time to time to set off any indemnification payments finally determined pursuant to Article VIII to be owed by the Indemnifying Stockholders to the Parent Indemnified Parties at such time against any Milestone Payment that is owed and has not yet been paid.

ARTICLE II.
CLOSING

2.1 The Closing. The closing of the transactions contemplated herein (the "Closing") shall take place at the offices of Latham & Watkins LLP, 140 Scott Drive, Menlo Park, California, at 9:00 a.m. as soon as reasonably practicable (and, in any event, within three (3) Business Days) after satisfaction or (to the extent permitted by applicable Law) waiver of the conditions set forth in Article VI hereof, or at such other time, date and location (or by electronic exchange of signatures) as Parent and the Company may agree in writing (the date of the Closing, the "Closing Date").

2.2 Pre-Closing Deliveries.

(a) No later than three (3) Business Days prior to the Closing Date, the Company shall deliver to Parent a statement (the "Estimated Closing Statement") setting forth the Company's good faith estimate of (i) Closing Indebtedness, (ii) Unpaid Transaction Expenses and (iii) Closing Cash. The Company shall consult with Parent and its accountants with respect to the preparation of the Estimated Closing Statement and shall deliver appropriate supporting documentation, in detail reasonably acceptable to Parent, concurrently with the delivery of the Estimated Closing Statement. Parent and its Representatives shall have reasonable access during normal business hours to the books, records and officers of the Company to the extent reasonably required in connection with their review of the Estimated Closing Statement and the components thereof. If prior to the Closing Date, Parent disputes all or any portion of the Estimated Closing Statement, the Company and Parent shall promptly meet and resolve in good faith any disagreements concerning the Estimated Closing Statement and the components thereof prior to the Closing.

(b) No later than three (3) Business Days prior to the Closing Date, the Company shall prepare and deliver to Parent a schedule in spreadsheet format (the "Consideration Schedule"), in form and substance reasonably satisfactory to Parent and certified as complete and correct by the Company's chief executive officer, setting forth all of the following information as of immediately prior to the Closing: (i) the names of all of the Company Stockholders and their respective addresses and, to the extent known by the Company, their respective e-mail addresses, (ii) the number and type of shares of Company Capital Stock held by such Company Stockholders and the respective certificate numbers representing such shares, (iii) the number of shares of Company Capital Stock held by such Company Stockholders that constitute Company Restricted Shares and the vesting schedule thereof, (iv) the date of acquisition of shares of Company Capital

Stock, (v) the calculation of the Fully Diluted Common Shares and the Aggregate Closing Parent Shares, (vi) the calculation of aggregate cash amounts, Parent Series A-2 Preferred Shares releasable to each Indemnifying Stockholder at Closing pursuant to Section 1.5 assuming each Indemnifying Stockholder is paid either a cash amount, Parent Series A-2 Preferred Shares pursuant to Section 1.5, (vii) the calculation of each Company Stockholder's Pro Rata Share and Indemnity Pro Rata Share, (viii) a funds flow memorandum setting forth applicable wire transfer instructions and (ix) if required, any information relating to cost basis reporting under Section 6045 of the Code and the Treasury Regulations promulgated thereunder, such as the acquisition date and acquisition price of any Company Capital Stock held by a Person that are "covered securities" within the meaning of Section 6045(g)(3) of the Code. All amounts and allocations set forth in the Consideration Schedule shall be conclusive and binding upon the Company and the Company Stockholders and neither Parent or Merger Sub, nor, after Closing, the Surviving Corporation shall have any obligation to verify the accuracy of the Consideration Schedule. In the event of any inconsistency between the Consideration Schedule and any provision of the Company Certificate or any other document, the Consideration Schedule shall control in all respects. The Consideration Schedule shall be revised by the parties to reflect the resolution of any disputes pursuant to Section 2.2(a), the amount of Closing Cash, any increase in Closing Indebtedness and Unpaid Transaction Expenses following Parent's receipt of the Payoff Letters and final invoices pursuant to Section 2.2(c). An illustrative Consideration Schedule prepared under the assumption that the Closing was required to occur on the date of this Agreement is set forth in Section 2.2(b) of the Company Disclosure Schedule; provided that such illustrative Consideration Schedule need not contain the addresses of Company Stockholders or information that is responsive to clauses (viii) and (ix) above.

(c) No later than three (3) Business Days prior to the Closing Date, the Company shall obtain and deliver to Parent accurate and complete copies of: (i) with respect to each item of Indebtedness of the Company, if any, a payoff letter, dated no more than three (3) Business Days prior to the Closing Date and in form and substance reasonably satisfactory to Parent, from the lender of such item of Indebtedness and setting forth the amounts payable to such lender to (A) fully satisfy and discharge such Indebtedness as of the Closing and (B) terminate and release any Encumbrances related thereto (each, a "Payoff Letter"); and (ii) an invoice from each advisor or other service provider to the Company, dated no more than three (3) Business Days prior to the Closing Date, with respect to all Transaction Expenses due and payable to such advisor or other service provider, as the case may be, as of the Closing Date.

ARTICLE III.
REPRESENTATIONS AND WARRANTIES OF THE COMPANY

The Company hereby represents and warrants to Parent and Merger Sub as follows, except as otherwise set forth on the Company Disclosure Schedule, which representations and warranties are, as of the date hereof, true and correct (except for representations and warranties that by their terms are made only as of a specific date or time, which need only be true and correct as of such date or time):

3.1 Organization. The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has all requisite corporate power and authority to carry on its business as presently conducted and as proposed to be conducted. The Company is duly qualified to transact business and is in good standing in each jurisdiction in which the failure to so qualify would have a Material Adverse Effect on the Company.

3.2 Authorization. The Company has all requisite corporate power and authority to execute and deliver this Agreement and all agreements contemplated by this Agreement to be executed and delivered by the Company, as the case may be, pursuant hereto, to consummate the transactions contemplated hereby and thereby and to perform its obligations hereunder and thereunder. The execution and delivery by the Company of this Agreement and such other agreements and the consummation by the Company of the transactions contemplated hereby and thereby have been duly approved by the Company Board. No other corporate proceedings on the part of the Company are necessary to authorize this Agreement and the transactions contemplated hereby (other than the Requisite Stockholder Approval). The Requisite Stockholder Approval is the only vote or consent of the holders of any class or series of Company Capital Stock necessary to adopt this Agreement and approve the terms of the Merger and the consummation of the transactions contemplated hereby. This Agreement has been, and such other agreements will be, duly executed and delivered by the Company and is, and such other agreements will be, the legal, valid and binding obligations of the Company, enforceable against the Company in accordance with their terms, in each case, except as such enforceability may be limited by (a) bankruptcy, insolvency, moratorium, reorganization or other similar Laws affecting creditors' rights generally and (b) the general principles of equity, regardless of whether asserted in a Proceeding in equity or at Law.

3.3 Governmental Consents and Filings. Assuming the accuracy of the representations made by Parent and Merger Sub in Article IV, no consent, approval, order or authorization of, or registration, qualification, designation, declaration or filing with, any federal, state or local Governmental Authority is required on the part of the Company in connection with the consummation of the transactions contemplated by this Agreement, except for (i) the filing of the Restated Certificate, which will have been filed as of the Closing, and (ii) filings pursuant to Regulation D of the Securities Act, and applicable state securities laws.

3.4 No Conflict or Violation. The Company is not in violation or default: (a) of any provisions of its Organizational Documents, (b) of any Order, (c) under any note, indenture or mortgage, (d) under any Company Material Contract to which it is a party or by which it is bound that is required to be listed on the Company Disclosure Schedule, or (e) of any provision of federal or state Law applicable to the Company, except, in each case of each of clauses (b) and (e), were such violation or default would not, individually or in the aggregate, reasonably be expected to result in a material Liability to the Company. The execution, delivery and performance of this Agreement and the consummation of the transactions contemplated hereby will not result in any such violation or be in conflict with or constitute, with or without the passage of time and giving of notice, either (i) a material default under any such provision, instrument, Order, or Company Material Contract; or (ii) an event which results in the creation of any Encumbrance upon any assets of the Company or the suspension, revocation, forfeiture, or nonrenewal of any material Permit applicable to the Company.

3.5 Capitalization.

(a) As of the date hereof, the authorized capital stock of the Company consists of:

(i) 17,550,000 shares of Company Common Stock, 5,038,237 shares of which are issued and outstanding as of the date hereof. All of the outstanding shares of Company Common Stock have been duly authorized, are fully paid and nonassessable and were issued in compliance with all applicable federal and state securities Laws. The Company holds no Company Common Stock in its treasury.

(ii) 10,794,127 shares of Company Preferred Stock, of which all of such shares have been designated Series A Preferred Stock, 10,762,877 of which are issued or outstanding as of the date hereof. The rights, privileges and preferences of the Company Preferred Stock are as stated in the Company Certificate and as provided by the DGCL. The Company holds no Company Preferred Stock in its treasury.

(b) As of the date hereof, the Company has reserved 1,464,350 shares of Company Common Stock for issuance to officers, directors, employees and consultants of the Company pursuant to the Company Plan. Of such reserved shares of Company Common Stock, 639,367 options to purchase or stock purchase rights have been granted, 30,000 Company Restricted Shares have been issued under the Company Plan, and 792,396 shares of Company Common Stock remain available for issuance to officers, directors, employees and consultants pursuant to the Company Plan. The Company has made available to Parent complete and accurate copies of the Company Plan and forms of agreements approved by the Company Board for use thereunder.

(c) Except as set forth on Section 3.5(c) of the Company Disclosure Schedule, (i) there are no outstanding options, warrants, rights (including conversion or preemptive rights) or agreements for the purchase or acquisition from the Company of any shares of Company Capital Stock or any other securities, phantom stock rights or capital stock of the Company, (ii) none of the outstanding shares of Company Capital Stock is entitled or subject to any preemptive right, right of participation, right of maintenance or any similar right; (iii) none of the outstanding shares of Company Capital Stock is subject to any right of first refusal or similar right in favor of the Company or any other Person, and (iv) there is no Contract to which the Company or any holder of Company Capital Stock is bound restricting any Person from purchasing, selling, pledging or otherwise disposing of (or granting any option or similar right with respect to), any shares of Company Capital Stock. The Company is not under any obligation, and is not bound by any Contract pursuant to which it may become obligated, to repurchase, sell, issue, redeem or otherwise acquire any shares of Company Capital Stock, any other securities or any rights related thereto.

(d) Section 3.5(d) of the Company Disclosure Schedule sets forth accurate and complete information with respect to (x) the holder, the grant date, the vesting, the exercise price, the expiration date, the shares underlying and the tax status of each Company Option outstanding as of the date of this Agreement and (y) the intended holder, the vesting, the shares underlying and the tax status of each Company Option promised by the Company but not yet granted. All outstanding Company Options were granted pursuant to the terms of the Company Plan. The Company has provided or otherwise made available to Parent accurate and complete

copies of all stock option plans pursuant to which the Company has granted such Company Options and the form of all stock option agreements evidencing such Company Options. Each Company Option is exempt from Section 409A of the Code. Except as set forth on Section 3.5(d) of the Company Disclosure Schedule, each Company Option characterized by the Company as an "incentive stock option" within the meaning of Section 422 of the Code complies with all of the applicable requirements of Section 422 of the Code.

(e) A total of 31,250 shares of Series A Preferred Stock are reserved for issuance pursuant to outstanding Company Warrants as of the date of this Agreement. Section 3.5(e) of the Company Disclosure Schedule sets forth accurate and complete information with respect to the holder, the exercise price, the expiration date and the shares underlying each Company Warrant outstanding as of the date of this Agreement. The Company has provided or otherwise made available to Parent accurate and complete copies of all Company Warrants and the form of all warrant purchase or other agreements relating to such Company Warrants.

(f) Except as set forth on Section 3.5(f) of the Company Disclosure Schedule, there are no commitments or agreements of any character to which the Company is bound obligating the Company to accelerate the vesting of any Company Option as a result of the Merger. All outstanding Company Options and Company Warrants have been issued and granted in material compliance with all applicable Laws as of the time of grant and issuance.

(g) The Company does not own or control, directly or indirectly, any interest in any other corporation, partnership, trust, joint venture, limited liability company, association, or other business entity. The Company is not a participant in any joint venture, partnership or similar arrangement.

3.6 Securities Laws.

(a) No "bad actor" disqualifying event described in Rule 506(d)(1)(i)-(viii) of the Securities Act (a "Disqualification Event") is applicable to the Company or, to the Company's Knowledge, any Company Covered Person, except for a Disqualification Event as to which Rule 506(d)(2)(ii-iv) or (d)(3), is applicable.

(b) Neither the Company, nor any of its officers, directors, employees, agents or stockholders has either directly or indirectly, including, through a broker or finder (i) engaged in any general solicitation, or (ii) published any advertisement in connection with the offer and sale of the Parent Series A-2 Preferred Shares.

3.7 Litigation. There is no Action pending or to the Company's Knowledge, currently threatened in writing (a) against the Company; (b) against any officer, director or employee of the Company arising out of their employment or board relationship with the Company; (c) that questions the validity of this Agreement or the agreements contemplated by this Agreement to which the Company is a party or the right of the Company to enter into them, or to consummate the transactions contemplated hereby or thereby; or (d) that would reasonably be expected, either individually or in the aggregate, to result in material Liability to the Company or materially impair the operation of the Company's business. Neither the Company nor, to the Company's Knowledge, any of its officers, directors or employees is a party or is named as subject

to the provisions of any Order (in the case of officers, directors or employees, such as would affect the Company). There is no Action by the Company pending or which the Company intends to initiate. The foregoing includes Actions pending or threatened in writing involving the prior employment of any of the Company's employees, their services provided in connection with the Company's business, any information or techniques allegedly proprietary to any of their former employers or their obligations under any agreements with prior employers.

3.8 Intellectual Property.

(a) Section 3.8(a) of the Company Disclosure Schedule sets forth an accurate and complete list as of the date of this Agreement of (i) each item of Company Registered Intellectual Property, (ii) the jurisdiction in which such item of Company Registered Intellectual Property has been registered or filed, the applicable application, registration, or serial or other similar identification number, the filing date or registration date and issuance or grant date, (iii) in the case of a trademark or pending application for a trademark, the class of goods covered and the expiration date, or if applicable the internet domain name registration, the name of the registrant and the name of the registrar, (iv) the record owner thereof and (v) all registration, maintenance or renewal fees that are due or filings that must be made within 120 days of the date hereof for the purposes of maintaining, perfecting, preserving or renewing any registrations for such Intellectual Property. The Company has provided to Parent complete and accurate copies of all invention disclosures, applications, material correspondence with any Governmental Authority, and other material documents related to the prosecution and maintenance of each such item of Company Registered Intellectual Property.

(b) The Company exclusively owns all right, title, and interest to and in Company Intellectual Property (other than (i) Company Intellectual Property exclusively and non-exclusively licensed to the Company, as identified in Section 3.8(b)(i) of the Company Disclosure Schedule and (ii) commercially available software products under standard end-user object code license agreements ("Off-the-Shelf Software Licenses")), in each case, free and clear of any Encumbrances (other than Permitted Encumbrances). Without limiting the generality of the foregoing: (1) all documents and instruments necessary to register or apply for or renew registration of Company Registered Intellectual Property have been validly executed, delivered, and filed in a timely manner with the appropriate Governmental Authority; (2) each item of Company Registered Intellectual Property is and at all times has been filed and maintained in compliance with all applicable Laws (including without limitation all applicable duties of candor and good faith in dealing with any applicable patent office, including the United States Patent and Trademark Office and any comparable foreign patent office) and all filings, payments, and other actions required to be made or taken to maintain such item of Company Registered Intellectual Property in full force and effect have been made by the applicable deadline; (3) except as set forth in Section 3.8(b)(i) of the Company Disclosure Schedule, no funding, facilities, or personnel of any Governmental Authority were used, directly or indirectly, to develop or create, in whole or in part, any Company Intellectual Property in which the Company has an ownership interest; and (4) the Company has not assigned or otherwise transferred ownership of, or agreed to assign or otherwise transfer ownership of, any Company Intellectual Property to any other Person. The Company has obtained and possesses valid licenses to use all of the software programs present on the computers and other software-enabled electronic devices that it owns or leases or that it has otherwise provided to its employees for their use in connection with the Company's business.

Section 3.8(b)(i) of the Company Disclosure Schedule sets forth an accurate and complete list as of the date of this Agreement of each Contract pursuant to which any Person granted to the Company any license or right or interest in any Intellectual Property (other than Off-the-Shelf Software Licenses). The Company has delivered or made available to Parent, a complete and accurate copy of all Contracts listed on Section 3.8(b)(i) of the Company Disclosure Schedule. With respect to each of such Contracts: (x) each such Contract is valid and binding on the Company and in full force and effect; (y) the Company has not received any written notice of termination or cancellation under such Contract, or received any written notice of breach or default under such Contract, which breach has not been cured or waived; and (z) the Company, and to the Company's Knowledge, no other party to any such Contract, is in breach or default thereof in any material respect. The consummation of the transactions contemplated by this Agreement will neither result in the modification, cancellation, termination, suspension of, or acceleration of any payments with respect to any such Contract, nor give any third party to any such Contract the right to do any of the foregoing. Following the closing of the transactions contemplated by this Agreement, the Parent itself or the Company will be permitted to exercise all of the rights of the Company under such Contracts to the same extent the Company would have been able had the transactions contemplated by this Agreement not occurred and without the payment of any additional amounts or consideration other than ongoing fees, royalties or payments that the Company would otherwise be required to pay.

(c) Section 3.8(c) of the Company Disclosure Schedule sets forth an accurate and complete list as of the date of this Agreement of each Contract pursuant to which any Person has been granted by Company any license or covenant not to sue under, or otherwise has received or acquired any right (whether or not currently exercisable) or interest in, any Company Intellectual Property, and except as set forth on Section 3.8(c) of the Company Disclosure Schedule, there exists no obligation by the Company to assign, license or otherwise transfer any of the Company Intellectual Property to any Person. Except as set forth on Section 3.8(c) of the Company Disclosure Schedule, the Company is not bound by, and no Company Intellectual Property is subject to, any Contract containing any covenant or other provision that in any way limits or restricts the ability of the Company to use, exploit, assert, or enforce any Company Intellectual Property anywhere in the world. Other than with respect to Off-the-Shelf Software Licenses, and the Contracts set forth on Section 3.8(b)(i) and Section 3.8(c) of the Company Disclosure Schedule, there are no outstanding Contracts, options, licenses, agreements, claims, Encumbrances or shared ownership interests of any kind relating to (i) Foundational IP (as defined in that certain license agreement, effective as of February 17, 2016, by and between Flagship Pioneering Innovations V, Inc. and the Company) and any Company Intellectual Property in which the Company has an ownership interest, and (ii) to the Company's Knowledge, any other Company Intellectual Property.

(d) The issued patent rights within the Company Registered Intellectual Property are to the Company's Knowledge valid and enforceable. There is no pending or, to the Company's Knowledge threatened: opposition, interference, reexamination, injunction, claim, suit, action, citation, summon, subpoena, investigation (by the International Trade Commission or otherwise), complaint, arbitration, mediation, demand, decree or other dispute, disagreement, proceeding or claim, in each case before a court or other Governmental Authority (collectively "Disputes") challenging the legality, validity, enforceability, inventorship, ownership, or right to use, sell, license or dispose of any of the Company Intellectual Property or alleging any misuse of

any of the Company Intellectual Property nor, to the Company's Knowledge, is there any basis for any such Dispute (provided the foregoing representation is made to Company's Knowledge with respect to Intellectual Property licensed to the Company). The Company Intellectual Property is not subject to any outstanding Order, settlement or other disposition as the result of a Dispute (provided the foregoing representation is made to Company's Knowledge with respect to Intellectual Property licensed to the Company), and the Company has not received any written notice asserting that any Company Intellectual Property or the proposed use, sale, license or disposition thereof conflicts with or infringes or misappropriates or will conflict with or infringe or misappropriate the rights of any other Person.

(e) The Company has taken reasonable steps to maintain the confidentiality of and otherwise protect and enforce its rights in all proprietary information that the Company holds, or purports to hold, as a trade secret. To the Company's Knowledge there have been no unauthorized disclosures of any trade secrets of the Company. Each employee of and consultant to the Company has executed a valid, enforceable agreement that assigns to the Company all Intellectual Property rights he or she conceives, makes or invents pursuant to such agreement that are related to the Company's business as now conducted and as presently proposed to be conducted and that contains confidentiality provisions protecting trade secrets and confidential information of the Company. To the Company's Knowledge, no current or former stockholder, officer, director, or employee of the Company has any claim, right (whether or not currently exercisable), or interest to or in any Company Intellectual Property. To the Company's Knowledge, no employee of the Company or is (i) bound by or otherwise subject to any Contract restricting him or her from performing his or her duties for the Company or (ii) in breach of any Contract with any former employer or other Person concerning, or confidentiality provisions protecting trade secrets and confidential information comprising, Company Intellectual Property.

(f) To the Company's Knowledge, the Company Intellectual Property constitutes all Intellectual Property necessary for the Company to conduct its business as currently conducted. To the Company's Knowledge, the Company owns or possesses sufficient legal rights to, and has the right to bring actions for the infringement of, all Company Intellectual Property without any conflict with, or infringement of, the rights of others (but subject to any Contract rights or obligations with respect to Company Intellectual Property licensed to the Company). The Company has not received any communications alleging that the Company has violated, or by conducting its business, would violate any of the Intellectual Property of any other Person. No formal, written legal opinion concerning or with respect to any third party Intellectual Property rights relating to any technology or process or product candidate developed or proposed to be developed, marketed or sold by the Company, including without limitation any freedom-to-operate, product clearance, or right-to-use opinion, has been conducted by or on behalf of, or delivered to the Company. To the Company's Knowledge, no third party is infringing upon, or violating any license or agreement with the Company relating to any Company Intellectual Property.

(g) To the Company's Knowledge, no trademark (whether registered or unregistered) or trade name owned, used, or applied for by the Company conflicts or interferes with any trademark (whether registered or unregistered) or trade name owned, used, or applied for by any other Person. To the Company's Knowledge, none of the goodwill associated with or inherent in any trademark (whether registered or unregistered) in which the Company has or purports to have an ownership interest has been impaired. Section 3.8(g) of the Company Disclosure Schedule sets forth all material unregistered trademarks owned by the Company or used by the Company in the conduct of its business as currently conducted and currently planned to be conducted.

(h) Except as set forth in Section 3.8(b)(i) and Section 3.8(c) of the Company Disclosure Schedule, (i) the Company is not bound by any Contract to indemnify, defend, hold harmless, or reimburse any other Person with respect to any Intellectual Property infringement, misappropriation, or similar claim, and (ii) the Company has never assumed, or agreed to discharge or otherwise take responsibility for, any existing or potential liability of another Person for infringement, misappropriation, or violation of any Intellectual Property, which assumption, agreement or responsibility remains in force as of the date of this Agreement.

3.9 Company Material Contracts.

(a) Except for this Agreement and the Contracts listed in Section 3.9(a) of the Company Disclosure Schedule (any such Contract listed or required to be listed on Section 3.9(a) of the Company Disclosure Schedule, a "Company Material Contract"), as of the date of this Agreement, there are no Contracts to which the Company is a party or by which it is bound that involve (i) obligations (contingent or otherwise) of, or payments to, the Company in excess of $100,000 on an annual basis, (ii) the license of any patent, copyright, trademark, trade secret or other proprietary right to or from the Company (except for Off-the-Shelf Software Licenses and other agreements generated in the ordinary course of business consistent with past practice that are not material, either individually or in the aggregate, to the Company, such as employee assignment agreements, non-disclosure agreements, consulting agreements, evaluation agreements and material transfer agreements), (iii) the grant of rights to manufacture, produce, assemble, license, market, or sell its products to any other Person that limit the Company's exclusive right to develop, manufacture, assemble, distribute, market or sell its products, (iv) indemnification by the Company with respect to infringements of proprietary rights (other than any agreement entered into in the ordinary course of business consistent with past practice), (v) any employment or restrictive covenant agreements (except for the Company's standard form offer letters and proprietary information agreement) and consulting agreements (except for the Company's standard form consulting agreements) which involve payments by the Company in excess of $100,000 on an annual basis, (vi) any distributor or sales representative agreement, (vii) any agreement under which the Company is restricted from carrying on its business anywhere in the world, (viii) any agreement for the disposition of a material portion of the Company's assets (other than for the sale of inventory in the ordinary course of business), (ix) any material lease or sublease pursuant to which the Company leases from others real or personal property or (x) any agreement for the acquisition by the Company of the business or securities or other ownership interests of another party.

(b) The Company has provided or otherwise made available to Parent a correct and complete copy of each Contract required to be listed in Section 3.9(a) of the Company Disclosure Schedule. With respect to each such Company Material Contract: (i) the Contract is legal, valid, binding, enforceable, and in full force and effect; (ii) neither the Company nor, to the Company's Knowledge, any other party is in material breach or default, and to the Company's Knowledge, no event has occurred and no circumstance or condition exists, which with or without notice or lapse of time would constitute a breach or default, or permit termination, modification, or acceleration, under such Contract, or give any Person the right to cancel, terminate or modify any such Contract; or (iii) to the Company's Knowledge, no party has repudiated any provision of such Contract.

3.10 Certain Transactions.

(a) Other than (i) standard employee benefits generally made available to all employees, (ii) standard director and officer indemnification agreements approved by the Board of Directors, (iii) the purchase of shares of Company Capital Stock, in each instance, approved in the written minutes of the Company Board (previously provided to Parent) and (iv) as otherwise disclosed in Sections 3.10(a), 3.16(f) and 3.16(g) of the Company Disclosure Schedule, there are no agreements, understandings or proposed transactions between the Company and any of its officers or their direct reports, directors, consultants or key employees, or any Affiliate of the Company or any of the foregoing.

(b) The Company is not indebted, directly or indirectly, to any of its directors, officers or employees or to their respective spouses or children or to any Affiliate of the Company or any of the foregoing (each, a "Company Related Person"), other than in connection with expenses or advances of expenses incurred in the ordinary course of business or employee relocation expenses and for other customary employee benefits made generally available to all employees. Except as set forth on Section 3.10(b) of the Company Disclosure Schedule, no Company Related Person is, directly or indirectly, indebted to the Company or, to the Company's Knowledge, has any (i) material commercial, industrial, banking, consulting, legal, accounting, charitable or familial relationship with any of the Company's customers, suppliers, service providers, joint venture partners, licensees or competitors, (ii) direct or indirect ownership interest in any entity with which the Company is affiliated or with which the Company has a business relationship, or any entity which competes with the Company (other than any ownership of less than two percent (2%) of the outstanding capital stock of publicly traded companies that may compete with the Company) or (iii) financial interest in any material Contract with the Company.

3.11 Voting Rights. Except as contemplated in the Company Voting Agreement, to the Company's Knowledge, no Company Stockholder has entered into any agreements with respect to the voting of shares of Company Capital Stock.

3.12 Property. The tangible property and assets that the Company owns are free and clear of all Encumbrances, except for Permitted Encumbrances. With respect to the tangible property and assets it leases, the Company is in compliance with such leases and, to its Knowledge, holds a valid leasehold interest free of any Encumbrances other than those of the lessors of such property or assets. The Company does not own, and has not ever owned, any real property.

3.13 Financial Statements. The Company has delivered to Parent its unaudited financial statements as of December 31, 2016 and December 31, 2017 and for the years ended December 31, 2016 and December 31, 2017 and its unaudited financial statements (including balance sheet, income statement, stockholders' equity and statement of cash flows) as of September 30, 2018 (the "Company Balance Sheet Date") and for the nine-month period ended on the Company Balance Sheet Date (collectively, the "Company Financial Statements"). The

Company Financial Statements have been prepared in accordance with GAAP applied on a consistent basis throughout the periods indicated, except that the unaudited Company Financial Statements may not contain all footnotes required by GAAP. The Company Financial Statements fairly present in all material respects the financial condition and operating results of the Company as of the dates, and for the periods, indicated therein, subject in the case of the unaudited Company Financial Statements to normal year-end audit adjustments. The Company maintains a standard system of accounting established and administered in accordance with GAAP.

3.14 Undisclosed Liabilities. The Company does not have any material Liabilities other than: (a) Liabilities disclosed and provided for on the Company Balance Sheet or in the notes thereto; (b) accounts payable or accrued salaries or employee benefits that have been incurred by the Company since the Company Balance Sheet Date in the ordinary course of business; (c) Liabilities under the express terms of executory Contracts to which the Company is a party (none of which relates to any breach of contract, breach of warranty, tort, infringement or violation of Law); and (d) Liabilities arising under this Agreement.

3.15 Absence of Changes. Since July 1, 2018, there has not been:

(a) any change in the assets, liabilities, financial condition or operating results of the Company from that reflected in the Financial Statements, except changes in the ordinary course of business that have not caused, in the aggregate, a Material Adverse Effect on the Company;

(b) any damage, destruction, loss or other event or development, whether or not covered by insurance, that would have a Material Adverse Effect on the Company;

(c) any waiver or compromise by the Company of a valuable right or of a material debt owed to it;

(d) any satisfaction or discharge of any Encumbrance or payment of any obligation by the Company, except in the ordinary course of business and the satisfaction or discharge of which would not have a Material Adverse Effect on the Company;

(e) any material change in any compensation arrangement or agreement with any employee, officer or director of the Company;

(f) any resignation or termination of employment of any officer, direct report of an officer or key employee of the Company;

(g) any mortgage, pledge, transfer of a security interest in, or Encumbrance, created by the Company, with respect to any of its material properties or assets, except Permitted Encumbrances;

(h) any loans or guarantees made by the Company to or for the benefit of its employees, officers or directors, or any members of their immediate families, other than travel advances and other advances made in the ordinary course of its business;

(i) any declaration, setting aside or payment or other distribution in respect of any of the Company's capital stock, or any direct or indirect redemption, purchase, or other acquisition of any of such stock by the Company;

(j) any sale, assignment or transfer of any Company Intellectual Property; or

(k) any arrangement or commitment by the Company to do any of the things described in this Section 3.15 (other than negotiations and agreements with Parent and its Representatives regarding the transactions contemplated by this Agreement).

3.16 Employee Matters.

(a) Section 3.16(a) of the Company Disclosure Schedule sets forth an accurate and complete list of the names, titles, annual base salary or hourly rate or other compensation rate, commission or bonus opportunity, hire date, accrued vacation and paid-time-off, principal work location, whether the employee or independent contractor regularly works more than 40 hours a week (or 8 hours a day in California), and leave status (including type of leave and expected duration) of all employees of and independent contractors to the Company as of the date of this Agreement, whether any employee is on a work visa or work permit (and applicable date of expiration) and each employee's status as being exempt or nonexempt from the application of state and federal wage and hour Laws.

(b) To the Company's Knowledge, none of its employees is obligated under any Contract (including licenses, covenants or commitments of any nature) or other agreement, or subject to any Order, that would materially interfere with such employee's ability to promote the interest of the Company or that would conflict with the Company's business. Neither the execution or delivery of this Agreement, nor the carrying on of the Company's business by the employees of the Company, nor the conduct of the Company's business as now conducted and as presently proposed to be conducted, will, to the Company's Knowledge, conflict with or result in a breach of the terms, conditions, or provisions of, or constitute a default under, any contract, covenant or instrument under which any such employee is now obligated.

(c) The Company is not delinquent in payments to any of its employees, consultants, or independent contractors for any wages, salaries, commissions, bonuses, or other direct compensation for any service performed for it to the date hereof or amounts required to be reimbursed to such employees, consultants or independent contractors. The Company is, and has been at all times since incorporation, in compliance in all material respects with all applicable state and federal equal employment opportunity Laws and with other Laws related to labor and employment, including those related to wages, hours, worker classification and collective bargaining. The Company has at all times since incorporation, withheld and paid to the appropriate Governmental Authority or is holding for payment not yet due to such Governmental Authority all amounts required to be withheld from employees of the Company and is not liable for any arrears of wages, taxes, penalties or other sums for failure to comply with any of the foregoing.

(d) To the Company's Knowledge, no key employee has expressed an intention to terminate employment with the Company or is otherwise likely to become unavailable to continue as a key employee, nor does the Company have a present intention to terminate the employment of any of the foregoing. The employment of each employee of the Company is terminable at the will of the Company. Except as set forth in Section 3.16(d) of the Company Disclosure Schedule or as required by law, upon termination of the employment of any such employees, no severance or other payments will become due. Except as set forth in Section 3.16(d) of the Company Disclosure Schedule, the Company has no policy, practice, plan or program of paying severance pay or any form of severance compensation in connection with the termination of employment services.

(e) The Company has not made any representations regarding equity incentives to any officer, employee, director or consultant that are inconsistent with the share amounts and terms set forth in the minutes of meetings of the Company Board.

(f) Each former officer or direct report of an officer whose employment was terminated by the Company has entered into an agreement with the Company providing for the full release of any claims against the Company or any related party arising out of such employment.

(g) Section 3.16(g) of the Company Disclosure Schedule sets forth an accurate and complete list identifying each material "employee benefit plan," as defined in Section 3(3) of ERISA, and each material employment, consulting, advisory, independent contractor, severance or similar Contract and each other material plan, agreement, policy, program, commitment or arrangement (written or oral) providing for compensation, bonuses, commission, profit-sharing, retention, equity or other equity-related rights, incentive or deferred compensation, vacation benefits, insurance (including any self-insured arrangements), health or medical benefits, welfare benefits, life, accident, dental or vision benefits, tuition benefits, vacation or paid-time-off, employee assistance program, disability or sick leave benefits, supplemental unemployment benefits, severance benefits, change of control payments, post-employment or retirement benefits and other employee benefits, in any case, which is maintained, administered or contributed to by the Company thereof and covers any employee or former employee of the Company, or with respect to which the Company has or may have any liability (whether actual or contingent) (collectively, the "Employee Plans"). The Company has made available to Parent a true, correct and complete copy of each of the Employee Plans and related plan documents. The Company has made all required contributions or has accrued such contributions in accordance with the terms of the applicable Employee Plan and has no liability under any such Employee Plans for post-termination or retiree payments and benefits, other than liability for health plan continuation coverage described in Part 6 of Title I(B) of ERISA, and has complied in all material respects with its terms and all applicable Laws for any such Employee Plan.

(h) Neither the Company nor any current or former ERISA Affiliate of the Company maintains, sponsors, participates in or contributes to, or has ever maintained, established, sponsored, participated in, or contributed to, any pension plan (within the meaning of Section 3(2) of ERISA) which is subject to Part 3 of Subtitle B of Title I of ERISA, Title IV of ERISA or Section 412 of the Code. Neither the Company nor any ERISA Affiliate of the Company is a party to, or has made any contribution to or otherwise incurred any obligation under, any "multiemployer plan" as such term is defined in Section 3(37) of ERISA or any "multiple employer plan" as such term is defined in Section 413(c) of the Code.

(i) The Company is not bound by or subject to (and none of its assets or properties is bound by or subject to) any written or oral, express or implied, contract, commitment or arrangement with any labor union, and no labor union has requested or, to the Company's Knowledge, has sought to represent any of the employees, representatives or agents of the Company. There is no strike or other labor dispute involving the Company pending, or to the Company's Knowledge, threatened, which would be material to the Company, nor is the Company aware of any labor organization activity involving its employees.

(j) To the Company's Knowledge, none of the key employees, officers or their direct reports, or directors of the Company has been (i) subject to voluntary or involuntary petition under the federal bankruptcy laws or any state insolvency law or the appointment of a receiver, fiscal agent or similar officer by a court for his business or property; (ii) convicted in a criminal proceeding or named as a subject of a pending criminal proceeding (excluding traffic violations and other minor offenses); (iii) subject to any order, judgment or decree (not subsequently reversed, suspended, or vacated) of any court of competent jurisdiction permanently or temporarily enjoining him from engaging, or otherwise imposing limits or conditions on his engagement in any securities, investment advisory, banking, insurance, or other type of business or acting as an officer or director of a public company; or (iv) found by a court of competent jurisdiction in a civil action or by the Securities and Exchange Commission to have violated any federal or state securities or unfair trade practices law, which such judgment or finding has not been subsequently reversed, suspended, or vacated.

(k) No Employee Plan is sponsored, maintained or contributed to under the law or applicable custom or rule of any jurisdiction outside of the United States.

(l) Neither the execution or delivery of this Agreement nor the consummation of the transactions contemplated by this Agreement or any termination of employment or service or any other event in connection therewith or subsequent thereto will, individually or together or with the occurrence of some other event, (whether contingent or otherwise), (i) result in any material payment or benefit (including severance, unemployment compensation, golden parachute, bonus or otherwise) becoming due or payable, or required to be provided, to any current or former employee, director, independent contractor or consultant, (ii) materially increase the amount or value of any benefit or compensation otherwise payable or required to be provided to any current or former employee, director, independent contractor or consultant, (iii) result in the acceleration of the time of payment, vesting or funding of any such benefit or compensation, (iv) increase the amount of compensation due to any Person, or (v) result in the forgiveness in whole or in part of any outstanding loans made by the Company to any Person. No amount paid or payable by the Company in connection with the transactions contemplated by this Agreement, whether alone or in combination with another event, will be an "excess parachute payment" within the meaning of Code Section 280G or Code Section 4999 or will not be deductible by the Company by reason of Code Section 280G. Section 3.16(l) of the Company Disclosure Letter lists each Person who the Company reasonably believes is, with respect to the Company and/or any ERISA Affiliate, a "disqualified individual" (within the meaning of Section 280G of the Code and the regulations promulgated thereunder).

3.17 Tax Matters.

(a) The Company has duly and timely filed with the appropriate Tax authorities all Tax Returns required to be filed by, or with respect to, the Company. All such Tax Returns are complete and accurate in all material respects. All Taxes due and owing by the Company (whether or not shown on any Tax Returns) have been timely paid. The Company is not currently the beneficiary of any extension (other than automatic extensions) of time within which to file any Tax Return. No written claim has ever been made by a Tax Authority in a jurisdiction where the Company does not file Tax Returns that the Company is or may be subject to taxation by that jurisdiction.

(b) The unpaid Taxes of the Company did not exceed the reserve for Tax liability (excluding any reserve for deferred Taxes established to reflect timing differences between book and Tax income) set forth on the face of the Company Balance Sheet (rather than in any notes thereto) as adjusted for ordinary course operations and transactions consistent with the past practice of the Company through the Closing Date. Since the Company Balance Sheet Date, the Company has not incurred any liability for Taxes outside the ordinary course of business or otherwise inconsistent with past custom and practice.

(c) No deficiencies for Taxes with respect to the Company have been claimed, proposed or assessed by any Tax Authority. There are no pending audits, assessments or other actions for or relating to any liability in respect of Taxes of the Company, nor are any threatened in writing. The Company has delivered or made available to Parent complete and accurate copies of all federal and material state, local and foreign income Tax Returns of the Company (and any predecessor thereof) for all taxable years remaining open under the applicable statute of limitations, and complete and accurate copies of all audit or examination reports and statements of deficiencies assessed against or agreed to by the Company (or any predecessors thereof). The Company (or any predecessor thereof) has not waived any statute of limitations in respect of Taxes or agreed to any extension of time with respect to a Tax assessment or deficiency, nor has any request been made in writing for any such extension or waiver. There are no Encumbrances for Taxes upon any property or asset of the Company (other than Encumbrances described in clause (b) of the definition of Permitted Encumbrances).

(d) The Company will not be required to include any item of income in, or exclude any item of deduction from, taxable income for any period (or any portion thereof) ending after the Closing Date as a result of any installment sale or open transaction or other similar transaction on or prior to the Closing Date, any accounting method change made or required to be made on or prior to the Closing Date, any agreement with a Tax Authority entered into on or prior to the Closing Date, the use of an improper method of accounting for any period or portion thereof ending prior to the Closing Date, any written agreement with a Tax Authority with respect to Taxes pursuant to Section 7121 of the Code (or any similar provision of state, local or foreign law) or private letter ruling with respect to the Company, any prepaid amount received on or prior to the Closing (other than in the ordinary course of business), an election under Section 965(h) of the Code, the application of Section 965 of the Code or any intercompany transaction or excess loss account described in the Treasury Regulations promulgated pursuant to Section 1502 of the Code (or any corresponding or similar provision of state, local or foreign law) in respect of taxable periods (or portions thereof) ending on or prior to the Closing Date.

(e) The Company is not a partner for Tax purposes with respect to any joint venture, partnership, or other arrangement or Contract which is treated as a partnership for Tax purposes.

(f) The Company is not a party to or bound by any Tax indemnity agreement, Tax sharing agreement, Tax allocation agreement or similar Contract.

(g) The Company has not been a party to a transaction that is or is substantially similar to a "reportable transaction," as such term is defined in Treasury Regulations Section 1.6011-4(b)(1), or any other transaction requiring disclosure under analogous provisions of state, local or foreign Tax law.

(h) The Company has not ever been a member of an affiliated group filing a consolidated federal income Tax Return or a combined, consolidated, unitary or other affiliated group Tax Return for state, local or foreign Tax purposes. The Company does not have any liability for the Taxes of any Person (other than Taxes of the Company) (i) under Treasury Regulations Section 1.1502-6 (or any similar provision of state, local or foreign law), (ii) as a transferee or successor, (iii) by Contract or (iv) otherwise.

(i) The Company has timely withheld and paid all Taxes required to have been withheld and paid in connection with amounts paid or owing to any employee, independent contractor, creditor and equityholders of the Company.

(j) The Company has not been a party to any distribution that the parties to which treated as satisfying the requirements of Section 355 of the Code.

(k) The Company has not, or has ever had, a branch or permanent establishment (within the meaning of an applicable Tax treaty) in a jurisdiction other than the United States.

(l) The Company has not taken any action and does not know of any fact that would reasonably be expected to prevent the Merger and the Series A-2 Financing, taken together, from qualifying as an exchange satisfying the requirements of Section 351 of the Code.

(m) To the Company's Knowledge, no Company Stockholders have, at the Closing, a binding commitment to dispose of Parent Common Stock, Parent Series A-1 Preferred Stock, Parent Series A-2 Preferred Stock, or Parent Series B Preferred Stock.

Notwithstanding anything in this Agreement to the contrary, the Company makes no representations or warranties regarding the amount of, or any limitations on, any Tax asset or attribute of the Company (e.g., net operating losses) arising in any Pre-Closing Tax Period (including the portion of the Straddle Period ending on the Closing Date) (each, a "Tax Attribute"), or the ability of Parent or any of its Affiliates (including the Surviving Corporation) to utilize such Tax Attributes after the Closing.

3.18 Insurance. The Company has made available to Parent a list of, and accurate and complete copies of, all insurance policies and fidelity bonds relating to the assets, business, operations, employees, officers or directors of the Company as of the date of this Agreement, each of which is in full force and effect, together with a claims history. Other than claims made in the ordinary course, there are no pending claims under any such policies or bonds, including any claims for loss or damage to the properties, assets or business of the Company. There is no claim by the Company pending under any of such policies or bonds as to which coverage has been questioned, denied or disputed by the underwriters of such policies or bonds or in respect of which such underwriters have reserved their rights. All premiums payable under all such policies and bonds have been timely paid and the Company has otherwise complied fully with the terms and conditions of all such policies and bonds. The Company has no Knowledge of any actual or threatened termination of, premium increase with respect to, or material alteration of coverage under, any of such policies or bonds. The Company does not have any self-insurance or co-insurance programs.

3.19 Employee Agreements. Each current and former employee and officer of the Company, and each consultant of the Company involved in the creation of Company Intellectual Property has executed an agreement with the Company (or an agreement with applicable provisions) regarding confidentiality and proprietary information (an "Inventions Assignment Agreement") substantially in the form or forms delivered to Parent. No such current or former employee, consultant or officer has excluded works or inventions from his or her assignment of inventions pursuant to such person's Inventions Assignment Agreement. Each such current and former employee has executed an agreement containing a non-solicitation and non-competition obligation substantially in the form or forms delivered to Parent. The Company is not aware that any of its employees, consultants or officers is in violation of any agreement covered by this Section 3.19.

3.20 Compliance with Laws; Permits. The Company is, and has at all times since incorporation been, in compliance, in all material respects, with, and is not, and has not since incorporation been, a recipient of written notice of any violation of, or, to the Company's Knowledge, threatened to be charged with any violation of or under investigation with respect to, any applicable Law. The Company has all material Permits, and has made all necessary filings required under applicable Law, necessary to conduct the business of the Company. The Company is, and has been since incorporation, in compliance in all material respects with each such material Permit. The Company has not received any written notice or other written communication regarding any actual or possible violation of or failure to comply with any term or requirement of any such material Permit or any actual or possible revocation, withdrawal, suspension, cancellation, termination or material modification of any such material Permit. Section 3.20 of the Company Disclosure Schedule sets forth (a) an accurate and complete list of all Permits issued to the Company and (b) an accurate and complete list of all Permits for which the Company has applied or has taken the steps necessary to secure or maintain within the three (3) months prior to the date hereof or that the Company otherwise intends to obtain. Each such Permit has been validly issued or obtained.

3.21 83(b) Elections. Each holder of Company Restricted Shares that were subject to vesting as of the date of issuance has provided to the Company evidence that such holder timely filed an election under Section 83(b) of the Code. A copy of the evidence provided to the Company of each election made under Section 83(b) of the Code in respect of Company Restricted Shares has been made available to Parent.

3.22 Corporate Documents. The Company Certificate and bylaws of the Company are in the form provided to Parent. The copy of the minute books of the Company provided to the Parent contains minutes of all meetings of directors and stockholders and all actions by written consent without a meeting by the directors and stockholders since the date of incorporation through the date hereof and accurately reflects in all material respects all actions by the directors (and any committee of directors) and stockholders with respect to all transactions referred to in such minutes.

3.23 Environmental and Safety Laws. To the Company's Knowledge, in all material respects, (a) the Company is and has been in compliance with all Environmental Laws; (b) there has been no release or to the Company's Knowledge threatened release of any pollutant, contaminant or toxic or hazardous material, substance or waste or petroleum or any fraction thereof (each a "Hazardous Substance"), on, upon, into or from any site currently or heretofore owned, leased or otherwise used by the Company; (c) there have been no Hazardous Substances generated by the Company that have been disposed of or come to rest at any site that has been included in any published U.S. federal, state or local "superfund" site list or any other similar list of hazardous or toxic waste sites published by any Governmental Authority in the United States; and (d) there are no underground storage tanks located on, no polychlorinated biphenyls ("PCBs") or PCB-containing equipment used or stored on, and no hazardous waste as defined by the Resource Conservation and Recovery Act, as amended, stored on, any site owned or operated by the Company, except for the storage of hazardous waste in compliance with Environmental Laws. The Company has made available to Parent true and complete copies of all material environmental records, reports, notifications, certificates of need, permits, pending permit applications, correspondence, engineering studies and environmental studies or assessments.

3.24 Data Privacy. In connection with its collection, storage, transfer (including any transfer across national borders) and/or use of any Personal Information, the Company is and has been to the Company's Knowledge, in compliance in all material respects with all applicable Laws in all relevant jurisdictions, the Company's privacy policies and the requirements of any contract or codes of conduct to which the Company is a party. The Company has commercially reasonable physical, technical, organizational and administrative security measures and policies in place to protect all Personal Information collected by it or on its behalf from and against unauthorized access, use and/or disclosure. To the extent the Company maintains or transmits protected health information, as defined under 45 C.F.R. § 160.103, the Company is in compliance in all material respects with the applicable requirements of the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act, including all rules and regulations promulgated thereunder. The Company has complied and is in compliance in all material respects with all applicable safeguarding requirements of the FDA regulations. The Company is and has been, to the Company's Knowledge, in compliance in all material respects with all Laws relating to data loss, theft and breach of security notification obligations.

3.25 Takeover Statutes. The Company Board has taken all actions necessary so that the restrictions on take-over bids, equity acquisitions, business combinations and equityholder vote and any other "moratorium," "control share acquisition," "business combination," "fair price" or other similar anti-takeover laws or regulations that are or may purport to be applicable will not apply with respect to or as a result of the Merger or the other transactions contemplated by this Agreement.

3.26 No Brokers. There is no investment banker, broker, finder or other intermediary that has been retained by or is authorized to act on behalf of the Company or who is or may be entitled to any fee or commission from the Company or any of its Affiliates in connection with the transactions contemplated by this Agreement.

ARTICLE IV.
REPRESENTATIONS AND WARRANTIES OF PARENT AND MERGER SUB

Parent and Merger Sub hereby jointly and severally represent and warrant to the Company as follows, except as otherwise set forth on the Parent Disclosure Schedule, which representations and warranties are, as of the date hereof, true and correct (except for representations and warranties that by their terms are made only as of a specific date or time, which need only be true and correct as of such date or time):

4.1 Organization. Each of Parent and Merger Sub is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has all requisite corporate power and authority to carry on its business as presently conducted and as proposed to be conducted. Each of Parent and Merger Sub is duly qualified to transact business and is in good standing in each jurisdiction in which the failure to so qualify would have a Material Adverse Effect on Parent.

4.2 Authorization. Parent and Merger Sub have all requisite corporate power and authority to execute and deliver this Agreement and all agreements contemplated by this Agreement to be executed and delivered by Parent or Merger Sub, as the case may be, pursuant hereto, to consummate the transactions contemplated hereby and thereby and to perform their obligations hereunder and thereunder. The execution and delivery by Parent and Merger Sub of this Agreement and such other agreements and the consummation by Parent and Merger Sub of the transactions contemplated hereby and thereby have been duly approved by the Parent Board and the board of directors of Merger Sub. With the exception of final authorization of the Parent Series A-2/B Purchase Agreement and the transactions contemplated thereby, which will be obtained on or prior to the Closing Date, no other corporate proceedings on the part of Parent or Merger Sub are necessary to authorize this Agreement and the transactions contemplated hereby (other than the approval of Parent, as the sole stockholder of Merger Sub). This Agreement has been, and such other agreements will be, duly executed and delivered by each of Parent and Merger Sub and is, and such other agreements will be, the legal, valid and binding obligations of Parent and Merger Sub, enforceable against Parent and Merger Sub in accordance with their terms, in each case, except as such enforceability may be limited by (a) bankruptcy, insolvency, moratorium, reorganization or other similar Laws affecting creditors' rights generally, (b) the general principles of equity, regardless of whether asserted in a Proceeding in equity or at Law and (c) to the extent the indemnification provisions contained in the Parent IRA and the A&R Parent IRA may be limited by applicable federal or state securities laws.

4.3 Governmental Consents and Filings. Assuming the accuracy of the representations made by the Company in Article III and each of the Company Stockholders in their Letters of Transmittal, no consent, approval, order or authorization of, or registration, qualification, designation, declaration or filing with, any federal, state or local Governmental Authority is required on the part of Parent in connection with the consummation of the transactions contemplated by this Agreement, except for (i) the filing of the Parent Restated Certificate, which will have been filed as of the Closing, (ii) filings pursuant to Regulation D of the Securities Act, and applicable state securities laws, which have been made or will be made in a timely manner, and (iii) the filing of the Certificate of Merger.

4.4 No Conflict or Violation. Neither Parent nor Merger Sub is in violation or default: (a) of any provisions of its Organizational Documents, (b) of any Order, (c) under any note, indenture or mortgage, (d) under any Contract to which it is a party or by which it is bound that is required to be listed on Section 4.10(a) of the Parent Disclosure Schedule, or (e) of any provision of federal or state Law applicable to Parent or Merger Sub. The execution, delivery and performance of this Agreement and the consummation of the transactions contemplated hereby will not result in any such violation or be in conflict with or constitute, with or without the passage of time and giving of notice, either (i) a material default under any such provision, instrument, Order, or contract; or (ii) an event which results in the creation of any Encumbrance upon any assets of Parent or Merger Sub or the suspension, revocation, forfeiture, or nonrenewal of any material Permit applicable to Parent or Merger Sub.

4.5 No Prior Merger Sub Operations. Merger Sub was formed solely for the purpose of effecting the Merger and has not engaged in any business activities or conducted any operations other than in connection with the transactions contemplated hereby. Parent is the sole stockholder of Merger Sub.

4.6 Capitalization.

(a) As of the date hereof, the authorized capital stock of Parent consists of:

(i) 187,250,000 shares of Parent Common Stock, 109,618,000 shares of which are issued and outstanding as of the date hereof. All of the outstanding shares of Parent Common Stock have been duly authorized, are fully paid and nonassessable and were issued in compliance with all applicable federal and state securities Laws. Parent holds no Parent Common Stock in its treasury.

(ii) 48,850,000 shares of Preferred Stock of Parent, of which 48,850,000 shares have been designated Parent Series A-1 Preferred Stock, 45,850,000 shares of which are issued and outstanding as of the date hereof. As of the date hereof, the rights, privileges and preferences of the Parent Series A-1 Preferred Stock are as stated in the Parent Restated Certificate and as provided by the DGCL. Parent holds no Parent Series A-1 Preferred Stock in its treasury.

(b) As of the date hereof, Parent has reserved 27,300,000 shares of Parent Common Stock for issuance to officers, directors, employees and consultants of Parent pursuant to the Parent Plan. Of such reserved shares of Parent Common Stock, options to purchase or stock purchase rights have been granted and are currently outstanding with respect to 3,865,000 shares of Parent Common Stock, zero shares of Parent Common Stock have been issued upon the exercise of options granted under the Parent Plan, and 23,435,000 shares of Parent Common Stock remain available for issuance to officers, directors, employees and consultants pursuant to the Parent Plan. Parent has made available to the Company complete and accurate copies of the Parent Plan and forms of agreements approved by the Parent Board for use thereunder.

(c) Except as set forth on Section 4.6(c) of the Parent Disclosure Schedule, (i) there are no outstanding options, warrants, rights (including conversion or preemptive rights) or agreements for the purchase or acquisition from Parent of any shares of Parent Capital Stock or any other securities, phantom stock rights or capital stock of Parent or Merger Sub, (ii) none of the outstanding shares of Parent Capital Stock is entitled or subject to any preemptive right, right of participation, right of maintenance or any similar right; (iii) none of the outstanding shares of Parent Capital Stock is subject to any right of first refusal or similar right in favor of Parent, Merger Sub or any other Person, and (iv) there is no Contract to which Parent or any holder of Parent Capital Stock is bound restricting any Person from purchasing, selling, pledging or otherwise disposing of (or granting any option or similar right with respect to), any shares of Parent Capital Stock. Parent is not under any obligation, and is not bound by any Contract pursuant to which it may become obligated, to repurchase, sell, issue, redeem or otherwise acquire any shares of Parent Capital Stock, any other securities or any rights related thereto.

(d) None of Parent's stock purchase agreements or stock option documents contains a provision for acceleration of vesting (or lapse of a repurchase right) or other changes in the vesting provisions or other terms of such agreement or understanding upon the occurrence of any event or combination of events, including in the case where the Company Plan is not assumed in an acquisition. Parent has never adjusted or amended the exercise price of any stock options previously awarded, whether through amendment, cancellation, replacement grant, repricing, or any other means. Except as set forth in the Parent Restated Certificate, Parent has no obligation (contingent or otherwise) to purchase or redeem any of its capital stock.

(e) Other than Merger Sub, of which Parent is the sole stockholder, Parent does not own or control, directly or indirectly, any interest in any other corporation, partnership, trust, joint venture, limited liability company, association, or other business entity. Parent is not a participant in any joint venture, partnership or similar arrangement.

4.7 Valid Issuance of Shares.

(a) The Parent Series A-2 Preferred Shares, when issued, sold and delivered in accordance with the terms and for the consideration set forth in this Agreement, have been or will be validly issued, fully paid and nonassessable and free of restrictions on transfer other than restrictions on transfer under the Stock Restriction Agreement, Parent A-2/B Investor Agreements, applicable state and federal securities Laws and Encumbrances created by or imposed by a Company Stockholder. Assuming the accuracy of the representations made by the Company in Article III and each of the Company Stockholders in their Letters of Transmittal and subject to the filings described in Section 4.3, the Parent Series A-2 Preferred Shares to be issued, sold and delivered in accordance with the terms and for the consideration set forth in this Agreement will be issued in compliance with all applicable federal and state securities laws, including all applicable provisions of Regulation D of the Securities Act. The Parent Common Stock issuable

upon conversion of the Parent Series A-2 Preferred Shares has been duly reserved for issuance, and upon issuance in accordance with the terms of the Parent Restated Certificate, has been or will be validly issued, fully paid and nonassessable and free of restrictions on transfer other than restrictions on transfer under the Stock Restriction Agreement, Parent A-2/B Investor Agreements, applicable federal and state securities Laws and Encumbrances created by or imposed by a Company Stockholder. Based in part upon the representations of the Company in Article III and each of the Company Stockholders in their Letters of Transmittal, and subject to Section 4.3, the Parent Common Stock issuable upon conversion of the Parent Series A-2 Preferred Shares has been or will be issued in compliance with all applicable federal and state securities Laws.

(b) No Disqualification Event is applicable to Parent or, to Parent's Knowledge, any Parent Covered Person, except for a Disqualification Event as to which Rule 506(d)(2)(ii-iv) or (d)(3), is applicable.

(c) Neither Parent, nor any of its officers, directors, employees, agents or stockholders has either directly or indirectly, including, through a broker or finder (i) engaged in any general solicitation, or (ii) published any advertisement in connection with the offer and sale of the Parent Series A-2 Preferred Shares.

4.8 Litigation. There is no Action pending or to Parent's Knowledge, currently threatened in writing (a) against Parent; (b) against any officer, director or employee of Parent arising out of their employment or board relationship with Parent; (c) that questions the validity of this Agreement or the agreements contemplated by this Agreement to which Parent is a party or the right of Parent to enter into them, or to consummate the transactions contemplated hereby or thereby; or (d) that would reasonably be expected, either individually or in the aggregate, to result in material Liability to Parent or materially impair the operation of Parent's business. Neither Parent nor, to Parent's Knowledge, any of its officers, directors or employees is a party or is named as subject to the provisions of any Order (in the case of officers, directors or employees, such as would affect Parent). There is no Action by Parent pending or which Parent intends to initiate. The foregoing includes Actions pending or threatened in writing involving the prior employment of any of Parent's employees, their services provided in connection with Parent's business, any information or techniques allegedly proprietary to any of their former employers or their obligations under any agreements with prior employers.

4.9 Intellectual Property.

(a) Section 4.9(a) of the Parent Disclosure Schedule sets forth an accurate and complete list as of the date of this Agreement of (i) each item of Parent Registered Intellectual Property, (ii) the jurisdiction in which such item of Parent Registered Intellectual Property has been registered or filed, the applicable application, registration, or serial or other similar identification number, the filing date or registration date and issuance or grant date, (iii) in the case of a trademark or pending application for a trademark, the class of goods covered and the expiration date, or if applicable the internet domain name registration, the name of the registrant and the name of the registrar, (iv) the record owner thereof and (v) all registration, maintenance or renewal fees that are due or filings that must be made within 120 days of the date hereof for the purposes of maintaining, perfecting, preserving or renewing any registrations for such Intellectual Property. The Parent has provided to Company complete and accurate copies of all invention disclosures, applications, material correspondence with any Governmental Authority, and other material documents related to the prosecution and maintenance of each such item of Parent Registered Intellectual Property.

(b) The Parent exclusively owns all right, title, and interest to and in Parent Intellectual Property (other than (i) Parent Intellectual Property exclusively and non-exclusively licensed to the Parent, as identified in Section 4.9(b)(i) of the Parent Disclosure Schedule and (ii) Off-the-Shelf Software Licenses), in each case, free and clear of any Encumbrances (other than Permitted Encumbrances). Without limiting the generality of the foregoing: (1) all documents and instruments necessary to register or apply for or renew registration of Parent Registered Intellectual Property have been validly executed, delivered, and filed in a timely manner with the appropriate Governmental Authority; (2) each item of Parent Registered Intellectual Property is and at all times has been filed and maintained in compliance with all applicable Laws (including without limitation all applicable duties of candor and good faith in dealing with any applicable patent office, including the United States Patent and Trademark Office and any comparable foreign patent office) and all filings, payments, and other actions required to be made or taken to maintain such item of Parent Registered Intellectual Property in full force and effect have been made by the applicable deadline; (3) except as identified in Section 4.9(b)(i) of the Parent Disclosure Schedule no funding, facilities, or personnel of any Governmental Authority were used, directly or indirectly, to develop or create, in whole or in part, any Parent Intellectual Property in which the Parent has an ownership interest; and (4) the Parent has not assigned or otherwise transferred ownership of, or agreed to assign or otherwise transfer ownership of, any Parent Intellectual Property to any other Person. The Parent has obtained and possesses valid licenses to use all of the software programs present on the computers and other software-enabled electronic devices that it owns or leases or that it has otherwise provided to its employees for their use in connection with the Parent's business. Section 4.9(b)(i) of the Parent Disclosure Schedule sets forth an accurate and complete list as of the date of this Agreement of each Contract pursuant to which any Person granted to the Parent any license or right or interest in any Intellectual Property (other than Off-the-Shelf Software Licenses). The Parent has delivered or made available to Company, a complete and accurate copy of all Contracts listed on Section 4.9(b)(i) of the Parent Disclosure Schedule. With respect to each of such Contracts: (x) each such Contract is valid and binding on the Parent and in full force and effect; (y) the Parent has not received any written notice of termination or cancellation under such Contract, or received any written notice of breach or default under such Contract, which breach has not been cured or waived; and (z) the Parent, and to the Parent's Knowledge, no other party to any such Contract, is in breach or default thereof in any material respect. The consummation of the transactions contemplated by this Agreement will neither result in the modification, cancellation, termination, suspension of, or acceleration of any payments with respect to any such Contract, nor give any third party to any such Contract the right to do any of the foregoing.

(c) Section 4.9(c) of the Parent Disclosure Schedule sets forth an accurate and complete list as of the date of this Agreement of each Contract pursuant to which any Person has been granted by Parent any license or covenant not to sue under, or otherwise has received or acquired any right (whether or not currently exercisable) or interest in, any Parent Intellectual Property, and except as set forth on Section 4.9(c) of the Parent Disclosure Schedule, there exists no obligation by the Parent to assign, license or otherwise transfer any of the Parent Intellectual Property to any Person. Except as set forth on Section 4.9(c) of the Parent Disclosure

Schedule, the Parent is not bound by, and no Parent Intellectual Property is subject to, any Contract containing any covenant or other provision that in any way limits or restricts the ability of the Parent to use, exploit, assert, or enforce any Parent Intellectual Property anywhere in the world. Other than with respect to Off-the-Shelf Software Licenses, and the Contracts set forth on Section 4.9(b)(i) and Section 4.9(c) of the Parent Disclosure Schedule, there are no outstanding Contracts, options, licenses, agreements, claims, Encumbrances or shared ownership interests of any kind relating to (i) any Parent Intellectual Property in which the Parent has an ownership interest, and (ii) to the Parent's Knowledge, any other Parent Intellectual Property.

(d) The issued patent rights within the Parent Registered Intellectual Property are to the Parent's Knowledge valid and enforceable. There is no pending or, to the Parent's Knowledge threatened Dispute challenging the legality, validity, enforceability, inventorship, ownership, or right to use, sell, license or dispose of any of the Parent Intellectual Property or alleging any misuse of any of the Parent Intellectual Property nor, to the Parent's Knowledge, is there any basis for any such Dispute (provided the foregoing representation is made to Parent's Knowledge with respect to Intellectual Property licensed to the Parent). The Parent Intellectual Property is not subject to any outstanding Order, settlement or other disposition as the result of a Dispute (provided the foregoing representation is made to Parent's Knowledge with respect to Intellectual Property licensed to the Parent), and the Parent has not received any written notice asserting that any Parent Intellectual Property or the proposed use, sale, license or disposition thereof conflicts with or infringes or misappropriates or will conflict with or infringe or misappropriate the rights of any other Person.

(e) The Parent has taken reasonable steps to maintain the confidentiality of and otherwise protect and enforce its rights in all proprietary information that the Parent holds, or purports to hold, as a trade secret. To the Parent's Knowledge there have been no unauthorized disclosures of any trade secrets of the Parent. Each employee of and consultant to the Parent has executed a valid, enforceable agreement that assigns to the Parent all Intellectual Property rights he or she conceives, makes or invents pursuant to such agreement that are related to the Parent's business as now conducted and as presently proposed to be conducted and that contains confidentiality provisions protecting trade secrets and confidential information of the Parent. To the Parent's Knowledge, no current or former stockholder, officer, director, or employee of the Parent has any claim, right (whether or not currently exercisable), or interest to or in any Parent Intellectual Property or other Intellectual Property currently used by the Parent. To the Parent's Knowledge, no employee of the Parent or is (i) bound by or otherwise subject to any Contract restricting him or her from performing his or her duties for the Parent or (ii) in breach of any Contract with any former employer or other Person concerning, or confidentiality provisions protecting trade secrets and confidential information comprising, Parent Intellectual Property or other Intellectual Property used by the Parent.

(f) To the Parent's Knowledge, the Parent Intellectual Property constitutes all Intellectual Property necessary for the Parent to conduct its business as currently conducted. To the Parent's Knowledge, the Parent owns or possesses sufficient legal rights to, and has the right to bring actions for the infringement of, all Parent Intellectual Property without any conflict with, or infringement of, the rights of others (but subject to any Contract rights or obligations with respect to Parent Intellectual Property licensed to the Parent). The Parent has not received any communications alleging that the Parent has violated, or by conducting its business,

would violate any of the Intellectual Property of any other Person. No formal, written legal opinion concerning or with respect to any third party Intellectual Property rights relating to any technology or process or product candidate developed or proposed to be developed, marketed or sold by the Parent, including without limitation any freedom-to-operate, product clearance, or right-to-use opinion, has been conducted by or on behalf of, or delivered to the Parent. To the Parent's Knowledge, no third party is infringing upon, or violating any license or agreement with the Parent relating to any Parent Intellectual Property.

(g) To the Parent's Knowledge, no trademark (whether registered or unregistered) or trade name owned, used, or applied for by the Parent conflicts or interferes with any trademark (whether registered or unregistered) or trade name owned, used, or applied for by any other Person. To the Parent's Knowledge, none of the goodwill associated with or inherent in any trademark (whether registered or unregistered) in which the Parent has or purports to have an ownership interest has been impaired. Section 4.9(g) of the Parent Disclosure Schedule sets forth all material unregistered trademarks owned by the Parent or used by the Parent in the conduct of its business as currently conducted and currently planned to be conducted.

(h) Except as set forth in Section 4.9(b)(i) and Section 4.9(c) of the Parent Disclosure Schedule, (i) the Parent is not bound by any Contract to indemnify, defend, hold harmless, or reimburse any other Person with respect to any Intellectual Property infringement, misappropriation, or similar claim, and (ii) the Parent has never assumed, or agreed to discharge or otherwise take responsibility for, any existing or potential liability of another Person for infringement, misappropriation, or violation of any Intellectual Property, which assumption, agreement or responsibility remains in force as of the date of this Agreement.

4.10 Agreements.

(a) Except for this Agreement, the Parent A-1 Investor Agreements and the Contracts listed in Section 4.10(a) of the Parent Disclosure Schedule (any such Contract listed or required to be listed on Section 4.10(a) of the Parent Disclosure Schedule, a "Parent Material Contract"), there are no Contracts to which Parent is a party or by which it is bound that involve (i) obligations (contingent or otherwise) of, or payments to, Parent in excess of $100,000 on an annual basis, (ii) the license of any patent, copyright, trademark, trade secret or other proprietary right to or from Parent (except for (a) Off-the-Shelf Software Licenses and (b) agreements with employees and contractors of Parent entered into on Parent standard form employee proprietary information and invention assignment agreement or consulting agreement), (iii) the grant of rights to manufacture, produce, assemble, license, market, or sell its products to any other Person that limit Parent's exclusive right to develop, manufacture, assemble, distribute, market or sell its products, (iv) indemnification by Parent with respect to infringements of proprietary rights, (v) any employment agreements (except for Parent's standard form offer letters and proprietary information agreement) and consulting agreements (except for Parent's standard form consulting agreements) which involve payments by Parent in excess of $100,000 on an annual basis, employee benefit, bonus, pension, profit-sharing, stock option, stock purchase and similar plans and arrangements (but not the individual agreements issued pursuant to such stock option, stock purchase and similar plans and arrangements), (vi) any distributor, sales or similar representative agreement, (vii) any agreement under which Parent is restricted from carrying on its business anywhere in the world, (viii) any agreement for the disposition of a material portion of Parent's assets (other than for the sale of inventory in the ordinary course of business) or (ix) any agreement for the acquisition by Parent of the business or securities or other ownership interests of another party.

(b) Parent has provided or otherwise made available to the Company a correct and complete copy of each Contract required to be listed in Section 4.10(a) of the Parent Disclosure Schedule. With respect to each such Parent Material Contract: (i) the Contract is legal, valid, binding, enforceable, and in full force and effect; (ii) neither the Company nor, to Parent's Knowledge, any other party is in material breach or default, and to Parent's Knowledge, no event has occurred and no circumstance or condition exists, which with or without notice or lapse of time would constitute a breach or default, or permit termination, modification, or acceleration, under such Contract, or give any Person the right to cancel, terminate or modify any such Contract; or (iii) to Parent's Knowledge, no party has repudiated any provision of such Contract.

4.11 Certain Transactions.

(a) Other than (i) standard employee benefits generally made available to all employees, (ii) standard director and officer indemnification agreements approved by the Board of Directors, (iii) the purchase of shares of Parent's capital stock and the issuance of options to purchase shares of Parent Common Stock, in each instance, approved in the written minutes of the Parent Board and (iv) as otherwise disclosed in Sections 4.16(f) and 4.16(g) of the Parent Disclosure Schedule, there are no agreements, understandings or proposed transactions between Parent and any of its officers or their direct reports, directors or consultants, or any Affiliate thereof.

(b) Parent is not indebted, directly or indirectly, to any of its directors, officers or employees or to their respective spouses or children or to any Affiliate of Parent or any of the foregoing (each, a "Parent Related Person"), other than in connection with expenses or advances of expenses incurred in the ordinary course of business or employee relocation expenses and for other customary employee benefits made generally available to all employees. No Parent Related Person is, directly or indirectly, indebted to Parent or, to Parent's Knowledge, has any (i) material commercial, industrial, banking, consulting, legal, accounting, charitable or familial relationship with any of Parent's customers, suppliers, service providers, joint venture partners, licensees or competitors, (ii) direct or indirect ownership interest in any entity with which Parent is affiliated or with which Parent has a business relationship, or any entity which competes with Parent (other than any ownership of less than two percent (2%) of the outstanding capital stock of publicly traded companies that may compete with Parent) or (iii) financial interest in any material Contract with Parent.

4.12 Rights of Registration and Voting Rights. Except as provided in the Parent IRA and the A&R Parent IRA, Parent is not under any obligation to register under the Securities Act any of its currently outstanding securities or any securities issuable upon exercise or conversion of its currently outstanding securities. To Parent's Knowledge, except as contemplated in the Parent Voting Agreement and the A&R Parent Voting Agreement, no stockholder of Parent has entered into any agreements with respect to the voting of capital shares of Parent.

4.13 Property. The tangible property and assets that Parent owns are free and clear of all Encumbrances, except for Permitted Encumbrances. With respect to the tangible property and assets it leases, Parent is in compliance with such leases and, to its Knowledge, holds a valid leasehold interest free of any Encumbrances other than those of the lessors of such property or assets. Parent does not own, and has not ever owned, any real property.

4.14 Financial Statements. Parent has delivered to the Company its unaudited financial statements (including balance sheet, income statement and statement of cash flows) as of November 30, 2018 (the "Parent Balance Sheet Date") and for the eleven (11) month period ended on the Parent Balance Sheet Date (collectively, the "Parent Financial Statements"). The Parent Financial Statements have been prepared in accordance with GAAP applied on a consistent basis throughout the periods indicated, except that the unaudited Parent Financial Statements may not contain all footnotes required by GAAP. The Parent Financial Statements fairly present in all material respects the financial condition and operating results of Parent as of the dates, and for the periods, indicated therein, subject in the case of the unaudited Parent Financial Statements to normal year-end audit adjustments. Parent maintains a standard system of accounting established and administered in accordance with GAAP.

4.15 Absence of Changes. Since July 1, 2018, there has not been:

(a) any change in the assets, liabilities, financial condition or operating results of Parent from that reflected in the Financial Statements, except changes in the ordinary course of business that have not caused, in the aggregate, a Material Adverse Effect on Parent;

(b) any damage, destruction, loss or other event or development, whether or not covered by insurance, that would have a Material Adverse Effect on Parent;

(c) any waiver or compromise by Parent of a valuable right or of a material debt owed to it;

(d) any satisfaction or discharge of any Encumbrance or payment of any obligation by Parent, except in the ordinary course of business and the satisfaction or discharge of which would not have a Material Adverse Effect on Parent;

(e) any material change in any compensation arrangement or agreement with any employee, officer or director of Parent;

(f) any resignation or termination of employment of any officer or direct report of an officer or key employee of Parent;

(g) any mortgage, pledge, transfer of a security interest in, or Encumbrance, created by Parent, with respect to any of its material properties or assets, except Permitted Encumbrances;

(h) any loans or guarantees made by Parent to or for the benefit of its employees, officers or directors, or any members of their immediate families, other than travel advances and other advances made in the ordinary course of its business;

(i) any declaration, setting aside or payment or other distribution in respect of any of Parent's capital stock, or any direct or indirect redemption, purchase, or other acquisition of any of such stock by Parent;

(j) any sale, assignment or transfer of any Parent Intellectual Property that could reasonably be expected to result in a Material Adverse Effect on Parent; or

(k) any arrangement or commitment by Parent to do any of the things described in this Section 4.15.

4.16 Employee Matters.

(a) Section 4.16(a) of the Parent Disclosure Schedule sets forth an accurate and complete list of the names, titles, annual base salary or hourly rate or other compensation rate, commission or bonus opportunity, hire date, accrued vacation and paid-time-off, principal work location, whether the employee or independent contractor regularly works more than 40 hours a week (or 8 hours a day in California), and leave status (including type of leave and expected duration) of all employees of and independent contractors to the Parent as of the date of this Agreement, whether any employee is on a work visa or work permit (and applicable date of expiration) and each employee's status as being exempt or nonexempt from the application of state and federal wage and hour Laws.

(b) To the Parent's Knowledge, none of its employees is obligated under any Contract (including licenses, covenants or commitments of any nature) or other agreement, or subject to any Order, that would materially interfere with such employee's ability to promote the interest of the Parent or that would conflict with the Parent's business. Neither the execution or delivery of this Agreement, nor the carrying on of the Parent's business by the employees of the Parent, nor the conduct of the Parent's business as now conducted and as presently proposed to be conducted, will, to the Parent's Knowledge, conflict with or result in a breach of the terms, conditions, or provisions of, or constitute a default under, any contract, covenant or instrument under which any such employee is now obligated.

(c) Parent is not delinquent in payments to any of its employees, consultants, or independent contractors for any wages, salaries, commissions, bonuses, or other direct compensation for any service performed for it to the date hereof or amounts required to be reimbursed to such employees, consultants or independent contractors. Parent is, and has been at all times since incorporation, in compliance in all material respects with all applicable state and federal equal employment opportunity laws and with other laws related to labor and employment, including those related to wages, hours, worker classification and collective bargaining. Parent has, and has at all times since incorporation, withheld and paid to the appropriate Governmental Authority or is holding for payment not yet due to such Governmental Authority all amounts required to be withheld from employees of Parent and is not liable for any arrears of wages, taxes, penalties or other sums for failure to comply with any of the foregoing.

(d) To Parent's Knowledge, no employee intends to terminate employment with Parent or is otherwise likely to become unavailable to continue as an employee, nor does Parent have a present intention to terminate the employment of any of the foregoing. The employment of each employee of Parent is terminable at the will of Parent. Except as set forth in Section 3.16(d) of the Parent Disclosure Schedule or as required by law, upon termination of the employment of any such employees, no severance or other payments will become due. Except as set forth in Section 4.16(d) of the Parent Disclosure Schedule, Parent has no policy, practice, plan or program of paying severance pay or any form of severance compensation in connection with the termination of employment services.

(e) Parent has not made any representations regarding equity incentives to any officer, employee, director or consultant that are inconsistent with the share amounts and terms set forth in the minutes of meetings of Parent's Board of Directors.

(f) Each former employee whose employment was terminated by Parent has entered into an agreement with Parent providing for the full release of any claims against Parent or any related party arising out of such employment.

(g) Section 4.16(g) of the Parent Disclosure Schedule sets forth an accurate and complete list identifying each material "employee benefit plan," as defined in Section 3(3) of ERISA, and each material employment, consulting, advisory, independent contractor, severance or similar Contract and each other material plan, agreement, policy, program, commitment or arrangement (written or oral) providing for compensation, bonuses, commission, profit-sharing, retention, equity or other equity-related rights, incentive or deferred compensation, vacation benefits, insurance (including any self-insured arrangements), health or medical benefits, welfare benefits, life, accident, dental or vision benefits, tuition benefits, vacation or paid-time-off, employee assistance program, disability or sick leave benefits, supplemental unemployment benefits, severance benefits, change of control payments, post-employment or retirement benefits and other employee benefits, in any case, which is maintained, administered or contributed to by Parent thereof and covers any employee or former employee of Parent, or with respect to which Parent has or may have any liability (whether actual or contingent) (collectively, the "Parent Employee Plans"). Parent has made available to the Company a true, correct and complete copy of each of the Parent Employee Plans and related plan documents. Parent has made all required contributions or has accrued such contributions in accordance with the terms of the applicable Parent Employee Plan and has no liability under any such Parent Employee Plans for post-termination or retiree payments and benefits, other than liability for health plan continuation coverage described in Part 6 of Title I(B) of ERISA, and has complied in all material respects with its terms and all applicable Laws for any such Parent Employee Plan.

(h) Neither Parent nor any current or former ERISA Affiliate of Parent maintains, sponsors, participates in or contributes to, or has ever maintained, established, sponsored, participated in, or contributed to, any pension plan (within the meaning of Section 3(2) of ERISA) which is subject to Part 3 of Subtitle B of Title I of ERISA, Title IV of ERISA or Section 412 of the Code. Neither Parent nor any ERISA Affiliate of Parent is a party to, or has made any contribution to or otherwise incurred any obligation under, any "multiemployer plan" as such term is defined in Section 3(37) of ERISA or any "multiple employer plan" as such term is defined in Section 413(c) of the Code.

(i) Parent is not bound by or subject to (and none of its assets or properties is bound by or subject to) any written or oral, express or implied, contract, commitment or arrangement with any labor union, and no labor union has requested or, to Parent's Knowledge, has sought to represent any of the employees, representatives or agents of Parent. There is no strike or other labor dispute involving Parent pending, or to Parent's Knowledge, threatened, which would be material to Parent, nor is Parent aware of any labor organization activity involving its employees.

(j) To Parent's Knowledge, none of the employees or directors of Parent has been (a) subject to voluntary or involuntary petition under the federal bankruptcy laws or any state insolvency law or the appointment of a receiver, fiscal agent or similar officer by a court for his business or property; (b) convicted in a criminal proceeding or named as a subject of a pending criminal proceeding (excluding traffic violations and other minor offenses); (c) subject to any order, judgment or decree (not subsequently reversed, suspended, or vacated) of any court of competent jurisdiction permanently or temporarily enjoining him from engaging, or otherwise imposing limits or conditions on his engagement in any securities, investment advisory, banking, insurance, or other type of business or acting as an officer or director of a public company; or (d) found by a court of competent jurisdiction in a civil action or by the Securities and Exchange Commission to have violated any federal or state securities or unfair trade practices law, which such judgment or finding has not been subsequently reversed, suspended, or vacated.

(k) No Parent Employee Plan is sponsored, maintained or contributed to under the law or applicable custom or rule of any jurisdiction outside of the United States.

(l) Neither the execution or delivery of this Agreement nor the consummation of the transactions contemplated by this Agreement or any termination of employment or service or any other event in connection therewith or subsequent thereto will, individually or together or with the occurrence of some other event, (whether contingent or otherwise), (i) result in any material payment or benefit (including severance, unemployment compensation, golden parachute, bonus or otherwise) becoming due or payable, or required to be provided, to any current or former employee, director, independent contractor or consultant, (ii) materially increase the amount or value of any benefit or compensation otherwise payable or required to be provided to any current or former employee, director, independent contractor or consultant, (iii) result in the acceleration of the time of payment, vesting or funding of any such benefit or compensation, (iv) increase the amount of compensation due to any Person, or (v) result in the forgiveness in whole or in part of any outstanding loans made by the Company to any Person. No amount paid or payable by Parent in connection with the transactions contemplated by this Agreement, whether alone or in combination with another event, will be an "excess parachute payment" within the meaning of Code Section 280G or Code Section 4999 or will not be deductible by the Company by reason of Code Section 280G.

4.17 Tax Matters.

(a) Parent has not taken any action and does not know of any fact that would reasonably be expected to prevent the Merger and the Series A-2 Financing, taken together, from qualifying as an exchange satisfying the requirements of Section 351 of the Code. To the Knowledge of Parent, no Person that is part of the control group (other than the Company Stockholders) for purposes of Section 368(c) of the Code has, at the Closing, a binding commitment to dispose of Parent Common Stock, Parent Series A-1 Preferred Stock, Parent Series

A-2 Preferred Stock, or Parent Series B Preferred Stock. Parent has not and does not have any current intention to grant more rights to appoint the directors of Parent in any investment agreement or otherwise to Persons that are not part of the control group for purposes of Section 368(c), other than as set forth in the Parent A-1 Investor Agreements, or, following the Closing, the Parent A-2/B Investor Agreements.

(b) Parent duly and timely filed all Tax Returns that they were required to file under applicable Law, and all such Tax Returns were true, correct and complete in all material respects. All Taxes due and owing by the Parent (whether or not shown on any Tax Return) have been paid. There are no Encumbrances for Taxes (other than Encumbrances described in clause (b) of the definition of Permitted Encumbrances) upon any of the assets of Parent. Parent has withheld and paid all Taxes required to have been withheld and paid in connection with any amounts paid or owing to any employee, independent contractor, creditor or equityholders of the Parent. No U.S. federal, state, local, or foreign tax audits or administrative or judicial Tax proceedings are pending or being conducted with respect to the Parent, nor is it threatened in writing. No deficiencies for Taxes with respect to the Parent have been claimed, proposed or assessed by any Tax Authority. Parent has not been a United States real property holding corporation within the meaning of Section 897(c)(2) of the Code during the applicable period specified by Section 897(c)(1)(A)(ii) of the Code. Parent is not a partner for Tax purposes with respect to any joint venture, partnership, or other arrangement or Contract which is treated as a partnership for Tax purposes.

(c) To Parent's Knowledge, all elections and notices under Section 83(b) of the Code have been or will be timely filed by all individuals who have acquired unvested shares of Parent Common Stock.

(d) Parent is not a party to any contract and/or has not granted any compensation, equity or award that could reasonably be deemed deferred compensation subject to the additional twenty percent (20%) Tax under Section 409A of the Code, and neither Parent nor, to Parent's Knowledge, any person that is a member of the same controlled group as Parent or under common control with Parent within the meaning of Section 414 of the Code, has any liability or obligation to make any payments or to issue any equity award or bonus that could reasonably be deemed deferred compensation subject to the additional twenty percent (20%) Tax under Section 409A of the Code.

4.18 Insurance. Parent has, as directed by the Parent Board, and in the normal course, obtained fire and casualty insurance policies with extended coverage, sufficient in amount (subject to reasonable deductions) to allow it to replace any of its properties that might be damaged or destroyed.

4.19 Employee Agreements. Each current and former employee and officer of Parent, and each consultant of Parent involved in the creation of Parent Intellectual Property has executed an Inventions Assignment Agreement with Parent substantially in the form or forms delivered to the Company. No such current or former employee, consultant or officer has excluded works or inventions from his or her assignment of inventions pursuant to such person's Inventions Assignment Agreement. Each such current and former employee has executed an agreement containing a non-solicitation and non-competition obligation substantially in the form or forms delivered to the Company. Parent is not aware that any of its employees, consultants or officers is in violation of any agreement covered by this Section 4.19.

4.20 Compliance with Laws; Permits. Parent is, and has been at all times since incorporation, in compliance, in all material respects, with, and is not, and has not been since incorporation, a recipient of a written notice of any violation of, or, to the Knowledge of Parent, threatened to be charged with any violation of or under investigation with respect to, any applicable Law. Parent has all material Permits necessary for the conduct of its business and has made all necessary filings required under applicable Law, necessary to conduct the business of Parent. Parent is, and has been at all times since incorporation, in compliance in all material respects with each such material Permit. Parent has not received any written notice or other written communication regarding any actual or possible violation of or failure to comply with any term or requirement of any such material Permit or any actual or possible revocation, withdrawal, suspension, cancellation, termination or material modification of any such material Permit.

4.21 Environmental and Safety Laws. To Parent's Knowledge, in all material respects, (a) Parent is and has been in compliance with all Environmental Laws; (b) there has been no release or to Parent's Knowledge threatened release of any Hazardous Substance, on, upon, into or from any site currently or heretofore owned, leased or otherwise used by Parent; (c) there have been no Hazardous Substances generated by Parent that have been disposed of or come to rest at any site that has been included in any published U.S. federal, state or local "superfund" site list or any other similar list of hazardous or toxic waste sites published by any Governmental Authority in the United States; and (d) there are no underground storage tanks located on, no PCBs or PCB-containing equipment used or stored on, and no hazardous waste as defined by the Resource Conservation and Recovery Act, as amended, stored on, any site owned or operated by Parent, except for the storage of hazardous waste in compliance with Environmental Laws.

4.22 Data Privacy. In connection with its collection, storage, transfer (including any transfer across national borders) and/or use of Personal Information, Parent is and has been, to Parent's Knowledge, in compliance in all material respects with all applicable Laws in all relevant jurisdictions, Parent's privacy policies and the requirements of any contract or codes of conduct to which Parent is a party. Parent has commercially reasonable physical, technical, organizational and administrative security measures and policies in place to protect all Personal Information collected by it or on its behalf from and against unauthorized access, use and/or disclosure. To the extent Parent maintains or transmits protected health information, as defined under 45 C.F.R. § 160.103, Parent is in compliance in all material respects with the applicable requirements of the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act, including all rules and regulations promulgated thereunder. Parent has complied and is in compliance in all material respects with all applicable safeguarding requirements of the FDA regulations. Parent is and has been, to Parent's Knowledge, in compliance in all material respects with all Laws relating to data loss, theft and breach of security notification obligations.

4.23 No Brokers. There is no investment banker, broker, finder or other intermediary that has been retained by or is authorized to act on behalf of Parent or who is or may be entitled to any fee or commission from Parent or any of its Affiliates in connection with the transactions contemplated by this Agreement.

ARTICLE V.
COVENANTS

The Company, the Stockholders' Representative, Parent and Merger Sub each covenant and agree as follows:

5.1 Conduct of the Businesses. From and after the date of this Agreement until the earlier of (A) the termination of this Agreement in accordance with the provisions of Section 7.1 and (B) the Effective Time (such period, the "Interim Period"), except as expressly contemplated by this Agreement, each of Parent and the Company shall conduct their respective business in the ordinary course and use their respective commercially reasonable efforts to (i) preserve intact its present business organization, (ii) maintain in effect all of its foreign, federal, state and local Permits, (iii) keep available the services of the officers and employees of the Company or Parent, as applicable, and (iv) maintain satisfactory relationships with the lenders, suppliers, licensors and licensees of the Company or Parent, as applicable, and others having material business relationships with the Company or Parent, as applicable. Without limiting the generality of the foregoing, during the Interim Period, except as expressly contemplated by this Agreement, set forth on Section 5.1 of the Company Disclosure Schedule or pursuant to the written consent of Parent, in the case of the Company, and set forth on Section 5.1 of the Parent Disclosure Schedule or pursuant to written consent of the Company, in the case of the Parent, each of the Company and Parent covenants that it shall not:

(a) except as may be necessary or advisable to implement the transactions described in this Agreement, amend its certificate of incorporation, bylaws or other Organizational Documents (whether by merger, consolidation or otherwise);

(b) declare, set aside or pay any dividend or other distribution (whether in cash, stock, debt or property or any combination thereof) in respect of any equity securities of the Company or Parent, as applicable, or redeem, repurchase or otherwise acquire or offer to redeem, repurchase, or otherwise acquire any equity securities of the Company or Parent, as applicable, in each case other than immaterial repurchases of restricted stock from former service providers in connection with the cessation of services to the applicable company;

(c) (i) issue, transfer, deliver, sell, pledge or otherwise encumber any shares of any equity securities of the Company or Parent, as applicable, (other than the issuance of equity securities pursuant to the valid exercise of any option or other convertible security) or (ii) amend any term of any equity securities of the Company or Parent, as applicable (whether by merger, consolidation or otherwise) including an amendment to provide for acceleration of vesting as a result of the Merger or a termination of employment or service related to the Merger;

(d) make any expenditures of more than $100,000 individually or incur any obligations or liabilities in respect thereof, other than expenses in respect of reasonable lab supplies, rent, utilities, facility maintenance, postage, phone, mobile phone, reasonable office supplies, internet services, existing accounting consultants, compensation and benefits for employees or consultants of the Company or Parent, as applicable, and contract research organizations, in each case in the ordinary course of business (provided that in the event the Closing has not occurred on or prior to January 31, 2019, the limit for expenditures or obligations in respect thereof shall be $200,000);

(e) make any capital expenditures or incur any obligations or liabilities in respect thereof in excess of $30,000 (provided that in the event the Closing has not occurred on or prior to January 31, 2019, the limit for capital expenditures or obligations or liabilities in respect thereof shall be $100,000);

(f) acquire (by merger, consolidation, acquisition of stock or assets or otherwise), directly or indirectly, any assets, securities, properties, interests or businesses, other than inventory and supplies in the ordinary course of business and as otherwise permitted pursuant to Sections 5.1(d) and (e);

(g) sell, lease, license or otherwise transfer, or create, incur, assume or suffer to exist any Encumbrance (other than Permitted Encumbrances) on, any of the assets, securities, properties, interests or businesses of the Company or Parent, as applicable;

(h) make any loans, advances or capital contributions to, or investments in, any other Person, other than travel advances and other advances of business expenses to employees made in the ordinary course of business;

(i) except as set forth on Section 5.1 of the Company Disclosure Schedule, make any payments to any Company Related Person or any other direct or indirect equityholder of the Company, in the case of the Company, or Parent Related Person or any other direct or indirect equityholder of Parent, in the case of Parent (other than salary payments or expense reimbursements made in the ordinary course of business);

(j) create, incur, assume or otherwise become liable with respect to any Indebtedness;

(k) modify, amend, cancel, terminate or waive any material rights under any Company Material Contract or Parent Material Contract, as applicable, enter into any Contract that would have been a Company Material Contract or Parent Material Contract, as applicable, had it been entered into prior to the date of this Agreement to the extent such Contract would result in Liabilities to the Company or Parent, as applicable, in excess of $100,000 (which shall increase to $200,000 if the Closing has not occurred on or prior to January 31, 2019), annually or otherwise waive, release or assign any material rights, claims or benefits of the Company or Parent, as applicable;

(l) other than as required by applicable Law: (i) grant or increase any form of compensation or benefits payable to any director, officer, advisor, consultant, or employee of the Company or Parent, as applicable (other than as set forth on Schedule 5.1(l)); (ii) adopt, enter into, modify or terminate any Employee Plan or Parent Employee Plan, as applicable; (iii) accelerate the vesting or payment of any compensation or benefits under any Employee Plan or Parent Employee Plan, as applicable; (iv) grant any equity or equity-linked awards or other bonus, commission or other incentive compensation to any director, officer, advisor, consultant or employee of the Company or Parent, as applicable, or any of their respective ERISA Affiliates; or (v) hire, promote or terminate any employee, officer, director or consultant of the Company or Parent, as applicable, or any of their ERISA Affiliates or materially change the management structure of the Company or Parent, as applicable;

(m) fail to maintain, or allow to lapse, dispose of or abandon, including by failure to pay the required fees in any jurisdiction, any Company Intellectual Property or Parent Intellectual Property, as applicable, or grant permission to enter into the public domain any trade secrets included in the Company Intellectual Property or Parent Intellectual Property, as applicable;

(n) change the Company's or Parent's, as applicable, methods of accounting or accounting practices, except as required by concurrent changes in GAAP as agreed to by the Company's or Parent's, as applicable, independent public accountants;

(o) commence, settle, or offer or propose to settle, (i) any Action involving or against the Company alleging Liabilities in excess of $50,000, (ii) any equityholder litigation or dispute against the Company or any of its officers or directors or (iii) any Action that relates to the transactions contemplated by this Agreement unless such Actions are between the Company, on the one hand, and Parent, on the other hand;

(p) (i) make or change any material Tax election, (ii) settle or compromise any claim, notice, audit report or assessment in respect of a material amount of Taxes, (iii) enter into any Tax allocation agreement, Tax sharing agreement, Tax indemnity agreement, pre-filing agreement, advance pricing agreement, cost sharing agreement or closing agreement relating to any Tax, (iv) file any federal income Tax Return or material Tax Return, in each case, without notifying the Company or Parent, as applicable, in advance of such filing, (v) amend any Tax Return (other than as set forth on Section 5.1(p) of the Company Disclosure Schedule), (vi) surrender or forfeit any right to claim a Tax refund or (vii) consent to any extension or waiver of the statute of limitations period applicable to any Tax claim or assessment;

(q) form or acquire any Subsidiaries;

(r) liquidate, dissolve or effect a recapitalization or reorganization in any form of transaction;

(s) initiate, launch or commence any sale, marketing, distribution, co-promotion or any similar activity with respect to any new Company Product (including Company Products under development); or

(t) authorize or agree, resolve or commit to do any of the foregoing.

Notwithstanding anything to the contrary in this Section 5.1, if the Closing has not occurred by February 28, 2019, thereafter the Company may (i) issue equity securities (including convertible securities) as needed solely to a Person that is a holder of Company Capital Stock as of the date of this Agreement, in the Company's sole discretion, in order to fund the operations of the Company and its business, and (ii) take any and all other action (including as may otherwise be restricted hereunder) that is necessary to effect such securities issuance, including without limitation, amending the Company's certificate of incorporation; provided, that the Company shall give Parent written notice of any such issuance and related action within 24 hours thereof.

5.2 Clinical Trials. During the Interim Period, the Company shall diligently conduct all research development activities with respect to the Company Products in compliance with all applicable Laws. During the Interim Period and except as prohibited by applicable Law, at the reasonable request of Parent, the Company shall discuss with Parent the progress of and developments in and results of any clinical trials being conducted by the Company. In addition, during the Interim Period and except as prohibited by applicable Law, the Company shall (a) provide Parent with copies of all written communication provided to and from such investigators, and (b) provide Parent with copies of any interim data and data analysis generated with respect to the Company's clinical trials. During the Interim Period and except as prohibited by applicable Law, prior to finalizing such protocols or delivering drafts or copies thereof to institutional review boards or regulatory authorities, selecting such clinical investigators and engaging in such clinical trials, the Company shall furnish copies of such protocols, drafts or copies, as the case may be, to Parent for its review and comment, and shall consult with, and consider in good faith any comments timely received from, Parent regarding, (i) clinical trial protocols, (ii) lists of clinical investigators, (iii) copies of all forms of clinical investigator contracts, (iv) all clinical trial agreements (including clinical financial information), and (v) patient data forms for any of its proposed clinical trials prior to finalizing such protocols or delivering drafts or copies thereof to institutional review boards or regulatory authorities, selecting such clinical investigators and engaging in such clinical trials. During the Interim Period and if in accordance with the subject's informed consent and except as prohibited by applicable Law, at the reasonable request of Parent, Parent shall have the right to be present for observation purposes at any procedures performed in connection with any clinical trial conducted by the Company, and Parent shall be given a reasonable opportunity to meet and confer with the physicians performing such clinical trials. In addition, during the Interim Period and except as prohibited by applicable Law, at the reasonable request of Parent, Parent shall be given reasonable access during normal business hours upon reasonable advance notice by Parent to the Company to (A) all internal and contract research organization or vendor correspondence, monitoring reports, study guidelines, plans, charters, meeting minutes, documents (whether internal or external) created or collected for any clinical trials, and drug management records at the clinical site level, (B) audit information relating to any clinical trials, and (C) any consultants, core labs or vendors used for any clinical trials. During the Interim Period and except as prohibited by applicable Law, the Company shall also provide Parent with copies of any summaries of the results of such clinical trials and of any preclinical studies prepared by the Company.

5.3 FDA and MAA Approval Matters.

(a) During the Interim Period and except as prohibited by applicable Law, the Company shall provide Parent with an accurate and complete copy (or summary in the case of oral communications) of any communications with the FDA, the EMA, European Union Member State Competent Authorities, or any corollary entity in any other jurisdiction, including outside of the United States of America, whether written or oral, as soon as reasonably practicable, but in no event later than three (3) business days after the receipt of such communication.

(b) During the Interim Period and except as prohibited by applicable Law, (i) from time to time and at the reasonable request of Parent, the Company shall discuss with Parent the progress of regulatory filings made or to be made by the Company relating to the Company Products and any changes since the date hereof to the strategy for obtaining necessary Regulatory Approvals to manufacture, market and sell the Company Products, and (ii) the Company shall furnish to Parent for its review and comment, and shall consult with Parent regarding, any material regulatory filing relating to the Company Products prior to finalizing such filings and delivering them to the relevant regulatory authorities.

5.4 No Solicitation. From and after the time that the Requisite Stockholder Approval is obtained until the earlier of the Effective Time or the termination of this Agreement in accordance with its terms, the Company shall not, and shall cause each of its Representatives not to, directly or indirectly, (a) solicit, initiate, facilitate, support, seek, induce, entertain or knowingly encourage, or take any action to solicit, initiate, facilitate, support, seek, induce, entertain or knowingly encourage any inquiries, announcements or communications relating to, or the making of any submission, proposal or offer that constitutes or that would reasonably be expected to lead to, an Acquisition Proposal, (b) enter into, participate in, maintain or continue any discussions or negotiations relating to, any Acquisition Proposal with any Person other than Parent, (c) furnish to any Person other than Parent any non-public information that would reasonably be expected to be used for the purposes of formulating any inquiry, expression of interest, proposal or offer relating to an Acquisition Proposal, or take any other action regarding any inquiry, expression of interest, proposal or offer that constitutes, or would reasonably be expected to lead to, an Acquisition Proposal, (d) accept any Acquisition Proposal or enter into any agreement, arrangement or understanding (whether written or oral) providing for the consummation of any transaction contemplated by any Acquisition Proposal or otherwise relating to any Acquisition Proposal or (e) submit any Acquisition Proposal or any matter related thereto to the vote of the Company Stockholders.

5.5 Further Assurances. Upon the terms and subject to the conditions contained herein, the parties agree (a) to use commercially reasonable efforts to take, or cause to be taken, all actions and to do, or cause to be done, all things necessary, proper or advisable to consummate and make effective the transactions contemplated by this Agreement, (b) to execute any documents, instruments or conveyances of any kind which may be reasonably necessary or advisable to carry out any of the transactions contemplated hereunder or thereunder, and (c) to cooperate with each other in connection with the foregoing. Without limiting the foregoing, the parties agree to use their respective commercially reasonable efforts (A) to obtain all necessary waivers, consents and approvals necessary or desirable for the consummation of the transactions contemplated by this Agreement, provided that none of Parent, the Stockholders' Representative, Merger Sub or the Company, nor any of their respective Affiliates, shall be required to make any payments, commence litigation or agree to modifications of any terms in order to obtain any such waivers, consents or approvals; (B) to obtain all necessary Permits as are required to be obtained under applicable Law; (C) to give all notices to, and make all registrations and filings with, third parties, including Governmental Authorities; and (D) to fulfill all conditions of the other party set forth in Article VI. The Company shall provide Parent with a reasonable opportunity to approve (which approval shall not be unreasonably withheld, conditioned or delayed) any waivers, consents, approvals, notices, Orders, registrations and filings to be made, given or used by the Company and shall, as promptly as reasonably practicable, deliver to Parent a copy of any such registration or filing made, any such notice given or any such waiver, consent, approval or Order obtained by the Company prior to the Closing Date as Parent may reasonably request.

5.6 [Intentionally Omitted].

5.7 Tax Matters.

(a) Parent, Company Stockholders and the Company shall cooperate, as and to the extent reasonably requested by the other party, in connection with the filing of Tax Returns and any audit, litigation or other proceeding with respect to Taxes. Such cooperation shall include the retention and (upon the other party's request) the provision of records and information reasonably relevant to any such audit, litigation, or other proceeding and making employees available on a mutually convenient basis to provide additional information and explanation of any material provided hereunder. Parent, Company Stockholders and the Company agree to retain all books and records with respect to Tax matters pertinent to the Company for a period of seven (7) years after the Closing Date, and to abide by all record retention agreements entered into with any Tax Authority.

(b) Parent shall prepare (or cause to be prepared), and timely file, all Tax Returns of the Company with respect to any Pre-Closing Tax Period that are required to be filed with a Tax Authority after the Closing Date. All such Tax Returns shall be prepared in a manner consistent with the Company's prior practice except as required by applicable Law; provided that Parent shall cause the Company's tax year to end at the end of the day on the Closing Date for U.S. federal income tax purposes by including the Company on Parent's consolidated income Tax Return after the Closing Date. Parent shall deliver any such Tax Return to the Stockholders' Representative for its review and approval at least fifteen (15) Business Days prior to the date on which such Tax Return is required to be filed (taking into account any valid extensions), and shall make any reasonable comments submitted in writing by Stockholders' Representative at least five days prior to the date on which such Tax Return is required to be filed (taking into account any valid extensions).

(c) Parent and the Company, on the one hand, and Company Stockholders, Stockholders' Representative and their affiliates, on the other hand, shall promptly notify each other upon receipt by such party of written notice of any inquiries, claims, assessments, audits or similar events with respect to Taxes relating to a Pre-Closing Tax Period (any such inquiry, claim, assessment, audit or similar event, a "Tax Matter"). Any failure to so notify the other party of any Tax Matter shall not relieve such other party of any liability with respect to such Tax Matters except to the extent such party was actually and materially prejudiced as a result thereof. Parent shall have sole control of the conduct of all Tax Matters, including any settlement or compromise thereof, provided, however, that Parent shall keep Stockholders' Representative reasonably informed of the progress of any Tax Matter and shall not effect any such settlement or compromise with respect to which the Company Stockholders are liable without obtaining the Stockholders' Representative's prior written consent thereto, which shall not be unreasonably withheld or delayed. In the event of any conflict or overlap between the provisions of this Section 5.6 and Article VIII, the provisions of Section 5.6 will control.

(d) All transfer, stamp, documentary, sales, use, registration, value-added and other similar Taxes (including all applicable real estate transfer Taxes) incurred in connection with this Agreement and the transactions contemplated hereby ("Transfer Taxes") will be borne fifty percent (50%) by the Company Stockholders and fifty percent (50%) by Parent.

(e) Notwithstanding anything to the contrary in this Agreement, after the Closing, none of Parent, the Company (including the Surviving Corporation) or Company Stockholders shall take or fail to take any action that would reasonably be expected to cause the Merger and the Series A-2 Financing, taken together, to fail to meet the requirements for an exchange under Section 351 of the Code.

(f) Any Tax sharing, Tax indemnity, Tax allocation or similar agreements between the Company, on the one hand, and any of the Company Stockholders or their Affiliates, on the other hand, shall be terminated prior to the Closing Date, and, after the Closing Date, the Company shall not be bound thereby or have any liability thereunder.

(g) Unless required by applicable Law, neither the Parent nor any Affiliate shall nor shall it cause the Company (including the Surviving Corporation) to amend any previously filed Tax Returns for a Pre-Closing Tax Period, file Tax Returns for a Pre-Closing Tax Period in a jurisdiction where the Company has not historically filed Tax Returns, make or change any Tax elections with respect to Pre-Closing Tax Periods, change any accounting method or adopt any convention that shifts taxable income from a period beginning (or deemed to begin) after the Closing Date to a taxable period (or portion thereof) ending on or before the Closing Date or shifts deduction or losses from a Pre-Closing Tax Period to a tax period beginning (or deemed to begin) after the Closing Date, without in each case the prior written consent of the Stockholders' Representative, such consent not to be unreasonably withheld, conditioned or delayed. In addition Parent and its Affiliates shall not make and shall not cause the Company (including the Surviving Corporation) to make an election pursuant to Sections 338 or 336(e) of the Code with respect to the transaction contemplated by this Agreement.

(h) Parent shall pay over, or cause to be paid over, to the Stockholders' Representative for the account of the Company Stockholders any Tax refunds of the Company attributable to Pre-Closing Tax Periods to the extent such Taxes were paid by the Company prior to the Closing, except to the extent taken into account in the determination of Aggregate Closing Parent Shares or attributable to any carryback of a loss or credit of Parent or its Affiliates (including the Company after the Closing) generated in a Tax period (or portion thereof) beginning after the Closing Date, within ten (10) days after receipt thereof, less any Taxes and reasonable out-of-pocket costs of Parents or its Affiliates associated with obtaining such Tax refund; provided, that to the extent such refund is subsequently disallowed the Company Stockholders shall repay such amount to Parent together with any interest, penalties, or other additional amounts imposed by the Governmental Authority.

5.8 Indemnification and Insurance.

(a) If the Merger is consummated, then until the sixth (6^{th}) anniversary of the Closing Date, Parent will, to the fullest extent permitted by Law, cause the Surviving Corporation to fulfill and honor in all respects the obligations of the Company to its present and former directors and officers determined as of immediately prior to the Effective Time (the "Company Indemnified Parties") pursuant to the certificate of incorporation or the bylaws of the Company or any indemnification agreements with the Company identified on Section 5.8(a) of the Company Disclosure Schedule, in each case, in effect as of the date of this Agreement, with respect to claims arising out of acts or omissions occurring at or prior to the Effective Time that are asserted after the Effective Time; provided that Parent's and the Surviving Corporation's obligations under this Section 5.8 shall not apply to any claim based on a claim for indemnification made by a Parent Indemnified Party pursuant to Article VIII.

(b) Prior to the Effective Time, Parent shall purchase tail insurance coverage (the "Tail Insurance Coverage") for the Company Indemnified Parties in a form reasonably satisfactory to the Company and Parent, which shall provide the Company Indemnified Parties with coverage for six (6) years following the Closing Date in an amount not less than the existing coverage and that shall have other terms not materially less favorable to the insured persons than the directors' and officers' liability insurance coverage maintained by the Company as of the date of this Agreement. Parent shall cause the Surviving Corporation to maintain the Tail Insurance Coverage in full force and effect and continue to honor the obligations thereunder until the sixth (6th) anniversary of the Closing Date.

(c) The provisions of this Section 5.8 shall survive the Closing and are intended to be for the benefit of, and enforceable by, the Company Indemnified Parties, and shall be binding on all successors and assigns of the Surviving Corporation and Parent. In the event that Parent or the Surviving Corporation or any of their respective successors or assigns (i) consolidates with or merges into any other Person and shall not be the continuing or surviving corporation or entity of such consolidation or merger or (ii) transfers or conveys all or substantially all of its properties and assets to any Person, then, and in each such case, proper provision shall be made so that the successors and assigns of Parent or the Surviving Corporation, as the case may be, assume the obligations set forth in this Section 5.8.

5.9 Access and Information.

(a) During the Interim Period, and in addition to and without limitation of Parent's rights pursuant to Section 5.2, each of the Company and Parent shall (i) give the other party and such party's Representatives reasonable access to its offices, properties, books and records, upon the reasonable request of the other party, (ii) furnish to the other party and such party's Representatives such financial and operating data and other information relating to the other party as such Persons may reasonably request and (iii) instruct its Representatives to cooperate with the other party in its investigation and due diligence review of the Company and Parent, as applicable. Any investigation pursuant to this Section 5.9(a) shall be conducted in such manner as not to interfere unreasonably with the conduct of the business of the Company and Parent, as applicable.

(b) Without limiting the generality of the foregoing, during the Interim Period, the Company shall permit Parent and its Representatives to contact the Company's accountants and employees, and the Company shall, and shall use its commercially reasonable efforts to cause such accountants, auditors and employees to, discuss, reasonably cooperate and provide all material information, documentation, data and materials (whether in electronic form of otherwise) relating to the Company that is in the control or possession of the Company or its Affiliates or Representatives as Parent may reasonably request, including any information that is reasonably required for the preparation of financial statements of Parent that include financial and operating data relating to the Company; provided that such discussions, cooperation and provision do not interfere unreasonably with the conduct of the business of the Company.

(c) Notwithstanding anything herein to the contrary in this Section 5.9, no access or examination contemplated by this Section 5.9 shall be permitted to the extent that it would require the Company or Parent, as applicable, to waive the attorney-client privilege or attorney work product privilege, or violate any applicable Law; provided, that each the Company and Parent (i) shall be entitled to withhold only such information that may not be provided without causing such violation or waiver, (ii) shall provide to the other party all related information that may be provided without causing such violation or waiver (including, to the extent permitted, redacted versions of any such information), and (iii) shall enter into such effective and appropriate joint-defense agreements or other protective arrangements as may be reasonably requested by the Company or Parent, as applicable, in order that all such information may be provided to the other party without causing such violation or waiver.

5.10 Confidentiality; Public Announcements.

(a) Parent and the Company hereby acknowledge and agree to continue to be bound by the Confidentiality Agreement dated as of October 7, 2018, by and between Parent and the Company (the "Confidentiality Agreement").

(b) Prior to the Closing, no party hereto shall, and each such party shall cause each of its respective Representatives not to, directly or indirectly, issue any press release or other public statement relating to the terms of this Agreement or the transactions contemplated hereby or use the other party's name or refer to the other party directly or indirectly in connection with such party's relationship with the other party in any media interview, advertisement, news release, press release or professional or trade publication, or in any print media, whether or not in response to an inquiry, without the prior written approval of the other party, unless required by applicable Law (including the rules or regulations of any securities exchange).

5.11 Employee Matters.

(a) Parent agrees that each employee of the Company who continues to remain employed with the Company or a Company Subsidiary immediately prior to the Effective Time (each, a "Continuing Employee") shall, during the period commencing at the Effective Time and ending on the first anniversary of the Closing Date (the "Continuation Period"), be provided with (i) an annual rate of base salary or base wage that is no less favorable than the annual rate of base salary or base wage provided either to such Continuing Employee by the Company immediately prior to the Effective Time or to similarly situated employees of Parent, (ii) an annual target cash bonus opportunity that is no less favorable than the annual target cash bonus opportunity provided either to such Continuing Employee by the Company immediately prior to the Effective Time or to similarly situated employees of Parent, and (iii) other employee benefits (other than equity or equity-based compensation) that are no less favorable in the aggregate to those provided either to such Continuing Employee by the Company immediately prior to the Effective Time or to similarly situated employees of Parent.

(b) Subject to the requirements of applicable Law and unless such recognition of service would result in a duplication of benefits or compensation and except in regards to equity compensation, Parent shall, and shall cause the Surviving Corporation to, treat, and use reasonable efforts to cause the applicable benefit plans to treat, the service of the Continuing Employees with Company attributable to any period before the Effective Time as service rendered to Parent or the Surviving Corporation for all purposes, including, but not limited to, eligibility to participate and applicability of any minimum waiting periods for participation, but excluding for these purposes benefit accrual under any defined benefit plan.

(c) Unless otherwise requested by Parent in writing no later than five (5) Business Days prior to the Closing Date, effective as of the day immediately preceding the Closing Date, the Company shall terminate any Employee Plan intended to include a Code Section 401(k) arrangement. Unless Parent provides such written notice to the Company, no later than three (3) Business Days prior to the Closing Date, the Company shall provide Parent with evidence that such Employee Plan(s) have been terminated (effective as of the day immediately preceding the Closing Date) pursuant to resolutions of the Company's Board of Directors. The form and substance of such resolutions shall be subject to review and approval by Parent, which approval shall not be unreasonably withheld, conditioned or delayed. The Company also shall take such other actions in furtherance of terminating such Employee Plan(s) prior to the Closing Date as Parent may reasonably require.

(d) Parent shall, or shall cause the Surviving Corporation to, use reasonable best efforts to waive, or cause its insurance carriers to waive, all pre-existing conditions, exclusions or waiting periods that could otherwise apply to any Continuing Employee under the benefit plans provided for such Continuing Employee following the Closing and to the extent such conditions, exclusions or waiting periods were applicable to the Continuing Employee prior to the Effective Time. With respect to the plan year during which the Effective Time occurs, Parent shall, or shall cause the Surviving Corporation to, use reasonable best efforts to provide each Continuing Employee with credit for deductibles and out-of-pocket requirements paid prior to the Closing Date in satisfying any applicable deductible or out-of-pocket requirements under any benefit plans provided for such Continuing Employee following the Closing. From and after the Closing Date, Parent shall, or shall cause the Surviving Corporation to, provide credit, under any arrangements provided for such Continuing Employee following the Closing, to Continuing Employees for their service recognized by the Company as of the Effective Time for purposes of eligibility, vesting, vacation, paid time off, and severance entitlements to the same extent and for the same purposes as such service was credited under the Employee Plans; provided, that such service shall not be recognized in respect of equity compensation plans or to the extent that such recognition would result in a duplication of benefits or compensation.

(e) As soon as administratively practicable following the Closing, Parent shall issue to each Continuing Employee listed on Schedule D and each consultant, advisor or other service provider listed on Schedule D (each, a "Continuing Consultant") an award of Parent restricted stock (each, a "Parent Restricted Stock Award") consisting of that number of shares of Parent Common Stock determined by multiplying the number of shares of Company Common Stock set forth opposite the name of such Continuing Employee or Continuing Consultant on Schedule D times the Preferred Exchange Ratio, such issuance to be contingent on the Continuing Employee or Continuing Consultant timely filing an election under Section 83(b) of the Code in respect of the Parent Restricted Stock Award. Each Parent Restricted Stock Award shall be subject to a risk of forfeiture on the date of issuance that shall lapse in accordance with the schedule set forth on Schedule D for such Parent Restricted Stock Award. As soon as administratively practicable after a Continuing Employee or Continuing Consultant delivers

evidence to Parent of the timely filing of an election under Section 83(b) in respect of the Parent Restricted Stock Award, Parent shall make a one-time cash payment to such Continuing Employee in an amount equal to the aggregate withholding Taxes incurred upon the grant of the Parent Restricted Stock Award and/or upon the filing the Section 83(b) election (or, in the case of a Continuing Consultant, an amount equal to the withholding Taxes that would have been incurred had such Continuing Consultant been an employee of the Company) (the "Gross-Up Bonuses"). For the avoidance of doubt, each Continuing Employee or Continuing Consultant will be solely responsible for satisfying any withholding Taxes incurred in connection with such one-time cash payment. Schedule D shall be updated as of immediately prior to the Effective Time to reflect any changes to the number of shares of Company Common Stock set forth opposite the name of such Continuing Employee or Continuing Consultant due to the exercise of any vested Company Option and the forfeiture of any unvested Company Options, in each case prior to the Effective Time.

(f) Parent shall adopt an employee carveout plan (the "Carveout Plan") for the benefit of Continuing Employees and Continuing Consultants on terms and conditions set forth on Schedule E that is intended to incentivize the Continuing Employees and Continuing Consultants to contribute to the achievement of the Additional Milestone Trigger Events. For the purposes of this Agreement, the payments made, or shares of Parent Capital Stock issued, in accordance with the terms of the Carveout Plan shall constitute Additional Milestone Payments.

(g) As soon as administratively practicable following the Closing, Parent shall issue to each Continuing Employee and Continuing Consultant listed on Schedule F an award of Parent restricted stock units ("Parent RSUs") covering that number of shares of Parent Common Stock determined by multiplying each Continuing Employee's or Continuing Consultant's Pro Rata Share times the First Milestone Shares. Each Parent RSU shall be subject to forfeiture to the same extent as the First Milestone Shares and shall also be subject to a service-based requirement (the "Service-Based Requirement") and a liquidity event requirement (the "Liquidity Event Requirement"). If both the Service-Based Requirement and the Liquidity Event Requirement are satisfied on or before the seventh anniversary of the Closing (the "Expiration Date"), and provided the First Milestone Shares were not forfeited, the vesting date ("Vesting Date") of a Parent RSU will be the first date upon which both of those requirements were satisfied with respect to that particular Parent RSU. The Liquidity Event Requirement will be satisfied on the first to occur of: (1) the date that is six months from or, if earlier, March 15 of the year following, the consummation of the Parent IPO, or (2) the consummation of a Change of Control. The Service-Based Requirement will be satisfied in four equal annual installments following the Closing, subject to the Continuing Employee's or Continuing Consultant's continued service to Parent or the Company. Notwithstanding anything to the contrary in this Agreement, in the event that the Company delivers notice to Parent prior to the Closing that the First Milestone has occurred, the Parent RSUs shall be issued to each Continuing Employee and Continuing Consultant subject only to the Service-Based Requirement and the Liquidity Event Requirement and not subject to forfeiture in respect of the First Milestone. Schedule F shall be updated as of immediately prior to the Effective Time to reflect any changes to each Continuing Employee's or Continuing Consultant's Pro Rata Share due to the exercise of any vested Company Option and the forfeiture of any unvested Company Options, in each case prior to the Effective Time.

(h) As soon as administratively practicable following the Closing, Parent shall issue to each person listed on Schedule G an award of options to purchase Parent Common Stock in the amounts set forth on Schedule G, each with an exercise price equal to the fair market value of a share of Parent Common Stock on the date of grant, and with a vesting schedule consistent with the standard vesting schedule applicable to Parent employee equity grants.

(i) Nothing contained in this Section 5.11 shall, or shall be construed as to: (i) alter or limit Parent or the Company's ability to amend, modify or terminate any particular Employee Plan, Parent Employee Plan, program, agreement or arrangement or constitute an amendment or modification of any particular Employee Plan, Parent Employee Plan, program, agreement or arrangement; (ii) confer upon any current or former employee of the Company any right to employment or continued employment for any period of time by reason of this Agreement; (iii) subject to the provisions of Section 5.11(a) herein, prevent or restrict in any way the right of Parent to terminate, reassign, promote or demote any employee, independent contractor, director or other service provider of the Company (or to cause any of the foregoing actions) at any time following the Closing, or to change (or cause the change of) the title, powers, duties, responsibilities, functions, locations, salaries, other compensation or terms or conditions of employment or service of any such service providers at any time following the Closing; or (iv) confer upon any individual (including employees, retirees, or dependents or beneficiaries of employees or retirees) any right as a third-party beneficiary of this Agreement.

5.12 280G Matters. As soon as reasonably practicable following the date of this Agreement, and in any event within two (2) Business Days prior to the Closing Date, the Company shall (a) obtain and deliver to Parent, prior to the initiation of the Company Stockholder approval procedure under clause (b) below, from each Person who is, with respect to the Company, a "disqualified individual" (within the meaning of Section 280G of the Code) as of immediately prior to the initiation of such Company Stockholder approval (each, a "Disqualified Individual"), and who might otherwise have, receive or have the right or entitlement to receive a "parachute payment" (within the meaning of Section 280G of the Code), a waiver (a "Parachute Payment Waiver"), of such Disqualified Individual's rights to all such payments and/or benefits applicable to such Disqualified Individual (the "Waived Parachute Payments") so that all remaining payments and/or benefits applicable to such Disqualified Individual shall not be deemed to be "excess parachute payments" (within the meaning of Section 280G of the Code) and (b) submit to the Company Stockholders for approval (in a manner satisfactory to Parent) by such number of Company Stockholders in a manner that meets the requirements of Section 280G(b)(5)(B) of the Code, any payments and/or benefits that Parent and the Company reasonably determine may separately or in the aggregate, constitute "parachute payments" (within the meaning of Section 280G of the Code), such that such payments and benefits shall not be deemed to be "parachute payments" under Section 280G of the Code (the foregoing actions, a "280G Vote"). As soon as practicable following the date of this Agreement, if a 280G Vote is required, the Company shall deliver to Parent evidence reasonably satisfactory to Parent, (i) that a 280G Vote was solicited in conformance with Section 280G of the Code, and the requisite stockholder approval was obtained with respect to any payments and/or benefits that were subject to the Company stockholder vote (the "Section 280G Approval") or (ii) that the Section 280G Approval was not obtained and as a consequence, pursuant to the Parachute Payment Waiver, such "parachute payments" shall not be made or provided. The form of the Parachute Payment Waiver, the disclosure statement, any other materials to be submitted to the Company Stockholders in connection with the Section 280G Approval and the calculations related to the foregoing shall be subject to advance reasonable review and approval by Parent, which approval shall not be unreasonably withheld, conditioned or delayed.

5.13 Securities Act Compliance.

(a) The Parent Series A-2 Preferred Shares to be issued pursuant to this Agreement will not be registered under the Securities Act in reliance on the exemptions from the registration requirements of Section 5 of the Securities Act set forth in Section 4(a)(2) or Rule 701 thereof.

(b) Immediately following the execution and delivery of this Agreement, the Company shall use commercially reasonable efforts to seek to obtain the Written Consent duly executed by Company Stockholders necessary to obtain the Requisite Stockholder Approval. Promptly following receipt of the Written Consent evidencing the obtainment of the Requisite Stockholder Approval, the Company shall cause its corporate Secretary to deliver a copy of the Written Consent to Parent. Promptly (and in any event within five (5) Business Days) following receipt by the Company of the Requisite Stockholder Approval pursuant to the Written Consent, the Company shall deliver an information statement (the "Information Statement"), in form and substance reasonably acceptable to Parent, to the Company Stockholders in compliance with Sections 228(e) and 262 of the DGCL. The Information Statement shall (i) provide the requisite notice of appraisal and dissenters' rights under the DGCL and (ii) include a Letter of Transmittal. The Company will give Parent and its Representatives reasonable opportunity to review and comment on the Information Statement and the Company will incorporate any reasonable comments that Parent or its Representatives have made with respect to the Information Statement.

(c) The Company will use its commercially reasonable efforts to obtain a duly executed Letter of Transmittal from each Company Stockholder prior to the Closing Date, and shall provide copies of all such executed Letter of Transmittal to Parent as soon as practicable following receipt thereof.

5.14 Book-Entry; Legends.

(a) Notwithstanding anything else to the contrary in this Agreement, all Parent Series A-2 Preferred Shares issued to Stock Converting Holders pursuant to this Agreement (including pursuant to Section 1.14) may be issued in uncertificated book-entry form (unless otherwise determined by Parent in its sole discretion).

(b) In addition to any legend imposed by applicable state securities Laws or by any Contract which continues in effect after the Effective Time (including the Parent A-2/B Investor Agreements), the book entries or certificates representing the Parent Series A-2 Preferred Shares to be issued pursuant to this Agreement shall bear a restrictive legend (and stop transfer orders shall be placed against the transfer thereof with Parent's transfer agent), stating substantially as follows:

THE SHARES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AND HAVE BEEN ACQUIRED FOR INVESTMENT AND NOT WITH A VIEW TO, OR IN CONNECTION WITH, THE SALE OR DISTRIBUTION THEREOF. NO SUCH TRANSFER MAY BE EFFECTED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN OPINION OF COUNSEL IN A FORM SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT OF 1933.

THE SECURITIES REPRESENTED HEREBY MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF AN AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY.

THE SHARES REPRESENTED HEREBY ARE SUBJECT TO A VOTING AGREEMENT, AS MAY BE AMENDED FROM TIME TO TIME (A COPY OF WHICH MAY BE OBTAINED UPON WRITTEN REQUEST FROM THE COMPANY), AND BY ACCEPTING ANY INTEREST IN SUCH SHARES THE PERSON ACCEPTING SUCH INTEREST SHALL BE DEEMED TO AGREE TO AND SHALL BECOME BOUND BY ALL THE PROVISIONS OF THAT VOTING AGREEMENT, INCLUDING CERTAIN RESTRICTIONS ON TRANSFER AND OWNERSHIP SET FORTH THEREIN.

(c) In addition to the legend set forth in Section 5.14(b) and any legend imposed by applicable state securities Laws or by any Contract which continues in effect after the Effective Time (including the Parent A-2/B Investor Agreements), the book entries or certificates representing the First Milestone Shares to be issued pursuant to Section 1.14(a) shall bear a restrictive legend (and stop transfer orders shall be placed against the transfer thereof with Parent's transfer agent), stating substantially as follows:

THE SHARES REPRESENTED HEREBY ARE SUBJECT TO AN AGREEMENT THAT SUBJECTS ALL OR A PORTION OF SUCH SHARES TO POSSIBLE FORFEITURE AND MAY NOT BE TRANSFERRED WITHOUT THE EXPRESS INSTRUCTION OF THE COMPANY. A COPY OF SUCH AGREEMENT MAY BE OBTAINED UPON WRITTEN REQUEST TO THE SECRETARY OF THE COMPANY.

Notwithstanding anything to the contrary in the foregoing, in the event that the Company delivers notice to Parent prior to the Closing that the First Milestone has occurred, the First Milestone Shares shall be issued to the Milestone Payment Recipients at Closing without the restrictive legend set forth in this Section 5.14(c).

5.15 Termination of Company Investor Agreements. The Company shall cause any stockholders agreements, voting agreements, registration rights agreements, co-sale agreements and any other similar Contracts between the Company and any holders of Company Capital Stock, including any such Contract granting any Person investor rights, rights of first refusal, registration rights, voting rights, access rights or director designation rights (including the Company Investor Agreements), to be terminated immediately prior to the Effective Time, without any liability being imposed on the part of Parent or the Surviving Corporation.

5.16 Parent Issuance Limitation. The parties agree that Parent shall not issue and sell shares of Parent Series A-2 Preferred Stock and Parent Series B Preferred Stock for aggregate proceeds of greater than $800 million without the prior written consent of the Stockholders' Representative and ARCH Venture Partners.

5.17 Consents. The Company shall use commercially reasonable efforts to obtain each of the Consents set forth in Schedule H.

5.18 Credit Facility Repayment Shortfall Amount. At the Closing, Parent shall pay to Pacific Western Bank (d/b/a Square 1 Bank), a California state chartered bank, via wire transfer of immediately available funds, an amount equal to the Credit Facility Repayment Shortfall Amount in accordance with the Payoff Letter delivered by the Company pursuant to Section 2.2(c).

5.19 Amended Agreements and Documents. The Company agrees that, between the date hereof and the Closing, it shall, and shall cause its Affiliates to, validly execute and deliver to Parent the amendments to the Flagship IP License and Flagship Managerial Agreement, in each case, substantially in the forms attached hereto as Exhibit I and Exhibit J, respectively. Parent agrees that, between the date hereof and the Closing, it shall validly approve and deliver to the Company an amendment to the bylaws of Parent, substantially in the form attached hereto as Exhibit K.

ARTICLE VI.
CONDITIONS TO CLOSING

6.1 Conditions to Obligations of the Company. The obligations of the Company to consummate the transactions provided for hereby are subject to the satisfaction (or waiver by the Company), at or prior to the Closing, of each of the following conditions:

(a) Representations and Warranties. Each of (i) the Parent Fundamental Representations (other than Section 4.6) shall be true and correct in all respects as of the date of this Agreement and as of the Closing Date as if made on the Closing Date (except for Parent Fundamental Representations that speak as of a particular date, which shall be true and correct in all respects as of such date), (ii) Section 4.6 shall be true and correct in all material respects as of the date of this Agreement (without giving effect to any materiality qualifications therein) and (iii) the representations and warranties made by Parent in this Agreement other than the Fundamental Representations shall be true and correct in all respects as of the date of this Agreement, except for representations and warranties that speak as of a particular date, which shall be true and correct in all respects as of such date, and except where any failure to be true and correct in all respects as of the applicable date has not had a Material Adverse Effect on Parent (it being understood that for purposes of determining the accuracy of such representations and warranties, all Material Adverse Effect or other materiality qualifications in such representations and warranties shall be disregarded).

(b) Covenants. Each of the covenants and obligations that Parent and Merger Sub is required to comply with or to perform at or prior to the Closing shall have been complied with and performed in all material respects.

(c) No Actions or Orders. No Action, inquiry or other Proceeding by any Governmental Authority or other Person shall have been instituted or threatened which seeks to restrain, enjoin, prevent the consummation of or otherwise affect the transactions contemplated by this Agreement or which questions the validity or legality of the transactions contemplated hereby or thereby.

(d) Tax Matters. The Series A-2 Financing shall have been consummated in a manner such that, immediately after giving effect to Parent Series A-2 Preferred Shares purchased for cash at the initial closing of the Series A-2 Financing and the concurrent or subsequent consummation of the Merger, the Stock Converting Holders together with the Parent Series A-2 Investors, will collectively own, within the meaning of Section 368(c) of the Code, at least 80% of (i) the total combined voting power of all classes of stock of the Surviving Corporation entitled to vote and (ii) the total number of shares of all other classes of stock of the Surviving Corporation.

(e) Other Deliveries. Parent shall have delivered (or cause to be delivered) to the Company each of the following:

(i) a certificate executed on behalf of Parent by its chief executive officer containing the representation and warranty of Parent that the conditions set forth in Sections 6.1(a) and 6.1(b) have been duly satisfied; and

(ii) a certificate executed on behalf of Parent by its chief executive officer certifying that attached thereto is a true and complete copy of the Restated Certificate filed with the Secretary of State of Delaware on or prior to the Closing, which shall continue to be in full force and effect as of the Closing.

6.2 Conditions to Obligations of Parent and Merger Sub. The obligations of Parent and Merger Sub to consummate the transactions provided for hereby are subject to the satisfaction (or waiver by Parent), at or prior to the Closing, of each of the following conditions:

(a) Representations and Warranties. Each of (i) the Company Fundamental Representations (other than Section 3.5) shall be true and correct in all respects as of the date of this Agreement and as of the Closing Date as if made on the Closing Date (except for Company Fundamental Representations that speak as of a particular date, which shall be true and correct in all respects as of such date), (ii) Section 3.5 shall be true and correct in all material respects as of the date of this Agreement (without giving effect to any materiality qualifications therein) and (iii) the representations and warranties made by the Company in this Agreement other than the Fundamental Representations shall be true and correct in all respects as of the date of this Agreement, except for representations and warranties that speak as of a particular date, which shall be true and correct in all respects as of such date, and except where any failure to be true and correct in all respects as of the applicable date has not had a Material Adverse Effect on the Company (it being understood that for purposes of determining the accuracy of such representations and warranties, all Material Adverse Effect or other materiality qualifications in such representations and warranties shall be disregarded).

(b) Covenants. Each of the covenants and obligations that the Company is required to comply with or to perform at or prior to the Closing shall have been complied with and performed in all material respects.

(c) No Actions or Orders. No Action, inquiry or other Proceeding by any Governmental Authority or other Person shall have been instituted or threatened which seeks to restrain, enjoin, prevent the consummation of the transactions contemplated by this Agreement or which questions the validity or legality of the transactions contemplated hereby or thereby.

(d) Tax Matters. The Series A-2 Financing shall have been consummated in a manner such that, immediately after giving effect to the Parent Series A-2 Preferred Shares purchased for cash at the initial closing of the Series A-2 Financing and the concurrent or subsequent consummation of the Merger, the Stock Converting Holders together with the Parent Series A-2 Investors, will collectively own, within the meaning of Section 368(c) of the Code, at least 80% of (i) the total combined voting power of all classes of stock of the Surviving Corporation entitled to vote and (ii) the total number of shares of all other classes of stock of the Surviving Corporation.

(e) 280G Waivers. If a 280G Vote is required under Section 5.12 hereof, the Company shall have delivered to Parent (i) a Parachute Payment Waiver from each Person that is eligible to receive a payment that may constitute a "parachute payment" under Section 280G of the Code prior to soliciting the Section 280G Approval and (ii) evidence satisfactory to Parent that either (i) the 280G Vote required pursuant to Section 5.12 was solicited in conformity with Section 280G(b)(5)(B) of the Code and the Section 280G Approval was obtained with respect to any payments and/or benefits that were subject to the 280G Vote or (ii) the Section 280G Approval was not obtained and as a consequence, that the Waived Parachute Payments shall not be made or provided, pursuant to the Parachute Payment Waivers which were executed by the Disqualified Individuals in accordance with Section 5.12.

(f) Other Deliveries. The Company shall have delivered (or cause to be delivered) to Parent and Merger Sub each of the following:

(i) a certificate executed on behalf of the Company by its chief executive officer containing the representation and warranty of the Company that the conditions set forth in Sections 6.2(a) and 6.2(b) have been duly satisfied;

(ii) the Written Consent executed by (A) Company Stockholders representing not less than 90% of the number of shares of Company Capital Stock outstanding as of immediately prior to the Effective Time and (B) every holder of 1% or more of Company Capital Stock;

(iii) from Company Stockholders representing not less than 90% of the number of shares of Company Capital Stock outstanding as of immediately prior to the Effective Time, (A) duly completed and executed Letters of Transmittal and (B) a joinder to the Parent A-2/B Investor Agreements and a Stock Restriction Agreement from the Stock Converting Holder;

(iv) resignations from each member of the Company Board immediately prior to the Effective Time resigning from such positions effective as of the Effective Time;

(v) executed Payoff Letters relating to any Indebtedness of the Company outstanding as of immediately prior to the Effective Time;

(vi) evidence reasonably satisfactory to Parent that each Employee Plan intended to be qualified under Section 401(k) of the Code has been terminated effective as of the day immediately prior to the Closing pursuant to resolutions duly adopted by the Company Board; and

(vii) the certificate in the form set forth in Exhibit L, duly executed and acknowledged, certifying that the transactions contemplated hereby are exempt from withholding under Section 1445 of the Code.

ARTICLE VII.
TERMINATION

7.1 Termination. This Agreement may be terminated and the Merger may be abandoned at any time prior to the Effective Time (notwithstanding the Requisite Stockholder Approval):

(a) by mutual written agreement of the Company and Parent;

(b) by either Parent or the Company, if a Governmental Authority shall have issued any Order or taken any other action, in each case, which has become final and non-appealable and which restrains, enjoins or otherwise prohibits the Merger;

(c) by Parent, if (i) any representation or warranty of the Company contained in this Agreement shall be inaccurate such that the condition set forth in Section 6.2(a) would not be satisfied, or (ii) the covenants or obligations of the Company contained in this Agreement shall have been breached in any material respect such that the condition set forth in Section 6.2(b) would not be satisfied; provided, however, that if an inaccuracy or breach is curable by the Company during the 30-day period after Parent notifies the Company in writing of the existence of such inaccuracy or breach (the "Company Cure Period"), then Parent may not terminate this Agreement under this Section 7.1(c) as a result of such inaccuracy or breach prior to the expiration of the Company Cure Period unless the Company is no longer continuing to exercise commercially reasonable efforts to cure such inaccuracy or breach;

(d) by the Company, if (i) any representation or warranty of Parent contained in this Agreement shall be inaccurate such that the condition set forth in Section 6.1(a) would not be satisfied, or (ii) the covenants or obligations of Parent or Merger Sub contained in this Agreement shall have been breached in any material respect such that the condition set forth in Section 6.1(b) would not be satisfied; provided, however, that if an inaccuracy or breach is

curable by Parent or Merger Sub during the 30-day period after the Company notifies Parent in writing of the existence of such inaccuracy or breach (the "Parent Cure Period"), then the Company may not terminate this Agreement under this Section 7.1(d) as a result of such inaccuracy or breach prior to the expiration of the Parent Cure Period unless Parent is no longer continuing to exercise commercially reasonable efforts to cure such inaccuracy or breach;

(e) by Parent at any time before the Requisite Stockholder Approval has been obtained; provided, that Parent shall not be permitted to terminate pursuant to this Section 7.1(e) during the first twenty-four (24) hours after the execution of this Agreement.

7.2 Effect of Termination. If this Agreement is terminated pursuant to Section 7.1, this Agreement shall become void and of no effect without liability of any party (or any Representative of such party) to any other party; provided that the parties shall, in all events, remain bound by and continue to be subject to the provisions set forth in Section 5.10 and Article IX, which shall survive any termination of this Agreement.

ARTICLE VIII.
INDEMNIFICATION

8.1 Survival. If the Merger is consummated, the representations and warranties of the parties set forth in this Agreement shall survive the Closing for a period of nine (9) months following the Closing Date, except that (a) Company Fundamental Representations and Parent Fundamental Representations shall survive the Closing for a period of three (3) years after the Closing Date (the "Fundamental Representations"), and (b) those representations and warranties set forth in Section 3.17 (Tax Matters), shall survive until the date that is 60 days following the expiration of the applicable statute of limitations (including any applicable extensions). All covenants and agreements set forth in this Agreement shall remain in full force and effect for a period of nine (9) months following the Closing Date, except for those covenants and agreements that by their nature are to be performed in whole or in part at or after the Closing, which shall remain in full force and effect until performed in accordance with this Agreement. For the avoidance of doubt, the indemnification obligations provided in this Article VIII are continuing obligations of indemnification intended to survive the Closing for the periods described herein, and not simply a remedy for breach existing as of the Closing. Notwithstanding the foregoing, (i) the expiration of the above survival periods for any representation or warranty shall not terminate or affect any claim with respect to such representation or warranty that is set forth in a Third-Party Notice of Claim or a Notice of Claim delivered to the other party in accordance with Section 8.7(b) or Section 8.7(e), as applicable, prior to the end of such survival period; and (ii) in the event of fraud by or on behalf the Company on the one hand, or Parent or Merger Sub on the other hand, in connection with a representation or warranty contained in Articles III and IV of this Agreement, such representation or warranty (and the associated right of indemnity) shall survive until the date that is 60 days following the expiration of the applicable statute of limitations (including any applicable extensions) applicable to claims based on such fraud.

8.2 Indemnification by Indemnifying Stockholders.

(a) From and after the Closing, each Indemnifying Stockholder shall severally (and not jointly) and in proportion to their respective Indemnity Pro Rata Share, hold harmless and indemnify each of Parent and its Affiliates (including the Surviving Corporation after the Closing) and each of their respective officers, directors, employees, successors and assigns (collectively, the "Parent Indemnified Parties") from and against any and all Losses arising out of or resulting from:

(i) any breach of or inaccuracy in any representation or warranty made by the Company pursuant to Article III or the certificate delivered by the Company pursuant to Section 6.2(g)(i);

(ii) any breach of any covenant or agreement made by the Company under this Agreement that was to be performed by the Company at or prior to the Closing;

(iii) any inaccuracy in the Consideration Schedule;

(iv) any Closing Indebtedness or Unpaid Transaction Expenses to the extent not either (A) fully discharged prior to the Closing or (B) accounted for in the determination of Aggregate Closing Parent Shares;

(v) Indemnified Taxes to the extent not either (A) fully discharged prior to the Closing, or (B) accounted for in the determination of Aggregate Closing Parent Shares;

(vi) any exercise of dissenters' rights or rights of appraisal by any Company Stockholder or former Company Stockholder, including (i) in the event any consideration is determined to be payable to any holder of Dissenting Shares pursuant to the DGCL, the excess of such consideration paid to holders of Dissenting Shares over the consideration that would have otherwise been payable to such holder pursuant to Section 1.5 upon the exchange of such Dissenting Shares if such holder had not exercised his, her or its right to dissent to the Merger pursuant to Section 262 of the DGCL and (ii) all Losses incurred in connection with the proceedings related to any such exercise of dissenters' rights or rights of appraisal and resolution thereof; or

(vii) any Action brought by shareholders of the Company or in the name of the Company against the Company and/or their respective directors relating to the transactions contemplated by this Agreement, including the Merger.

(b) Notwithstanding anything to the contrary in this Agreement, the right to indemnification under this Section 8.2 is subject to the following limitations; provided, however, that none of the limitations set forth in this Article VIII shall apply in the case of fraud by or on behalf of the Company:

(i) Indemnifying Stockholders shall not have any obligation to indemnify any Parent Indemnified Party from and against any Losses arising out of breaches or inaccuracies indemnified under Section 8.2(a)(i) (other than as a result of a breach of or inaccuracy in a Company Fundamental Representation) until the Parent Indemnified Parties have suffered aggregate Losses by reason of such breaches or inaccuracies in excess of $1,000,000 (the "Minimum Amount"), at

which point the full amount of Losses of the Parent Indemnified Parties shall be recoverable from the first dollar of Loss. For the avoidance of doubt, the rights of Parent Indemnified Parties to indemnification pursuant to Section 8.2(a)(i) as a result of a breach of or inaccuracy in a Company Fundamental Representation shall not be subject to the Minimum Amount.

(ii) The maximum amount which the Parent Indemnified Parties may recover arising out of breaches or inaccuracies described in Section 8.2(a)(i) (other than as a result of a breach of or inaccuracy in a Company Fundamental Representation) shall be an aggregate amount equal to $15,000,000 (the "Cap"). For the avoidance of doubt, the Parent Indemnified Parties' right to indemnification under Section 8.2(a)(i) as a result of a breach of or inaccuracy in a Company Fundamental Representation shall not be subject to the Cap.

(c) Any finally determined claim for indemnification under this Section 8.2 shall be satisfied from (i) Stock Converting Holders by cancelling such Stock Converting Holders' Parent Series A-2 Preferred Shares using a value of such Parent Series A-2 Preferred Shares equal to the Adjusted Parent Stock Price, and (ii) Indemnifying Stockholders that received the Per Share Closing Cash Consideration pursuant to Section 1.5(c) in the form of a cash payment, in each case, in an amount not to exceed each such Indemnifying Stockholder's Indemnity Pro Rata Share of such Losses. Upon such final determination, Parent may cancel and extinguish such Parent Series A-2 Preferred Shares on the stock ledger and books and records of Parent, and upon notice of such cancellation, such Stock Converting Holder shall surrender to Parent such Parent Series A-2 Preferred Shares without any consideration payable therefor.

(d) The per share price to be used to value Parent Series A-2 Preferred Shares in order to determine the amount of Losses deemed to be satisfied by such Parent Series A-2 Preferred Shares (either with respect to Parent Series A-2 Preferred Shares to be cancelled by Parent pursuant to Section 8.2(c) or to be issued to Company Indemnified Parties pursuant to Section 8.3(b)(iii)) (the "Adjusted Parent Stock Price") (i) with respect to any indemnifiable Loss paid and satisfied within one (1) year from the Closing Date and prior to the consummation of a Parent IPO, shall be the Parent Preferred Per Share Price, (ii) with respect to any indemnifiable Loss paid and satisfied from and after the date that is one (1) year from the Closing Date and prior to the consummation of a Parent IPO, the fair market value of the Parent Series A-2 Preferred Shares as determined by an independent third party valuation expert selected by the board of directors of Parent, and (iii) with respect to any indemnifiable Loss paid and satisfied from and after the consummation of a Parent IPO, shall be adjusted to an amount equal to the average closing price of a share of Parent Common Stock on the applicable nationally recognized stock exchange as of the fifteen (15) trading day period ending on the last trading day preceding the date of submission of a Third Party Claim Notice or Notice of Claim, as applicable; provided, that the Adjusted Parent Stock Price shall also be equitably adjusted (without duplication to any other equitable adjustment contemplated by this Agreement) to reflect any conversion of Parent Series A-2 Preferred Shares into shares of Parent Common Stock other than on a one-for-one basis and/or any stock splits or reverse stock splits which occur in connection with such Parent IPO.

(e) Notwithstanding anything in this Agreement to the contrary, but subject to Section 8.2(b), in no event shall any Indemnifying Stockholder have any liability pursuant to this Section 8.2 greater than the amount of consideration actually received by such Indemnifying Stockholder pursuant to Section 1.5 of this Agreement.

8.3 Indemnification by Parent and the Surviving Corporation.

(a) From and after the Closing, Parent and the Surviving Corporation will, jointly and severally, hold harmless and indemnify each Company Stockholder and its Affiliates and each of their respective officers, directors, employees, successors and assigns (collectively, the "Company Stockholder Indemnified Parties" and, together with the Parent Indemnified Parties, the "Indemnified Parties") from and against any and all Losses to the extent arising out of or resulting from:

(i) any breach of or inaccuracy in any representation or warranty made by Parent or Merger Sub pursuant to Article IV or the certificates delivered by Parent and Merger Sub pursuant to Section 6.1(e)(i); or

(ii) any breach of covenant or agreement made by Parent or Merger Sub under this Agreement that was to be performed by Parent or Merger Sub at or prior to the Closing.

(b) Notwithstanding anything to the contrary in this Agreement, the right to indemnification under this Section 8.3 is subject to the following limitations; provided, however, that none of the limitations set forth in this Article VIII shall apply in the case of fraud by or on behalf of Parent or Merger Sub:

(i) Parent and the Surviving Corporation shall not have any obligation to indemnify any Company Stockholder Indemnified Party from and against any Losses arising out of breaches or inaccuracies indemnified under Section 8.3(a)(i) (other than as a result of a breach of or inaccuracy in a Parent Fundamental Representation) until the Company Stockholder Indemnified Parties have suffered aggregate Losses by reason of such breaches or inaccuracies in excess of the Minimum Amount, at which point the full amount of all Losses of the Company Stockholder Indemnified Parties shall be recoverable from the first dollar of Loss. For the avoidance of doubt, the Company Stockholder Indemnified Parties' right to indemnification under Section 8.3(a)(i) as a result of a breach of or inaccuracy in a Parent Fundamental Representation shall not be subject to the Minimum Amount.

(ii) The maximum amount which the Company Stockholder Indemnified Parties may recover arising out of breaches or inaccuracies described in Section 8.3(a)(i) (other than as a result of a breach of or inaccuracy in a Parent Fundamental Representation) shall be the Cap. For the avoidance of doubt, the Company Stockholder Indemnified Parties' right to indemnification under Section 8.3(a)(i) as a result of a breach of or inaccuracy in a Parent Fundamental Representation shall not be subject to the Cap.

(iii) Subject to the other limitations contained herein, Parent and the Surviving Corporation shall have the right (but not the obligation) to satisfy all or any portion of any finally determined claim for indemnification under this Section 8.3 with respect to Stock Converting Holders through the issuance to Stock Converting Holders, a number of additional Parent Series A-2 Preferred Shares equal to the quotient obtained by dividing (1) the applicable

Losses to be satisfied with Parent Series A-2 Preferred Shares by (2) the Adjusted Parent Stock Price, rounded down to the nearest whole number of Parent Series A-2 Preferred Shares, in an amount not to exceed each such Indemnifying Stockholder's Indemnity Pro Rata Share of such finally determined claim for indemnification; provided, that in the event of the consummation of a Parent IPO at any time from and after the Closing Date pursuant to which Parent Series A-2 Preferred Shares are converted into shares of Parent Common Stock, Parent shall be entitled to issue to Stock Converting Holders shares of Parent Common Stock in lieu of such Parent Series A-2 Preferred Shares at the conversion ratio effective as of the consummation of such Parent IPO (to be equitably adjusted (without duplication to any other equitable adjustment contemplated by this Agreement) to reflect any stock splits or reverse stock splits which occur in connection with such Parent IPO).

(c) Notwithstanding anything in this Agreement to the contrary, but subject to Section 8.3(b), in no event shall Parent and the Surviving Corporation have aggregate liability pursuant to this Section 8.3 in excess of $100,000,000.

8.4 Exclusive Remedy. From and after the Closing Date, the Parent Indemnified Parties' and the Company Stockholder Indemnified Parties' sole and exclusive remedy for any claim with respect to the breach of any representation, warranty, covenant or agreement or other express indemnification obligation set forth in this Agreement shall be those remedies set forth in this Article VIII; provided, however, that nothing herein shall preclude any party hereto from (a) enforcing its rights to an injunction or specific performance pursuant to Section 9.14 or (b) seeking any remedy based upon fraud by any other party hereto (including any such fraud committed by any officer, director or employee of Parent, Merger Sub, the Company Stockholders, the Company or any Affiliate thereof in connection with the transactions contemplated by this Agreement) (provided that any claims for fraud may be asserted solely against the Person who allegedly committed such fraud).

8.5 Additional Provisions Regarding Indemnification. Notwithstanding any other provision of this Article VIII, the right to indemnification pursuant to this Article VIII is subject to the following limitations; provided, however, that the following limitations described in clause (a) below shall not apply to Losses arising out of or resulting from fraud:

(a) in no event will any party to this Agreement be liable under this Agreement (for indemnification) to any other party or other Person for diminution in value, lost opportunities, punitive damages or any other damages that are not the reasonably foreseeable consequence of the breach or inaccuracy giving rise to such claim for Losses, except, in each case, where such damages are received by a third party from an Indemnified Party in connection with Losses indemnified hereunder;

(b) the amount of Loss for which any party to this Agreement or other Person may be entitled to seek indemnification under this Agreement will be reduced by the amount of any third-party insurance (and not self-insurance) proceeds or other payment from a third party that is actually received by such party or Person (or its Affiliates) with respect to such Loss (net of any out-of-pocket expenses incurred in obtaining such amounts, any co-payment, retrospective premium adjustment and increased premiums resulting from such Loss as reasonably determined by the Indemnifying Parties and Indemnified Parties ("Reduction Amounts"));

(c) if an Indemnified Party, after having received any indemnification payment pursuant to this Agreement with respect to a Loss, subsequently actually receives any third-party insurance proceeds or other payment from a third party for which it was actually indemnified pursuant to this Article VIII, such Indemnified Party will promptly refund and pay to the Indemnifying Party an amount equal to such insurance proceeds or payment (net of applicable Reduction Amounts);

(d) the right to indemnification or other remedy based on the representations, warranties, covenants, agreements and indemnities contained herein will not be affected by any investigation conducted, or any knowledge acquired (or capable of being acquired) by the party seeking indemnification, at any time, whether before or after the execution and delivery of this Agreement or the Closing Date, with respect to the accuracy or inaccuracy of or compliance with, any representation, warranty, covenant or agreement contained herein or any other matter;

(e) no Indemnified Party shall be entitled to double recovery for any indemnifiable Losses even though such Losses may have resulted from the breach of more than one of the representations, warranties, agreements, or covenants in this Agreement;

(f) no Indemnified Party shall be entitled to indemnification under this Agreement in respect of any Losses to the extent such Losses were specifically taken into account in the calculation of, and reduced the Aggregate Closing Parent Shares, including the calculation of the Unpaid Transaction Expenses and Closing Indebtedness;

(g) the Indemnified Parties shall use such efforts as required by applicable Law to mitigate the amount of any Losses arising from a matter subject to indemnification hereunder; provided, however, that (i) this clause (g) shall not require any Indemnified Party to take any action to recover Losses from any third party; and (ii) the taking of any such action shall not be a condition to indemnification rights hereunder; and

(h) for purposes of determining the amount of any Losses with respect to any claim for indemnification under Section 8.2 or Section 8.3, any qualifiers as to materiality (including Material Adverse Effect or similar terms) contained in an applicable representation and warranty shall be deemed to be deleted and shall be given no force or effect.

8.6 Tax Treatment. Parent, Company Stockholders, Stockholders' Representative and the Company agree to treat (and cause each of their Affiliates to treat) any payment received pursuant to this Article VIII as an adjustment to the consideration paid to Indemnifying Stockholders pursuant to Section 1.5 and Section 1.14 for all Tax purposes, to the maximum extent permitted by applicable Law.

8.7 Indemnification Procedures.

(a) Any party or other Person that has an indemnification obligation under this Article VIII is referred to herein as an "Indemnifying Party" and any party or Person that is entitled to indemnification under this Article VIII is referred to herein as an "Indemnified Party".

(b) Should any claim or Proceeding by or involving a third party (including any Governmental Authority) not party to this Agreement (or an Affiliate thereof) arise after the Closing Date for which an Indemnifying Party has an indemnification obligation under the terms of this Agreement (a "Third-Party Claim"), the Indemnified Party shall notify the Indemnifying Party in writing (a "Third-Party Claim Notice") prior to the expiration of the applicable survival date provided in Section 8.1 and within a reasonable time after such Third-Party Claim or Proceeding arises and is known to the Indemnified Party; provided, however, that no delay on the part of the Indemnified Party to provide the Indemnifying Party a Third-Party Claim Notice shall relieve the Indemnifying Party from any obligation hereunder unless (and then solely to the extent) the Indemnifying Party is actually prejudiced as a result thereof.

(c) After receipt of a Third-Party Claim Notice from Parent or the Stockholders' Representative, as applicable, the other party shall be entitled, at its own cost and expense, to consult with the party who has delivered such Third-Party Claim Notice in any defense of such claim, it being understood that the party who delivered such Third-Party Claim Notice shall have the sole right to control such defense; provided, however, that the Indemnifying Parties and the Indemnified Parties shall cooperate in good faith to implement reasonable arrangements designed to preserve any existing attorney-client privilege; provided, further, that each party shall be entitled to withhold information from the other party if its provision would cause the attorney-client privilege thereof to be waived.

(d) No settlement of any Third-Party Claim without the consent (which shall not be unreasonably withheld, conditioned or delayed) of Parent or the Stockholders' Representative, as applicable, shall be dispositive of whether such Third-Party Claim represented an indemnifiable matter hereunder or determinative of the existence or amount of Losses relating to such matter for which any Indemnified Party shall be entitled to indemnification hereunder. In the event that Parent or the Stockholders' Representative, as applicable, has consented to any such settlement, however, the applicable Indemnifying Parties shall have no power or authority to object to such Third-Party Claim and the payment of Losses in respect thereof.

(e) Any claim on account of Losses for which indemnification is provided under this Agreement which does not involve a Third-Party Claim shall be asserted by reasonably prompt written notice (a "Notice of Claim") prior to the expiration of the applicable survival date provided in Section 8.1, stating, in reasonable detail, and to the extent known, the nature and basis of such claim and a good faith, non-binding, preliminary estimate of the aggregate dollar amount of actual Losses that have arisen and are expected to arise as a result of such breach or other matter as set forth on such Notice of Claim, given by the Indemnified Party to the Indemnifying Party; provided, however, that no delay on the part of the Indemnified Party in notifying the Indemnifying Party shall relieve the Indemnifying Party from any obligation hereunder unless (and then solely to the extent) the Indemnifying Party is actually prejudiced as a result thereof.

(f) Upon receipt of a Notice of Claim, the Indemnifying Party and the Indemnified Party shall consult with each other in an attempt to agree upon the matters set forth in the Notice of Claim and reach a written agreement with respect to such matters (a "Claim Settlement Agreement"). If the Indemnifying Party and the Indemnified Party fail to agree upon the matters contained in such Notice of Claim within thirty (30) days after the date the Notice of

Claim is delivered to the Indemnified Party, then, at the request of any party, the Indemnifying Party and the Indemnified Party shall meet in an attempt to resolve the objection described in such Notice of Claim and reach a Claim Settlement Agreement. If the Indemnifying Party and the Indemnified Party enter into a Claim Settlement Agreement, the objections contained in such Notice of Claim shall be deemed to be as resolved as provided therein. If the Indemnifying Party and the Indemnified Party are unable to resolve the objection described in such Notice of Claim within sixty (60) days after delivery by the Indemnified Party of such Notice of Claim, then either party may submit the objections contained in such Notice of Claim for resolution in a Proceeding commenced as contemplated by Section 9.12.

8.8 Exercise of Remedies. No Indemnified Party, other than Parent (on behalf of the Parent Indemnified Parties) or the Stockholders' Representative (on behalf of the Company Stockholders) shall be permitted to assert any indemnification claim or exercise any other right or remedy under this Agreement unless Parent or the Stockholders' Representative, as applicable, shall have consented to the assertion of such indemnification claim or the exercise of such right or other remedy.

8.9 Non-Reliance.

(a) Except for the representations and warranties set forth in Article III and in any certificate, instrument or other document delivered by or on behalf of the Company pursuant to this Agreement (including the Accredited Investor Certification and Letter of Transmittal), Parent and Merger Sub acknowledge and agree that (i) neither the Company nor any other Person acting on behalf of the Company has made or is making any express or implied representation or warranty with respect to the Company, the business, operation, condition (financial or otherwise) or any other aspect thereof, or with respect to any other information provided to Parent, Merger Sub or any of their Affiliates or Representatives and (ii) any other representations or warranties are expressly disclaimed by the Company, (iii) Parent and Merger Sub, and any Person acting on behalf of Parent or Merger Sub, are not entitled to rely on any such representation or warranty, if made, and (iv) Parent or Merger Sub, and any Person acting on behalf of Parent or Merger Sub, have not, are not and will not rely on any such representation or warranty, if made.

(b) Except for the representations and warranties set forth in Article IV and in any certificate, instrument or other document delivered by or on behalf of Parent or Merger Sub pursuant to this Agreement, the Company and the Company Stockholders acknowledge and agree that (i) none of Parent, Merger Sub or any Person acting on behalf of Parent or Merger Sub has made or is making any express or implied representation or warranty with respect to Parent or Merger Sub, including the business, operation, condition (financial or otherwise) or any other aspect thereof, or with respect to any other information provided to the Company or the Company Stockholders, including the Affiliates or Representatives thereof, (ii) any other representations or warranties are expressly disclaimed by Parent and Merger Sub, (iii) none of the Company, the Company Stockholders or any Person acting on behalf of the Company or any Company Stockholder, are entitled to rely on any such representation or warranty, if made, and (iv) none of the Company, the Company Stockholders or any Person acting on behalf of the Company or any Company Stockholder, has, is or will rely on any such representation or warranty, if made.

(c) Each of the Company, on the one hand, and Parent and Merger Sub, on the other hand, represents that such party has entered into this Agreement without reliance upon any representations, statement, documents or information other than those contained within this Agreement (including the Accredited Investor Certification and Letters of Transmittal) and the corresponding disclosure schedules.

ARTICLE IX.
MISCELLANEOUS

9.1 Defined Terms. As used herein, the terms below shall have the following meanings. Any such term, unless the context otherwise requires, may be used in the singular or plural, depending upon the reference.

"Accredited Investor" means a Person that is, as of the Effective Time, an "accredited investor" within the meaning of SEC Rule 501 of Regulation D, as presently in effect, under the Securities Act.

"Acquisition Proposal" means, other than the transactions contemplated by this Agreement, any offer or proposal for or indication of interest in (a) the sale, license, disposition or acquisition of all or a material portion of the business or assets of the Company, (b) the issuance, disposition or acquisition of (i) any capital stock or other equity security of the Company, (ii) any subscription, option, call, warrant, preemptive right, right of first refusal or any other right (whether or not exercisable) to acquire any capital stock or other equity security of the Company, or (iii) any security, instrument or obligation that is or may become convertible into or exchangeable for any capital stock or other equity security of the Company or (c) any merger, consolidation, business combination, reorganization or similar transaction involving the Company.

"Action" means any action, complaint, claim, suit, litigation, Proceeding, labor dispute, arbitral action, governmental audit, inquiry, criminal prosecution, civil or criminal investigation or unfair labor practice charge or complaint.

"Affiliate" means, when used with reference to any specified Person, any other Person directly or indirectly controlling, controlled by, or under direct or indirect common control with, such specified Person. For purposes of this definition, "control," when used with respect to any specified Person, means the power to direct or cause the direction of management or policies of such Person, directly or indirectly, whether through the ownership of voting securities, by contract or otherwise.

"Aggregate Closing Parent Shares" means (a) 100,000,000 shares of Parent capital stock, which shall be split between Parent Series A-2 Preferred Shares and shares of Parent Common Stock at the Closing based on the number of such shares to be issued pursuant to Section 1.5 (as reflected in the Consideration Schedule delivered pursuant to Section 2.2(c)), less (b) that number of Parent Series A-2 Preferred Shares and shares of Parent Common Stock (in proportion to the number of such shares pursuant to clause (a) whose aggregate value is equal to the amount of all Unpaid Transaction Expenses plus all unpaid Closing Indebtedness; provided, to the extent such resulting number of Parent Series A-2 Preferred Shares includes any fractional share, such amount shall be rounded down to the nearest whole number of Parent Series A-2 Preferred Shares.

"BLA" means a biologics license application, as described in the Code of Federal Regulations Title 21 (21 C.F.R.) § 601, submitted to the FDA under Section 351 of the Public Health Service Act for licensure to market and commercialize a biological product in the United States.

"BLA Approval" means receipt of a biologics license from the FDA to market a biological product in the United States pursuant to 21 C.F.R. § 601.20.

"Business Day" means a day other than Saturday, Sunday or any day on which banks located in the State of California are authorized or obligated to close.

"Change of Control" means (A) an event or series of events by which any third party "person" or "group" (as such terms are used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, but excluding any (x) employee benefit plan of such person or its subsidiaries, and any person or entity acting in its capacity as trustee, agent or other fiduciary or administrator of any such plan or (y) any person or group affiliated with any equity holder of Parent or the Surviving Corporation as of immediately following the Effective Time) becomes the "beneficial owner" (as defined in Rules 13d-3 and 13d-5 under the Securities Exchange Act of 1934, except that a person or group shall be deemed to have "beneficial ownership" of all securities that such person or group has the immediate right to acquire (such right, an "Option Right")), directly or indirectly, of more than seventy percent (70%) the equity securities of Parent entitled to vote for members of the board of directors or equivalent governing body of Parent (as applicable) on a fully-diluted basis (and taking into account all such securities that such person or group has the right to acquire pursuant to any Option Right); (B) any merger, business combination, consolidation, recapitalization, tender or exchange offer or other similar transaction whereby the stockholders of Parent (together with their Affiliates) as of immediately prior to such transaction do not own at least seventy percent (70%) of the outstanding capital stock of Parent immediately following such transaction; or (C) any sale of assets or business of Parent or the Surviving Corporation that constitutes at least eighty-five percent (85%) of the total revenue, net income, EBITDA or assets of Parent, taken as a whole.

"Closing Cash" means all cash and cash equivalents held by the Company as of immediately prior to the Effective Time; provided, however, that "cash" shall (a) be calculated net of issued but uncleared checks, wire transfers and drafts written or issued by the Company, (b) include all uncleared checks, wire transfers and drafts deposited or pending deposit for the account of the Company and (c) not include any cash, cash equivalents, bank deposits or marketable securities that are restricted or "trapped" because of legal, contractual of Tax-related restrictions or impediments.

"Closing Indebtedness" means all Indebtedness of the Company as of immediately prior to the Effective Time other than indebtedness owed under the Square 1 Facility represented by the Credit Facility Repayment Shortfall Amount.

"Commercially Reasonable Efforts" means, with respect to the efforts to be expended by Parent and the Parent Parties with respect to the Milestones, reasonable, diligent, good faith efforts and resources to accomplish any such Milestones as is commonly dedicated in the pharmaceutical industry by a biopharmaceutical company for a product of similar commercial potential at a similar stage in its lifecycle to any Company Product, in each case taking into account all relevant factors, including issues of safety and efficacy, product profile, the proprietary position, the then current competitive environment and the likely timing of market entry, the regulatory environment and status of such product, and other relevant scientific, technical and commercial factors, but without regard to any Milestone Payments that may be owed under this Agreement and without reference to any other products owned, in-licensed or otherwise controlled by Parent or any Parent Party.

"Company Capital Stock" means Company Common Stock and Company Preferred Stock.

"Company Common Stock" means the Company's Common Stock, $0.001 par value per share.

"Company Covered Person" means, with respect to the Company as an "issuer" for purposes of Rule 506 promulgated under the Securities Act, any Person listed in the first paragraph of Rule 506(d)(1).

"Company Disclosure Schedule" means a schedule executed and delivered by the Company to Parent and Merger Sub as of the date hereof which sets forth the exceptions to the representations and warranties contained in Article III hereof and certain other information called for by this Agreement. Unless otherwise specified, each reference in this Agreement to any numbered schedule is a reference to that numbered schedule which is included in the Company Disclosure Schedule.

"Company Fundamental Representations" means the representations and warranties of the Company contained in Section 3.1 (Organization), Section 3.2 (Authorization), Section 3.5 (Capitalization), and Section 3.26 (No Brokers).

"Company Intellectual Property" means all Intellectual Property that is owned or licensed to the Company.

"Company Investor Agreements" means the Investors' Rights Agreement, dated as of May 12, 2017, by and among the Company (f/k/a VL39, Inc.) and the other parties listed therein; the Voting Agreement, dated as of May 12, 2017, by and among the Company (f/k/a VL39, Inc.) and the other parties listed therein; the Right of First Refusal and Co-Sale Agreement, dated as of May 12, 2017, by and among the Company (f/k/a VL39, Inc.) and the other parties listed therein; the Management Rights Letter, dated May 12, 2017, between the Company, Flagship Ventures Fund V, L.P. and Flagship V VentureLabs Rx Fund, L.P.; and the Management Rights Letter, dated August 7, 2018, between the Company and Flagship Pioneering Fund VI, L.P.

"Company Option" means an option entitling the holder thereof to acquire shares of Company Common Stock from the Company, whether under the Company Plan or otherwise.

"Company Plan" means the 2017 Equity Incentive Plan, as amended.

"Company Preferred Stock" means the Company's Preferred Stock, $0.001 par value per share.

"Company Product" means an in vivo Fusogenic therapeutic product candidate.

"Company Registered Intellectual Property" means all applications, registrations and filings for Intellectual Property that have been registered, filed, certified or otherwise perfected or recorded or are the subject of a pending application for such, with or by any Governmental Authority or the Internet domain name registrar, by or on behalf of or in the name of the Company (including all Internet domain names).

"Company Restricted Shares" means any shares of Company Common Stock granted under the Company Plan or otherwise that, as of immediately prior to the Effective Time, is subject to a risk of forfeiture, a right of first refusal, transfer restrictions or a right of repurchase at the original purchase price thereof.

"Company Securityholders" means Company Stockholders and any holder of Company Options or Company Warrants, in each case as of immediately prior to the Effective Time.

"Company Stockholders" means any holder of Company Capital Stock immediately prior to the Effective Time.

"Company Warrant" means a warrant entitling the holder thereof to acquire shares of Company Preferred Stock from the Company.

"Consent" means any approval, consent, ratification, permission, extension, waiver or authorization.

"Contingent Allocation" means, with respect to any Milestone Payment Recipient, the product of (i) such Milestone Payment Recipient's Pro Rata Share and (ii) such Milestone Payment, provided, that, for the purposes of determining a Milestone Payment Recipient's Contingent Allocation, as of immediately prior to the date of the relevant Milestone, the Milestone Payment Recipient's Pro Rata Share shall be equitably adjusted to take into account any forfeitures under the Carveout Plan or in respect of Parent RSUs prior to the achievement of such Milestone.

"Contract" means any contract, agreement, indenture, note, bond, loan, license, instrument, lease, commitment, plan or other arrangement, in each case, purporting to be legally binding, whether oral or written.

"Credit Facility Repayment Shortfall Amount" means an amount equal to (a) the total amount due (including principal and interest) to fully repay and discharge the Square 1 Facility at Closing, less (b) the amount of unrestricted cash of the Company on the Closing Date, less (c) the amount of any Transaction Expenses paid by the Company after the date of this Agreement (other than any expenses of legal counsel to the extent incurred in connection with the negotiation, preparation and execution of an Alternative Merger Agreement described in Section 1.13).

"EMA" means the European Medicines Agency and any successor entity.

"Encumbrance" means any claim, lien, pledge, option, charge, community property interest, equitable interest, right of first refusal or restriction of any kind, easement, security interest, deed of trust, mortgage, pledge, hypothecation, right-of-way, encroachment, building or use restriction, conditional sales agreement, encumbrance or other right of third parties, whether voluntarily incurred or arising by operation of law, and includes any agreement to give any of the foregoing in the future, and any contingent sale or other title retention agreement or lease in the nature thereof.

"Environmental Laws" means any applicable Law, regulation, or other applicable requirement relating to (a) releases or threatened release of Hazardous Substance; (b) pollution or protection of employee health or safety, public health or the environment; or (c) the manufacture, handling, transport, use, treatment, storage, or disposal of Hazardous Substances.

"ERISA" means the Employee Retirement Income Security Act of 1974, as amended, and the regulations promulgated thereunder.

"ERISA Affiliate" of any entity means any other entity (whether or not incorporated) that, together with such entity, would be treated as a "single employer" within the meaning of Section 414 of the Code.

"Expert" means any person (a) with at least ten (10) years of applicable pharmaceutical industry experience for products similar to the Company Products, (b) who has not worked for or been engaged by either party to this Agreement or its Affiliates in the three (3) year period immediately prior to selection of the Expert, and (c) who does not own equity or debt in either party to this Agreement or its Affiliates (other than equity or debt owned through a broad-based mutual fund or exchange traded fund).

"FDA" means the United States Food and Drug Administration and any successor entity.

"First Milestone" means the achievement of preclinical evidence of successful in vivo intracellular delivery in a mouse or other animal model with a Fusogenic composition.

"First Milestone Payment" means $50.0 million.

"Flagship IP License" means the License Agreement between Flagship Pioneering Innovations V, Inc. and the Company (f/k/a VL39, Inc.), dated February 17, 2016, as amended.

"Flagship Managerial Agreement" means the Managerial Agreement between the Company (f/k/a VL39, Inc.) and Flagship Ventures Management, Inc., dated as of February 17, 2016, as amended.

"Fully Diluted Common Shares" means the aggregate number of shares of Company Common Stock represented by, without duplication, (a) all shares of Company Capital Stock issued and outstanding as of immediately prior to the Effective Time, on an as-converted-to-Company Common Stock basis (as applicable), (b) all shares of Company Capital Stock issuable upon exercise of Company Options, whether vested or unvested, as of immediately prior to the Effective Time without giving effect to any termination thereof under Section 1.6 and (c) any other direct or indirect rights to acquire shares of Company Capital Stock that are outstanding as of immediately prior to the Effective Time (including shares issuable upon the exercise of Company Warrants), on an as-exercised and as-converted-to-Company Common Stock basis (as applicable).

"Fusogenic" means a product or product candidate that includes: (a) a lipid bilayer membrane with an associated lumen (including cells, cell-derived vesicles, enveloped viruses or virus-like structures, and synthetic lipid vesicles); and (b) a polypeptide or polypeptide complex associated with such lipid bilayer membrane where such polypeptide or polypeptide complex enables fusion with, or creates a channel between, such lipid bilayer membrane and a cellular membrane, enabling transfer of a payload to or across such cellular membrane.

"GAAP" means United States generally accepted accounting principles.

"Governmental Authority" means any United States, foreign, supra-national, federal, state, provincial, local or self-regulatory governmental, regulatory or administrative authority, agency, division, body, organization or commission or any judicial or arbitral body.

"IND" means an Investigational New Drug Application, as defined in 21 C.F.R. § 312.3, clinical trial application or similar application or submission for approval to conduct human clinical investigations filed with or submitted to a Regulatory Authority anywhere in the world in conformance with the requirement of such Regulatory Authority, and any amendments thereto.

"IND Milestone" means the acceptance (wherein "acceptance" means that a clinical study in humans may be initiated based on such IND) of an IND for a Company Product by a Regulatory Authority in any country in the world.

"Indebtedness" means, without duplication, (a) all obligations for borrowed money or extensions of credit (including under credit cards, bank overdrafts, and advances), (b) all obligations evidenced by bonds, debentures, notes, or other similar instruments, (c) all obligations to pay the deferred purchase price of property or services, except trade accounts payable arising in the ordinary course of business, (d) all obligations of others secured by an Encumbrance on any asset of such Person, (e) all obligations, contingent or otherwise, directly or indirectly guaranteeing any obligations of any other Person, (f) all obligations to reimburse the issuer in respect of letters of credit or under performance or surety bonds, or other similar obligations, (g) all obligations in respect of bankers' acceptances and under reverse repurchase agreements, (h) any unpaid Taxes of the Company with respect to any Pre-Closing Tax Period and (i) all obligations for interest, penalties, fees and premiums, expenses and breakage costs related to any of the foregoing.

"Indemnified Taxes" means any and all Losses attributable to (i) any Taxes of the Company for all Pre-Closing Tax Periods (allocated, with respect to a Straddle Period, in accordance with the last sentence of this definition); (ii) any Taxes of any Person (other than the Company) for which the Company may become liable as a transferee or successor, by Contract or by reason of having been a member of any combined, consolidated, affiliated, unitary or similar group for Tax purposes, by reason of a state or transaction existing or occurring prior to the Closing; (iii) Transfer Taxes borne by Company Stockholders pursuant to Section 5.7(d); and (iv) any withholding Taxes imposed with respect to payments made at the Closing pursuant to this Agreement. The portion of any Tax that relates to the portion of any Straddle Period ending on the Closing Date shall (a) in the case of real property, personal property and similar *ad valorem* Taxes be deemed to be the amount of such Tax for the entire Straddle Period multiplied by a fraction (i) the numerator of which is the number of days in the Straddle Period ending on the Closing Date and (ii) the denominator of which is the number of days in the entire Straddle Period and (b) in the case of any other Tax, be deemed equal to the amount which would be payable if the relevant Straddle Period ended on the Closing Date.

"Indemnifying Stockholder" means any Company Stockholder other than any holder of Company Restricted Shares.

"Indemnity Pro Rata Share" means, with respect to any Indemnifying Stockholder, the quotient (expressed as a percentage) obtained by dividing (a) the number of shares of Company Common Stock represented by all shares of Company Capital Stock (including any shares issuable upon the exercise of Company Warrants) held by such Indemnifying Stockholder as of immediately prior to the Effective Time, on an as-converted-to-Company Common Stock basis (as applicable), by (b) the number of Fully Diluted Common Shares (excluding for purposes of this calculation, all shares of Company Capital Stock issuable upon exercise of Company Options, whether vested or unvested, as of immediately prior to the Effective Time and all Company Restricted Shares).

"Intellectual Property" means patents, patent applications, trademarks, trademark applications, service marks, service mark applications, tradenames, copyrights, trade secrets, domain names, mask works, information and proprietary rights and processes, similar or other intellectual property rights, subject matter of any of the foregoing, tangible embodiments of any of the foregoing, and licenses in, to and under any of the foregoing.

"Japan Regulatory Milestone" means receipt of a Regulatory Approval of Drug (*seizo hanbai shonin*) by the Japanese Minister of Health, Labor and Welfare ("MHLW") or the Japanese Pharmaceuticals and Medical Devices Agency ("PMDA"), in each case, or any successor entity thereto, for a Company Product.

"Knowledge" means (a) with respect to the Company, the actual knowledge of Geoffrey von Maltzahn, Neal Gordon, Ryan McQuade and Jack Milwid, and (b) with respect to Parent, the actual knowledge of Steve Harr, Nathan Hardy and Jim MacDonald.

"Law" means any federal, state, local or foreign law, statute, ordinance, code, decree, treaty, rule, rule of common law, policy, directive or regulation or Order of any Governmental Authority and all other provisions having the force or effect of law.

"Liabilities" means all debts, liabilities, commitments and obligations, whether accrued or fixed, absolute or contingent, matured or unmatured, determined or determinable, liquidated or unliquidated, asserted or unasserted, known or unknown, whenever or however arising, including those arising under applicable Law or any Proceeding or order of a Governmental Authority and those arising under any Contract, regardless of whether such debt, liability, commitment or obligation would be required to be reflected on a balance sheet prepared in accordance with GAAP or disclosed in the notes thereto.

"Losses" means any and all losses, damages, liabilities, reasonable, out-of-pocket costs and expenses (including reasonable out-of-pocket attorneys' or accountants' fees and reasonable out-of-pocket expenses incurred in investigating, preparing for, defending, avoiding or settling any Proceeding in accordance with Article VIII), assessments, deficiencies, fines, penalties, reasonable, or out-of-pocket payments (including those arising out of settlement, judgment or compromise relating to any Proceeding in accordance with Article VIII).

"MAA Approval" means receipt of a decision from the European Commission following a favorable opinion by the EMA granting a marketing authorization for a Company Product.

"Material Adverse Effect" means with respect to any Person, any fact, event, change, development, circumstance or effect that is or would be, with the passage of time, reasonably expected to be materially adverse to the business, assets (including intangible assets), liabilities, financial condition, property or results of operations of such Person; provided, however, that in no event shall any of the following be deemed, either alone or in combination, to constitute, nor shall any of the following be taken into account in determining whether there has been, a Material Adverse Effect (unless, in the case of clauses (i) through (iii) and (v) below, they have a disproportionate effect on the Company or Parent, as applicable, as compared to any of the other companies in the industry in which the Company or Parent, as applicable, operate, in which case, only the extent of such disproportionate effect shall be taken into account when determining whether there has been a Material Adverse Effect): (i) changes in general economic conditions or financial markets, (ii) changes affecting the Company's or Parent's, as applicable industry generally, (iii) changes in national or international political or social conditions, including acts of war or terrorism, and natural disasters or other acts of God, (iv) any failure by the Company or Parent, as applicable, to meet any projections, budgets or estimates of revenue or earnings (it being understood that the facts giving rise to such failure may be taken into account in determining whether there has been a Material Adverse Effect (except to the extent such facts are otherwise excluded from being taken into account by this proviso)), and (v) changes in Law or GAAP occurring after the date hereof, but including any with retroactive effect.

"Milestone" or "Milestones" means the First Milestone and the Additional Milestone Trigger Events (individually and in the aggregate, respectively).

"Milestone Payment Recipients" means the holders of Company Capital Stock (including any Company Warrants to the extent exercised prior to the payment of the applicable Additional Milestone Payment but excluding the holders of any Company Restricted Shares) as of immediately prior to the Closing (other than the holders of Dissenting Shares), participants in the Carveout Plan and holders of Parent RSUs.

"Milestone Payments" means the First Milestone Payment and the Additional Milestone Payments.

"Milestone Stock Consideration" means shares of Parent capital stock of the same type and series of capital stock that was issued to institutional investors in Parent's most recent bona fide arms' length equity financing transaction occurring prior to the applicable Additional Milestone Trigger Event, at the applicable price per share paid by such institutional investors in such equity financing ("Milestone Stock"); provided that if the Milestone Stock includes "pay to play" or other similar forced conversion provisions that have a punitive impact on stockholders that do not participate in a future funding round ("Punitive Provisions"), Parent will take all actions necessary to create and issue as the Milestone Stock Consideration a "shadow" series of capital stock that mirrors the Milestone Stock in all aspects but does not include the Punitive Provisions; provided, further, that, if Parent has not yet issued any Parent Series B Preferred Stock prior to the occurrence of an Additional Milestone Trigger Event, Parent Series B Preferred Stock (on terms, including price per share, consistent with those set forth in the Parent Series A-2/B Purchase Agreement) may be issued by Parent in satisfaction of the applicable Additional Milestone Payment; provided, further, that if any Additional Milestone Trigger Event occurs after a Parent IPO, Parent may satisfy the applicable Additional Milestone Payment in the form of shares of Parent Common Stock valued as follows: (i) for an Additional Milestone Trigger Event other than the Qualifying Valuation Milestone, using a per share volume weighted average price in respect of period from the scheduled opening of trading until the scheduled close of trading of the primary trading session for the preceding five (5) consecutive trading days ending on the date of achievement of the applicable Additional Milestone Trigger Event; and (ii) for the Qualifying Valuation Milestone, using the Volume Weighted Average Price that triggered achievement of the Qualifying Valuation Milestone.

"NDA" means a new drug approval application as described in 21 C.F.R. § 314.50, submitted to the FDA under Section 505(b) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. § 355(b)) for approval to market and commercialize a drug product in the United States.

"NDA Approval" means receipt of a written letter of approval by the FDA of an NDA pursuant to 21 C.F.R. § 314.105.

"Order" means judgments, writs, decrees, directives, rulings, compliance agreements, injunctions, awards, assessments, writs, stipulations, determination of awards, settlement agreements or orders of any Governmental Authority or arbitrator.

"Organizational Documents" means (a) the articles or certificate of incorporation, all certificates of determination and designation, and the bylaws of a corporation; (b) the partnership agreement and any statement of partnership of a general partnership; (c) the limited partnership agreement and the certificate or articles of limited partnership of a limited partnership; (d) the operating agreement, limited liability company agreement and the certificate or articles of organization or formation of a limited liability company; (e) any charter or similar document adopted or filed in connection with the creation, formation or organization of any other Person; and (f) any amendment to any of the foregoing.

"Parent A-1 Investor Agreements" means the (i) Investors' Rights Agreement, dated as of October 2, 2018, by and among Parent and the Persons listed on Schedule A attached thereto, (the "Parent IRA"), (ii) Voting Agreement, dated as of October 2, 2018, by and among Parent and the Persons listed on Schedule A and Schedule B attached thereto (the "Parent Voting Agreement"), and (iii) Right of First Refusal and Co-Sale Agreement, dated as of October 2, 2018, by and among Parent and the Persons listed on Schedule A and Schedule B attached thereto.

"Parent A-2/B Investor Agreements" means the (i) Amended & Restated Investors' Rights Agreement, substantially in the form set forth in Exhibit M (the "A&R Parent IRA") (ii) Amended & Restated Voting Agreement, substantially in the form set forth in Exhibit N (the "A&R Parent Voting Agreement"), and (iii) Amended & Restated Right of First Refusal and Co-Sale Agreement, substantially in the form set forth in Exhibit O.

"Parent Capital Stock" means the Parent Common Stock and Parent Series A-1 Preferred Stock.

"Parent Common Stock" means the Common Stock of Parent, par value $0.0001 per share.

"Parent Covered Person" means, with respect to Parent as an "issuer" for purposes of Rule 506 promulgated under the Securities Act, any Person listed in the first paragraph of Rule 506(d)(1).

"Parent Disclosure Schedule" means a schedule executed and delivered by Parent to the Company as of the date hereof which sets forth the exceptions to the representations and warranties contained in Article IV hereof and certain other information called for by this Agreement. Unless otherwise specified, each reference in this Agreement to any numbered schedule is a reference to that numbered schedule which is included in the Parent Disclosure Schedule.

"Parent Fundamental Representations" means the representations and warranties of Parent and Merger Sub contained in Section 4.1 (Organization), Section 4.2 (Authorization), Section 4.6 (Capitalization), and Section 4.23 (No Brokers).

"Parent Intellectual Property" means all Intellectual Property that is owned or licensed to Parent.

"Parent IPO" means the initial firm commitment underwritten public offering of Parent Common Stock registered with the SEC pursuant to an effective registration statement under the Securities Act that results in Parent Common Stock being listed for trading on a nationally recognized stock exchange.

"Parent Parties" means Parent and its Affiliates (including after the Closing, the Surviving Corporation), and any licensees or sublicensees of any Company Products.

"Parent Plan" means Parent's 2018 Equity Incentive Plan, as amended.

"Parent Preferred Per Share Price" means $1.00.

"Parent Registered Intellectual Property" means all applications, registrations and filings for Intellectual Property that have been registered, filed, certified or otherwise perfected or recorded or are the subject of a pending application for such, with or by any Governmental Authority or the Internet domain name registrar, by or on behalf of or in the name of the Parent (including all Internet domain names).

"Parent Restated Certificate" means the Amended and Restated Certificate of Incorporation of Parent in the form of Exhibit P attached hereto.

"Parent Series A-1 Preferred Stock" means the Series A-1 Preferred Stock of Parent, par value $0.0001 per share.

"Parent Series A-2 Investors" means the Investors in the Series A-2 Financing as such term is defined in the Parent Series A-2/B Purchase Agreement.

"Parent Series A-2 Preferred Shares" means the shares of Parent Series A-2 Preferred Stock.

"Parent Series A-2 Preferred Stock" means the Series A-2 Preferred Stock of Parent, par value $0.0001 per share.

"Parent Series B Preferred Stock" means the Series B Preferred Stock of Parent, par value $0.0001 per share.

"Per Share Closing Cash Consideration" means an amount of cash equal to the product obtained by multiplying (a) the Preferred Exchange Ratio by (b) the Parent Preferred Per Share Price.

"Per Share Closing Consideration" means the Per Share Closing Cash Consideration and the Preferred Per Share Closing Consideration, as applicable.

"Permits" means all licenses, permits, franchises, approvals, authorizations, certificates, exemptions, or consents from any Governmental Authority, whether foreign, federal, state or local.

"Permitted Encumbrances" means (a) any restriction on transfer arising under applicable securities laws; (b) Encumbrances for current Taxes not yet due and payable or being contested in good faith for which adequate reserves have been established in accordance with GAAP; (c) mechanics', carriers', workers', repairers' and similar Encumbrances arising or incurred in the ordinary course of business that are not yet due and payable and which are not, individually or in the aggregate, material to the business, operations and financial condition of the assets so encumbered of the Company or Parent, as applicable; and (d) zoning laws and other land use restrictions that do not, individually or in the aggregate, materially impair the present or anticipated use or occupancy of the property subject thereto.

"Person" means any individual, corporation (including any non-profit corporation), general or limited partnership, limited liability company, joint venture, estate, trust, association, organization, labor union, or other entity or governmental body.

"Personal Information" means any information relating to an identified or identifiable natural person; an "identifiable person" is one who can be identified, directly or indirectly, in particular by reference to an identification number or to one or more factors specific to his physical, physiological, mental, economic, cultural or social identity, including unique device or browser identifiers, names, ages, addresses, telephone numbers, email addresses, social security numbers, passport numbers, alien registration numbers, medical history, employment history, and/or account information; and shall also mean "personal information," "personal health information" and "personal financial information" each as defined by applicable Laws relating to the collection, use, sharing, handling, storage, retention, destruction, and/or disclosure of information about an identifiable individual.

"Pivotal Trial Milestone" means the enrollment of the first patient in a pivotal clinical trial designed to, or does, obtain statistically significant evidence of safety and efficacy as required to support a Regulatory Milestone or the Japan Regulatory Milestone.

"Pre-Closing Tax Period" any taxable period that ends on or prior to Closing, including the pre-closing portion of any Straddle Period.

"Preferred Exchange Ratio" means the quotient obtained by dividing (a) the Aggregate Closing Parent Shares by (b) the Fully Diluted Common Shares.

"Preferred Per Share Closing Consideration" means a number of Parent Series A-2 Preferred Shares equal to the Preferred Exchange Ratio.

"Pricing Approval" means any governmental approval, agreement, determination, or decision establishing the prices for a product that can be charged or reimbursed in regulatory jurisdictions where the applicable Governmental Authorities negotiate, approve, or determine the price or reimbursement of pharmaceutical products.

"Pro Rata Share" means, with respect to any Company Securityholder, the quotient (expressed as a percentage) obtained by dividing (a) the number of shares of Company Common Stock represented by all shares of Company Capital Stock (including any shares issuable upon the exercise of Company Warrants and all shares of Company Capital Stock issuable upon exercise of Company Options, whether vested or unvested, as of immediately prior to the Effective Time without giving effect to any termination thereof under Section 1.6) held by such Company Stockholder as of immediately prior to the Effective Time, on an as-converted-to-Company Common Stock basis (as applicable), by (b) the number of Fully Diluted Common Shares.

"Proceeding" means any claim, action, suit, Order, hearing, notice, demand letter, request for information by a Governmental Authority, litigation, demand, directive, inquiry or investigation by, before or otherwise involving any Governmental Authority, or any legal, administrative or arbitration proceeding, whether civil, criminal or administrative.

"Qualifying Valuation Event" means, at any time prior to the twentieth (20th) anniversary of the Closing Date, (i) the closing of either (x) an arms' length equity financing transaction of Parent by institutional investors or (y) the consummation of a Parent IPO, in each case, at a price per share that implies a pre-money valuation of Parent of at least $8.462 billion (which is calculated based on the assumed sale of shares of Parent Series A-2 Preferred Stock and

Parent Series B Preferred Stock for aggregate proceeds of $800 million) or, if lesser, a price per share that implies a pre-money valuation of Parent at least three (3) times the post-money valuation of Parent implied by the sale of Parent Series B Preferred Stock; or (ii) following a Parent IPO, a Volume Weighted Average Price that implies a valuation of Parent of at least $8.462 billion or, if lesser, a Volume Weighted Average Price that implies a valuation of Parent of at least three (3) times the post-money valuation of Parent implied by the sale of Parent Series B Preferred Stock.

"Qualifying Valuation Milestone" means the occurrence of a Qualifying Valuation Event at a time when at least one Company Product is (i) the subject of an ongoing clinical trial being conducted pursuant to an active IND; (ii) has completed clinical trials under an active IND and in the process of filing for, or has filed, an NDA or a BLA for a Company Product or (iii) has received Regulatory Approval.

"QVM Valuation" means $2.82 billion (which is calculated based on the assumed sale of shares of Parent Series A-2 Preferred Stock and Parent Series B Preferred Stock for aggregate proceeds of $800 million) or, if lesser, the post-money valuation of Parent implied by the sale of Parent Series B Preferred Stock.

"Regulatory Approval" means, with respect to any country or extra-national territory, any approval, license, certificate, clearance, exemption, registration or authorization of a Regulatory Authority necessary in order to commercially distribute, sell or market a pharmaceutical product in such country or some or all of such extra-national territory, but excluding Pricing Approvals. For the avoidance of doubt, Regulatory Approval received in the US in an expedited manner or in the EU in a conditional manner, in each case, is a Regulatory Approval for purposes of this definition.

"Regulatory Authority" means, in a particular country or jurisdiction, any applicable Governmental Authority involved in the granting of Regulatory Approval or otherwise involved in regulating the research, development, manufacture or commercialization of a pharmaceutical product, including, without limitation, (a) in the United States, the FDA, (b) in Europe, the EMA and (c) in Japan, the MHLW or PMDA, as the case may be.

"Regulatory Milestone" means receipt of the first MAA Approval, BLA Approval or NDA Approval for a Company Product.

"Representative" means any officer, director, manager, principal, attorney, agent, employee or other representative.

"Requisite Stockholder Approval" means, with respect to this Agreement, approval by (a) all holders of more than 1.00% of the Fully Diluted Common Shares (excluding Company Options for this purpose), and (b) holders of not less than 90.00% of the Fully Diluted Common Shares (excluding Company Options for this purpose).

"Rollover Per Share Closing Consideration" means for each Company Restricted Share, a number of shares of Parent Common Stock equal to the Preferred Exchange Ratio; provided, to the extent such resulting number of shares of Parent Common Stock includes any fractional share, such amount shall be rounded down to the nearest whole number of shares of Parent Common Stock.

"SEC" means the U.S. Securities and Exchange Commission.

"Securities Act" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

"Square 1 Facility" means the Loan and Security Agreement, dated as of October 27, 2017, by and between the Company (f/k/a VL39, Inc.) and Pacific Western Bank.

"Stock Converting Holder" means any Company Stockholder entitled to receive the Preferred Per Share Closing Consideration pursuant to Section 1.5(b) and Rollover Per Share Closing Consideration pursuant to Section 1.5(a).

"Straddle Period" means any taxable period that includes (but does not end on) the Closing Date.

"Subsidiary" means when used in reference to any Person, any corporation or other entity of which such Person owns, directly or indirectly, (a) 50% or more of the outstanding shares of stock, other equity interests or voting securities, or (b) outstanding securities having ordinary voting power to elect the majority of the board of directors or other managing body of such corporation or entity.

"Tax" means any and all taxes, including any net income, alternative or add-on minimum, gross income, gross receipts, sales, use, ad valorem, value added, transfer, franchise, profits, license, registration, recording, documentary, conveyancing, gains, withholding, payroll, employment, excise, severance, stamp, occupation, premium, property, or windfall profit, custom duty or other tax, governmental fee or other like assessment or charge in the nature of a tax, together with any interest, penalty, addition to tax or additional amount imposed by any Governmental Authority having or purporting to exercise jurisdiction with respect to any such tax (United States (federal, state or local) or foreign) (each a "Tax Authority"), whether disputed or not.

"Tax Return" means any return, report, declaration, claim for refund, information return or other document (including schedules thereto, other attachments thereto, amendments thereof, or any related or supporting information) filed or required to be filed with respect to any Tax.

"Transaction Expenses" without duplication, the aggregate amount of all fees, costs and expenses incurred by or on behalf of the Company arising from, incurred in connection with or related to the negotiation, preparation, execution and performance of this Agreement and the transactions contemplated hereby, including (a) third party fees, expenses and costs (including legal, accounting, broker's, investment banker's, consultant's, advisor's and finder's fees, costs and expenses) arising from, incurred in connection with or related to this Agreement or the transactions contemplated hereby (whether or not such amounts have been billed as of or prior to the Closing Date) (excluding any fees in respect of the Square 1 Facility), (b) all bonuses, incentive compensation, termination payments, severance, or other change-in-control, separation or other transaction-related payments payable in connection with the Merger or any of the other transactions contemplated hereby (whether paid or provided on or following the Closing Date), (c) the employer portion of any payroll, employment or similar Taxes incurred or to be incurred by

Parent, the Surviving Corporation or the Company arising from, incurred in connection with or related to this Agreement or the transactions contemplated hereby and (d) all other miscellaneous out-of-pocket expenses or costs incurred by or on behalf of the Company incurred in connection with, arising from or related to this Agreement; provided that notwithstanding the foregoing, the Gross-Up Bonuses (and the employer portion of any payroll, employment or similar Taxes associated with such Gross-Up Bonuses) shall not be deemed Transaction Expenses; provided, further that notwithstanding the foregoing, expenses of legal counsel to the extent incurred in connection with the negotiation, preparation and execution of an Alternative Merger Agreement pursuant to Section 1.13 shall not be deemed Transaction Expenses; provided, further that notwithstanding the foregoing, any acceleration of any award, any bonus, termination payment, severance or other separation payment (and the employer portion of any payroll, employment or similar Taxes associated with such payments) shall not be deemed Transaction Expenses to the extent agreed upon in writing by the parties prior to Closing.

"Treasury Regulations" means the United States Treasury regulations promulgated under the Code.

"Unpaid Transaction Expenses" means Transaction Expenses, but only to the extent they have not been paid by the Company in cash prior to the Closing.

"Volume Weighted Average Price" means with respect to a share of Parent Common Stock following a Parent IPO and determined on the last trading day of each calendar month, for any thirty (30) consecutive trading day period ending on a trading day in such calendar month, the quotient of (i) the sum of the per share volume weighted average prices for each trading day in respect of the period from the scheduled opening of trading until the scheduled close of trading of the primary trading session on each such trading day divided by (ii) thirty (30). The Volume Weighted Average Price will be determined without regard to after-hours trading or any other trading outside of the regular trading session trading hours.

The following terms shall have the meanings defined for such terms in the Sections set forth below:

Defined Term	Section
"280G Vote"	5.12
"Accredited Investor Certification"	1.9(a)
"Additional Milestone Payment"	1.14(b)
"Additional Milestone Trigger Event"	1.14(b)
"Adjusted Parent Stock Price"	8.2(d)
"Agreement"	Preamble
"Alternative Merger Agreement"	1.13
"Cap"	8.2(b)(ii)
"Carveout Plan"	5.11(f)
"Certificate of Merger"	1.2
"Claim Settlement Agreement"	8.7(f)
"Closing"	2.1
"Closing Date"	2.1
"Code"	Recitals

Defined Term	Section
"Company"	Preamble
"Company Balance Sheet Date"	3.13
"Company Board"	Recitals
"Company Certificate"	1.3(a)
"Company Cure Period"	7.1(d)
"Company Financial Statements"	3.13
"Company Indemnified Parties"	5.8(a)
"Company Material Contract"	3.9(a)
"Company Related Person"	3.10(b)
"Company Stock Certificate"	1.5(d)
"Company Stockholder Indemnified Parties"	8.3(a)
"Confidentiality Agreement"	5.10(a)
"Consideration Schedule"	2.2(b)
"Continuation Period"	5.11(a)
"Continuing Consultant"	5.11(e)
"Continuing Employee"	5.11(a)
"Deal Communications"	9.20(e)
"DGCL"	Recitals
"Disputes"	3.8(d)
"Disqualification Event"	3.6(a)
"Disqualified Individual"	5.12
"Dissenting Shares"	1.8
"Effective Time"	1.2
"Employee Plans"	3.16(g)
"Estimated Closing Statement"	2.2(a)
"Expiration Date"	5.11(g)
"First Milestone Shares"	1.14(a)
"Fundamental Representations"	8.1
"Goodwin"	9.20(a)
"Gross-Up Bonuses"	5.11(e)
"Hazardous Substance"	3.23
"Indemnified Parties"	8.3(a)
"Indemnified Party"	8.7(a)
"Indemnifying Party"	8.7(a)
"Information Statement"	5.13(b)
"Interim Period"	5.1
"Inventions Assignment Agreement"	3.19
"Letter of Transmittal"	1.9(a)
"Liquidity Event Requirement"	5.11(g)
"Merger"	Recitals
"Merger Sub"	Preamble
"Minimum Amount"	8.2(b)(i)
"Non-Accredited Person"	1.5(c)
"Notice of Claim"	8.7(e)
"Off-the-Shelf Software Licenses"	3.8(b)

Defined Term	Section
"Parachute Payment Waiver"	5.12
"Parent"	Preamble
"Parent Balance Sheet Date"	4.14
"Parent Board"	Recitals
"Parent Cure Period"	7.1(e)
"Parent Employee Plans"	4.16(g)
"Parent Financial Statements"	4.14
"Parent Indemnified Parties"	8.2
"Parent Indemnity Claim"	9.19(a)(ii)
"Parent Material Contract"	4.10(a)
"Parent Related Person"	4.11(b)
"Parent Restricted Stock Award"	5.11(e)
"Parent RSUs"	5.11(g)
"Parent Series A-2/B Purchase Agreement"	Recitals
"Payoff Letter"	2.2(c)
"PCBs"	3.23
"Permitted Disposition"	1.14(i)
"Privileged Deal Communications"	9.20(e)
"Reduction Amounts"	8.5(b)
"Residual Amount"	1.14(j)(ii)(a)
"Section 280G Approval"	5.12
"Series A-2 Financing"	Recitals
"Service-Based Requirement"	5.11(g)
"Stock Restriction Agreement"	1.14(a)
"Stockholders' Representative"	Preamble
"Surrender Time"	1.14(a)
"Surviving Corporation."	1.1
"Tail Insurance Coverage"	5.8(b)
"Tax Attribute"	3.17
"Tax Authority"	9.1
"Tax Matter"	5.7(c)
"Third-Party Claim"	8.7(b)
"Third-Party Claim Notice"	8.7(b)
"Transfer Taxes"	5.7(d)
"Vesting Date"	5.11(g)
"Waived Parachute Payments"	5.12
"Written Consent"	Recitals

9.2 Notices. All notices, requests and other communications required or permitted under, or otherwise made in connection with, this Agreement, shall be in writing and shall be deemed to have been duly given (a) when delivered in person, (b) upon confirmation of receipt when transmitted by email (excluding "out of office" or similar automated replies) if sent prior to 5:00 p.m. San Francisco, California time, or if sent later, then on the next Business Day, (c) upon receipt after dispatch by registered or certified mail, postage prepaid or (d) on the next

Business Day if transmitted by national overnight courier (with confirmation of delivery), in each case, addressed as follows:

If to the Company (prior to the Closing), addressed to:

Cobalt Biomedicine, Inc.
35 Cambridge Parkway
Cambridge, MA 02142
Attn: Karen Hodys and Chuck Carelli
Email: mailto:legalnotices@flagshippioneering.com

With a copy (which shall not constitute notice) to:

Goodwin Procter LLP
100 Northern Avenue
Boston, MA 02210
Attn: Kingsley L. Taft; Gregg L. Katz
Email: ktaft@goodwinlaw.com; gkatz@goodwinlaw.com

If to the Stockholders' Representative, addressed to:

VentureLabs VI, Inc.
55 Cambridge Parkway, Suite 800E
Cambridge, MA 02142
Attn: Karen Hodys and Chuck Carelli
Email: mailto:legalnotices@flagshippioneering.com

With a copy (which shall not constitute notice) to:

Goodwin Procter LLP
100 Northern Avenue
Boston, MA 02210
Attn: Kingsley L. Taft; Gregg L. Katz
Email: ktaft@goodwinlaw.com; gkatz@goodwinlaw.com

If to Parent, Merger Sub or the Surviving Corporation, addressed to:

Sana Biotechnology, Inc.
1616 Eastlake Avenue East, Suite 360
Seattle, WA 98102
Attn: General Counsel
Email: legal_notices@sana.com

With a copy (which shall not constitute notice) to:

Latham & Watkins LLP
140 Scott Drive
Menlo Park, California 94025
Attn: Brian Cuneo
Email: brian.cuneo@lw.com

or to such other place and with such other copies as a party may designate as to itself by written notice to the others.

9.3 Rules of Construction. The parties agree that they have been represented by counsel during the negotiation and execution of this Agreement and, therefore, waive the application of any Law, regulation, holding or rule of construction providing that ambiguities in any agreement or other document will be construed against the party drafting such agreement or document.

9.4 References. The titles, captions or headings of the Articles and Sections herein are inserted for convenience of reference only and are not intended to be a part of or to affect the meaning or interpretation of this Agreement. All references to "days" or "months" shall be deemed references to calendar days or months. All references to "$" or "dollars" shall be deemed references to United States dollars. Any dollar amounts or thresholds set forth herein shall not be used as a determinative benchmark for establishing what is or is not "material" or a "Material Adverse Effect" (or words of similar import) under this Agreement. Unless the context otherwise requires, any reference to an "Article," "Section," "Exhibit," or "Schedule" shall be deemed to refer to an article of this Agreement, Section of this Agreement, exhibit to this Agreement or a schedule to this Agreement, as applicable. Any reference to any federal, state, county, local or foreign statute or Law shall be deemed also to refer to all rules and regulations promulgated thereunder, unless the context requires otherwise, and shall include any modification, amendment, re-enactment thereof and any legislative provision substituted therefore. For all purposes of and under this Agreement, (a) the words "include," "includes" and "including" shall be deemed to be immediately followed by the words "without limitation"; (b) words (including defined terms) in the singular shall be deemed to include the plural and vice versa; (c) words of one gender shall be deemed to include the other genders as the context requires; (d) "or" is not exclusive; (e) the word "will" shall be construed to have the same meaning and effect as the word "shall"; (f) unless otherwise stated, any reference herein to any Person shall be construed to include such Person's successors and assigns; (g) the terms "hereof," "herein," "hereto," "herewith," "hereunder" and any other words of similar import shall, unless otherwise stated, be construed to refer to this Agreement as a whole (including the exhibits and schedules hereto) and not to any particular term or provision of this Agreement, unless otherwise specified; (h) the phrase "ordinary course of business" will be deemed followed by the phrase "consistent with past practice" and (i) reference herein to any document or other information being "made available," "delivered" or "provided" to Parent prior to the date hereof shall be deemed satisfied by the posting of any such document or information in the virtual data room of the Company hosted by Merrill Corporation at least two (2) Business Days prior to the date hereof.

9.5 Entire Agreement. This Agreement, including the Exhibits hereto, the Company Disclosure Schedule, the Parent Disclosure Schedule and the other agreements, documents and written understandings referred to herein or otherwise entered into or delivered by the parties hereto pursuant to this Agreement (including the Letters of Transmittal), constitute the entire agreement and understanding of the parties hereto with respect to the subject matter hereof and supersede all other prior covenants, agreements (including any letters of intent between the parties), undertakings, obligations, promises, arrangements, communications, representations and warranties, whether oral or written, by any party hereto with respect to the subject matter hereof.

9.6 Assignment. No party may assign, delegate or otherwise transfer any of its rights or obligations under this Agreement without the consent of each other party hereto.

9.7 Amendment; Modification. This Agreement may not be amended or modified except in an instrument in writing signed by the parties hereto. No amendment, supplement, modification or waiver of this Agreement shall be binding unless executed in writing by the party to be bound thereby. Notwithstanding the foregoing, after the Closing, this Agreement may be amended, modified or supplemented in writing signed by Parent and the Stockholders' Representative.

9.8 Waiver. Except where a specific period for action or inaction is provided herein, neither the failure nor any delay on the part of any party in exercising any right, power or privilege under this Agreement or the documents referred to in this Agreement shall operate as a waiver thereof, nor shall any waiver on the part of any party of any such right, power or privilege, nor any single or partial exercise of any such right, power or privilege, preclude any other or further exercise thereof or the exercise of any other such right, power or privilege. The failure of a party to exercise any right conferred herein within the time required shall cause such right to terminate with respect to the transaction or circumstances giving rise to such right, but not to any such right arising as a result of any other transactions or circumstances.

9.9 Severability. If any term or other provision of this Agreement is invalid, illegal or incapable of being enforced as a result of any rule of Law or public policy, all other terms and other provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated by this Agreement is not affected in any manner materially adverse to any party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in an acceptable manner to the end that the transactions contemplated by this Agreement are fulfilled to the greatest extent possible.

9.10 Burden and Benefit. This Agreement shall be binding upon and shall inure to the benefit of, the parties hereto and their respective successors and permitted assigns. This Agreement and all of its conditions and provisions are for the sole and exclusive benefit of the parties hereto and their respective successors and permitted assigns, and nothing in this Agreement, express or implied, is intended to confer upon any Person other than the parties hereto any rights or remedies of any nature whatsoever under or by reason of this Agreement or any provision hereof; provided, however, that the provisions of Section 5.8 are intended to be for the benefit of, and enforceable by, the Company Indemnified Parties.

9.11 Governing Law. This Agreement shall be governed by and construed in accordance with the internal laws of the State of Delaware, without giving effect to principles of conflicts of laws that would require the application of the laws of any other jurisdiction.

9.12 Consent to Jurisdiction. The parties hereto agree that any Proceeding seeking to enforce any provision of, or based on any matter arising out of or in connection with, this Agreement or the transactions contemplated hereby shall be brought in any federal or state court located in the State of Delaware, and each of the parties hereby irrevocably consents to the jurisdiction of such courts (and of the appropriate appellate courts therefrom) in any such Proceeding and irrevocably waives, to the fullest extent permitted by law, any objection that it may now or hereafter have to the laying of the venue of any such Proceeding in any such court or that any such Proceeding brought in any such court has been brought in an inconvenient forum. Process in any such Proceeding may be served on any party anywhere in the world, whether within or without the jurisdiction of any such court. Without limiting the foregoing, each party agrees that service of process on such party as provided in Section 9.2 shall be deemed effective service of process on such party.

9.13 Waiver of Trial by Jury. EACH PARTY TO THIS AGREEMENT ACKNOWLEDGES AND AGREES THAT ANY CONTROVERSY WHICH MAY ARISE UNDER THIS AGREEMENT IS LIKELY TO INVOLVE COMPLICATED AND DIFFICULT ISSUES, AND THEREFORE IT HEREBY IRREVOCABLY AND UNCONDITIONALLY WAIVES ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY LITIGATION DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS AGREEMENT AND ANY OF THE AGREEMENTS DELIVERED IN CONNECTION HEREWITH OR THE TRANSACTIONS CONTEMPLATED HEREBY OR THEREBY. EACH PARTY CERTIFIES AND ACKNOWLEDGES THAT (A) NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE EITHER OF SUCH WAIVERS, (B) IT UNDERSTANDS AND HAS CONSIDERED THE IMPLICATIONS OF SUCH WAIVERS, (C) IT MAKES SUCH WAIVERS VOLUNTARILY, AND (D) IT HAS BEEN INDUCED TO ENTER INTO THIS AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION 9.13.

9.14 Specific Performance. The parties hereto agree that irreparable damage would occur if any provision of this Agreement were not performed in accordance with the terms hereof or were otherwise breached and that, irrespective of any other rights or remedies that may be available to the parties as provided herein or otherwise, the parties shall be entitled to an injunction or injunctions to prevent breaches of this Agreement or to enforce specifically the performance of the terms and provisions hereof in any federal or state court located in the State of Delaware. Each of the parties hereto agrees that it will not oppose the granting of an injunction, specific performance and other equitable relief on the basis that the other parties hereto have an adequate remedy at law or an award of specific performance is not an appropriate remedy for any reason at law or equity. The parties hereto acknowledge and agree that any party seeking an injunction or injunctions to prevent breaches of this Agreement and to enforce specifically the terms and provisions of this Agreement in accordance with this Section 9.14 shall not be required to provide any bond or other security in connection with any such order or injunction.

9.15 Cumulative Remedies. Except as otherwise expressly set forth in this Agreement, including in Section 8.4, all rights and remedies of any party hereto are cumulative of each other and of every other right or remedy such party may otherwise have at Law or in equity, and the exercise of one or more rights or remedies shall not prejudice or impair the concurrent or subsequent exercise of other rights or remedies.

9.16 Expenses. Except as otherwise expressly set forth in this Agreement, all costs and expenses incurred in connection with this Agreement and the transactions contemplated hereby shall be paid by the party incurring such expenses.

9.17 Representation by Counsel. Each party hereto represents and agrees with each other that it has been represented by or had the opportunity to be represented by, independent counsel of its own choosing, and that it has had the full right and opportunity to consult with its respective attorney(s), that to the extent, if any, that it desired, it availed itself of this right and opportunity, that it or its authorized officers (as the case may be) have carefully read and fully understand this Agreement in its entirety and have had it fully explained to them by such party's respective counsel, that each is fully aware of the contents thereof and its meaning, intent and legal effect, and that it or its authorized officer (as the case may be) is competent to execute this Agreement and has executed this Agreement free from coercion, duress or undue influence.

9.18 Execution and Counterparts. This Agreement may be executed in one or more counterparts, each of which when executed shall be deemed an original and all of which together shall constitute one and the same instrument. The parties agree that this Agreement shall be legally binding upon the electronic transmission, including by facsimile, email, pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, e.g., www.docusign.com, by each party of a signed signature page to this Agreement to the other party.

9.19 Stockholders' Representative.

(a) Appointment. By executing this Agreement, the Company (and, upon execution of the Written Consent or Letter of Transmittal by a Company Stockholder, such Company Stockholder) shall be deemed to have constituted and appointed, effective from and after the Effective Time, VentureLabs VI, Inc. as agent and attorney-in-fact for and on behalf of each Company Stockholder to act as the Stockholders' Representative under this Agreement, including in respect of the following matters:

(i) giving and receiving any notice or instruction permitted or required to be given to or received by any Company Stockholder under this Agreement;

(ii) coordinating the common defense of all indemnity claims against the Company Stockholders by any Parent Indemnified Party pursuant to this Agreement (a "Parent Indemnity Claim"),

(iii) consenting to, compromising or settling all Parent Indemnity Claims,

(iv) conducting negotiations with Parent and its Representatives regarding such Parent Indemnity Claims,

(v) dealing with Parent under this Agreement with respect to all matters arising under this Agreement, and

(vi) engaging counsel, accountants or other Stockholders' Representatives in connection with the foregoing matters.

(b) Authorization. By each Company Stockholder's execution of the Written Consent or Letter of Transmittal, each such Company Stockholder shall authorize the Stockholders' Representative, on such Company Stockholder's behalf, to:

(i) receive all notices or documents given or to be given to any of the Company Stockholders by Parent or the Surviving Corporation pursuant hereto or in connection herewith and to receive and accept service of legal process in connection with any suit or proceeding arising under this Agreement;

(ii) engage counsel, and such accountants and other advisors for any of the Company Stockholders and incur such other expenses on behalf of any of the Company Stockholders in connection with this Agreement and the transactions contemplated hereby or thereby as the Stockholders' Representative may in its sole discretion deem appropriate;

(iii) take such action on behalf of any of the Company Stockholders as the Stockholders' Representative may in its sole discretion deem appropriate in respect of: (A) taking such other action as the Stockholders' Representative is authorized to take under this Agreement; (B) receiving all documents or certificates and making all determinations, on behalf of any of the Company Stockholders, required under this Agreement; and (C) all such action as may be necessary after the Closing Date to carry out any of the transactions contemplated by this Agreement, including, the defense and/or settlement of any claims for which indemnification is sought pursuant to Article VIII and any waiver of any obligation of Parent or the Surviving Corporation.

(c) Decisions. All actions, decisions and instructions of the Stockholders' Representative shall be conclusive and binding upon all of the Company Stockholders and such Company Stockholder's successors as if expressly confirmed and ratified in writing by such Company Stockholder and no Company Stockholder shall have any claim or cause of action against the Stockholders' Representative, and the Stockholders' Representative shall have no liability to any Company Stockholder, for any action taken, decision made or instruction given by the Stockholders' Representative in connection with this Agreement, except in the case of its own gross negligence or willful misconduct.

(d) Reliance. Parent, Merger Sub and the Surviving Corporation shall not be obliged to inquire into the authority of the Stockholders' Representative, and Parent, Merger Sub and the Surviving Corporation shall be fully protected in dealing with the Stockholders' Representative in good faith.

(e) Confidentiality. The Stockholders' Representative (i) shall not disclose to any other Person any information provided to it by Parent or any of its Representatives in connection with this Agreement and the transactions contemplated hereby (including pursuant to Section 1.14) except (a) to the Stockholders' Representative's advisors, officers, directors and employees, so long as such parties are informed of the confidential nature of such information, (b) as required by Law, (c) in connection with the enforcement of any rights of Stockholders'

Representative hereunder or otherwise related to the transactions contemplated herein and (d) to the extent that such information can be shown to have been in the public domain through no fault of the Stockholders' Representative and (ii) shall not use such information other than solely in its capacity as Stockholders' Representative hereunder; provided that the Stockholders' Representative may disclose such information to the Milestone Payment Recipients so long as each such Milestone Payment Recipient is informed of the confidential nature of such information and executes a confidentiality agreement with the Stockholders' Representative regarding such information (A) that is comparable to and no less restrictive than the terms of this Section 9.19(e) with respect to the Stockholders' Representative, (B) contains the acknowledgment and agreement referred to in the last sentence of this Section 9.19(e) and (C) to which Parent is made an express third-party beneficiary; provided, further, that notwithstanding the foregoing, the Stockholders' Representative may inform each Milestone Payment Recipient of the aggregate amount of, and the amount such recipient will in receive in connection with any Milestone Payment (including with respect to the cash and securities portion thereof and any associated payment mechanics). Any Milestone Payment Recipient receiving such information shall not disclose such information to any Person except (a) to its Affiliates, officers, managers, members, partners, employees, attorneys, accountants, auditors and advisors who have a need to know, are informed of the confidential nature of such information and agree to keep such information confidential, (b) as required by Law, (c) in connection with the enforcement of any rights with respect to the transactions contemplated herein, and (d) to the extent that such information can be shown to have been in the public domain through no fault of such Milestone Payment Recipient; provided, further, that a Milestone Payment Recipient that is a venture capital fund or institutional investor may, (i) disclose such information to its employees, officers, directors, auditors and other advisors, so long as such party is informed of the confidential nature of such information and is under an obligation to keep such information confidential; (ii) disclose such information to its current limited partners so long as such limited partners are informed of the confidential nature of such information and agree to keep such information confidential; and (iii) disclose to prospective limited partners the valuation such venture capital fund has placed on its expected return from the Merger and a general statement of the likelihood that the Milestone Payments will be received (e.g., a "high likelihood," a "low likelihood," a "greater or less than 50% likelihood," etc.). The Stockholders' Representative acknowledges and agrees that (x) the information provided pursuant to Section 1.14(g) may contain material non-public information concerning Parent and its Affiliates, (y) it shall comply with applicable securities laws regarding the trading of securities of Parent and its Affiliates while in possession of any such material non-public information from purchasing or selling securities of Parent and its Affiliates or from communicating such information to any other Person under circumstances in which it is reasonably foreseeable such other Person is likely to purchase or sell such securities and (z) Parent is relying upon its compliance with the obligations under this Section 1.14(g) for purposes of compliance by Parent and its Affiliates with Regulation FD promulgated by the SEC (to the extent Parent or any of its Affiliates is subject to such Regulation).

(f) Successor Stockholders' Representative. If the Stockholders' Representative shall die, become disabled, resign or otherwise be unable to fulfill its responsibilities hereunder, the Company Stockholders who in the aggregate held at least a majority of the Company Capital Stock immediately prior to the Effective Time shall appoint a new Stockholders' Representative as soon as reasonably practicable by written consent by sending notice and a copy of the duly executed written consent appointing such new Stockholders'

Representative to Parent and the Surviving Corporation. Such appointment will be effective upon the later of the date indicated in the consent or the date such consent is received by Parent and the Surviving Corporation. Company Stockholders who in the aggregate held at least a majority of the Company Capital Stock immediately prior to the Effective Time shall have the right at any time to remove the then-acting Stockholders' Representative and to appoint a successor Stockholders' Representative; provided, however, that neither such removal of the then acting Stockholders' Representative nor such appointment of a successor Stockholders' Representative shall be effective until the delivery to Parent and Surviving Corporation of executed counterparts of a writing signed by each such Company Stockholder with respect to such removal and appointment, together with an acknowledgment signed by the successor Stockholders' Representative appointed in such writing that it, he or she accepts the responsibility of successor Stockholders' Representative and agrees to perform and be bound by all of the provisions of this Agreement applicable to the Stockholders' Representative. Each successor Stockholders' Representative shall have all of the power, authority, rights, privileges and obligations conferred by this Agreement upon the original Stockholders' Representative, and the term "Stockholders' Representative" as used herein shall be deemed to include any interim or successor Stockholders' Representative.

9.20 Waiver of Conflicts; Privilege.

(a) Each of the parties acknowledges and agrees that Goodwin Procter LLP ("Goodwin") has acted as counsel to the Company and the Stockholders' Representative in connection with the negotiation of this Agreement and consummation of the transactions contemplated hereby.

(b) Parent hereby consents and agrees to, and agrees to cause Surviving Corporation to consent and agree to, Goodwin representing the Stockholders' Representative after the Closing, including with respect to disputes in which the interests of the Stockholders' Representative may be directly adverse to Parent and its Subsidiaries (including the Surviving Corporation), and even though Goodwin may have represented the Company in a matter substantially related to any such dispute, or may be handling ongoing matters for the Company. Parent further consents and agrees to, and agrees to cause the Surviving Corporation to consent and agree to, the communication by Goodwin to the Stockholders' Representative in connection with any such representation of any fact known to Goodwin arising by reason of Goodwin's prior representation of the Company.

(c) In connection with the foregoing, Parent hereby irrevocably waives and agrees not to assert, and agrees to cause the Surviving Corporation to irrevocably waive and not to assert, any conflict of interest arising from or in connection with (i) Goodwin's prior representation of the Company and (ii) Goodwin's representation of the Stockholders' Representative prior to and after the Closing.

(d) Parent further agrees, on behalf of itself and, after the Closing, on behalf of the Surviving Corporation, that all communications in any form or format whatsoever between or among any of Goodwin, the Company, the Stockholders' Representative and/or any Company Stockholder, or any of their respective directors, officers, employees or other Representatives to the extent related to the negotiation, documentation and consummation of the transactions contemplated by this Agreement or any dispute arising under this Agreement

(collectively, the "Deal Communications") shall be deemed to be retained and owned collectively by the Company Stockholders, shall be controlled by the Stockholders' Representative on behalf of the Company Stockholders and shall not pass to or be claimed by Parent or the Surviving Corporation. All Deal Communications that are attorney-client privileged (the "Privileged Deal Communications") shall remain privileged after the Closing and the privilege and the expectation of client confidence relating thereto shall belong solely to the Stockholders' Representative and the Company Stockholders, shall be controlled by the Stockholders' Representative on behalf of the Company Stockholders and shall not pass to or be claimed by Parent or the Surviving Corporation.

(e) Notwithstanding the foregoing, in the event that a dispute arises between Parent or the Surviving Corporation, on the one hand, and a third party other than the Stockholders' Representative, on the other hand, Parent or the Surviving Corporation may assert the attorney-client privilege to prevent the disclosure of the Privileged Deal Communications to such third party; provided, however, that neither Parent nor the Surviving Corporation may waive such privilege without the prior written consent of the Stockholders' Representative. In the event that Parent or the Surviving Corporation is legally required by an Order or otherwise to access or obtain a copy of all or a portion of the Privileged Deal Communications, Parent shall immediately (and, in any event, within two (2) Business Days) notify the Company (if prior to Closing) or the Stockholders' Representative (if after Closing) in writing (including by making specific reference to this Section 9.20(e)) so that the Company or the Stockholders' Representative, as applicable, can seek a protective order and Parent agrees to use all commercially reasonable efforts to assist therewith.

(f) To the extent that files or other materials maintained by Goodwin constitute property of its clients, only the Stockholders' Representative shall hold such property rights and Goodwin shall have no duty to reveal or disclose any such files or other materials or any Privileged Deal Communications by reason of any attorney-client relationship between Goodwin, on the one hand, and Parent or the Surviving Corporation, on the other hand.

(g) Parent agrees that it will not, and that it will cause the Surviving Corporation not to, (i) access or use the Privileged Deal Communications, including by way of review of any electronic data, communications or other information, or by seeking to have the Stockholders' Representative waive the attorney-client or other privilege, or by otherwise asserting that Parent or the Surviving Corporation thereof has the right to waive the attorney-client or other privilege or (ii) seek to obtain the Deal Communications from Goodwin.

(Signature Page Follows)

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed as of the day and year first set forth above.

SANA BIOTECHNOLOGY, INC.

By: /s/ Steven D. Harr, M.D.
Name: Steven D. Harr, M.D.
Title: Chief Executive Officer

[Signature Page to Agreement and Plan of Merger]

SANA BIOTECHNOLOGY IV, INC.

By: /s/ Nathan Hardy
Name: Nathan Hardy
Title: President and Chief Executive Officer

[Signature Page to Agreement and Plan of Merger]

COBALT BIOMEDICINE, INC.

By: /s/ Geoffrey von Maltzahn
Name: Geoffrey von Maltzahn
Title: President

VENTURELABS VI, INC.

By: /s/ Chuck Carelli
Name: Chuck Carelli
Title: Treasurer

EXHIBIT A

Parent Series A-2/B Purchase Agreement

See attached.

EXHIBIT B

Written Consent

See attached.

EXHIBIT C

Certificate of Merger

See attached.

EXHIBIT D

Bylaws of the Surviving Corporation

See attached.

EXHIBIT E

Letter of Transmittal

See attached.

EXHIBIT F

Accredited Investor Certification

See attached.

EXHIBIT G

Stock Restriction Agreement

See attached.

EXHIBIT H

Expert Procedures

See attached.

EXHIBIT I

Amendment to Flagship IP License

See attached.

EXHIBIT J

Amendment to Flagship Managerial Agreement

See attached.

EXHIBIT K

Amendment to Bylaws of Parent

See attached.

EXHIBIT L

FIRPTA Certificate

See attached.

EXHIBIT M

Amended & Restated Parent IRA

See attached.

EXHIBIT N

Amended & Restated Parent Voting Agreement

See attached.

EXHIBIT O

Amended & Restated Parent ROFR and Co-Sale Agreement

See attached.

EXHIBIT P

Parent Restated Certificate

See attached.

Exhibit 2.1(b)

AMENDMENT TO AGREEMENT AND PLAN OF MERGER

This Amendment, dated as of January 29, 2019 (the "Amendment"), to the Agreement and Plan of Merger, dated as of December 20, 2018 (this "Agreement"), is entered into by and among Sana Biotechnology, Inc., a Delaware corporation ("Parent"), Sana Biotechnology, IV, Inc., a Delaware corporation and a wholly owned subsidiary of Parent ("Merger Sub"), Cobalt Biomedicine, Inc., a Delaware corporation (the "Company"), and VentureLabs VI, Inc., a Delaware corporation, solely in its capacity as the Stockholders' Representative ("Stockholders' Representative").

RECITALS

WHEREAS, Parent, Merger Sub, the Company and Stockholders' Representative are parties to the Agreement and wish to amend the Agreement in accordance with the terms of this Amendment.

WHEREAS, pursuant to Section 9.7 of the Agreement, the Agreement may be amended by an instrument in writing signed by the parties hereto, which shall be by action taken by or on behalf of their respective boards of directors.

WHEREAS, the actions required by Section 9.7 of the Agreement to enter into this Amendment have been taken by or on behalf of the board of directors of each party to this Amendment.

AGREEMENT

NOW THEREFORE, in consideration of the respective covenants and promises contained herein and for other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, the parties hereto agree as follows:

1.Defined Terms. Capitalized terms used but not defined herein shall have the meanings ascribed to them in the Agreement.

2. Amendment to Section 1.13 of the Agreement. The first sentence of Section 1.13 of the Agreement is hereby amended and restated in its entirety to read as follows:

"If the Series A-2 Financing has not been consummated on or prior to February 8, 2019 in a manner that satisfies the condition set forth in Section 6.1(d), the Company may provide written notice to Parent that it is triggering the alternative transaction structure mechanics described in this Section 1.13."

3. Amendment to Section 5.1 of the Agreement. The references to "January 31, 2019" in Sections 5.1(d), 5.1(e) and 5.1(k) shall be amended and restated to read "February 8, 2019".

4. Full Force and Effect; No Waiver of Rights. Except as expressly modified by this Amendment, the Agreement is unmodified and this Amendment shall not impair the full force and effect of the Agreement and shall not constitute a waiver of any right held by any party under the Agreement.

5. General Provisions. The provisions of Article VII (*Termination*) and Sections 5.10 (*Confidentiality; Public Announcements*), 9.2 (*Notices*), 9.4 (*References*), 9.6 (*Assignment*), 9.7 (*Amendment; Modification*), 9.8 (*Waiver*), 9.9 (*Severability*), 9.10 (*Burden and Benefit*), 9.11 (*Governing Law*), 9.12 (*Consent to Jurisdiction*), 9.13 (*Waiver of Trial by Jury*), 9.14 (*Specific Performance*), 9.15 (*Cumulative Rights*), 9.16 (*Expenses*), 9.17 (*Representation by Counsel*) and 9.18 (*Execution and Counterparts*) of the Agreement shall apply *mutatis mutandis* to this Amendment.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have executed this Amendment or caused this Amendment to be duly executed on their respective behalf, by their respective officers thereunto duly authorized, all as of the day and year first above written.

SANA BIOTECHNOLOGY, INC.

By: /s/ Steven D. Harr, M.D.
Name: Steven D. Harr, M.D.
Title: Chief Executive Officer

SANA BIOTECHNOLOGY IV, INC.

By: /s/ Nathan Hardy
Name: Nathan Hardy
Title: President and Chief Executive Officer

COBALT BIOMEDICINE, INC.

By: /s/ Geoffrey von Maltzahn
Name: Geoffrey von Maltzahn
Title: President

VENTURELABS VI, INC.

By: /s/ Chuck Carelli
Name: Chuck Carelli
Title: Treasurer

Exhibit 2.1(c)

SECOND AMENDMENT TO AGREEMENT AND PLAN OF MERGER

This Second Amendment, dated as of February 8, 2019 (the "Second Amendment"), to the Agreement and Plan of Merger, dated as of December 20, 2018 (this "Agreement"), is entered into by and among Sana Biotechnology, Inc., a Delaware corporation ("Parent"), Sana Biotechnology, IV, Inc., a Delaware corporation and a wholly owned subsidiary of Parent ("Merger Sub"), Cobalt Biomedicine, Inc., a Delaware corporation (the "Company"), and VentureLabs VI, Inc., a Delaware corporation, solely in its capacity as the Stockholders' Representative ("Stockholders' Representative"), as amended.

RECITALS

WHEREAS, Parent, Merger Sub, the Company and Stockholders' Representative are parties to the Agreement and wish to amend the Agreement in accordance with the terms of this Second Amendment.

WHEREAS, pursuant to Section 9.7 of the Agreement, the Agreement may be amended by an instrument in writing signed by the parties hereto, which shall be by action taken by or on behalf of their respective boards of directors.

WHEREAS, the actions required by Section 9.7 of the Agreement to enter into this Second Amendment have been taken by or on behalf of the board of directors of each party to this Second Amendment.

AGREEMENT

NOW THEREFORE, in consideration of the respective covenants and promises contained herein and for other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, the parties hereto agree as follows:

1. Defined Terms. Capitalized terms used but not defined herein shall have the meanings ascribed to them in the Agreement.

2. Amendment to Section 1.13 of the Agreement. The first sentence of Section 1.13 of the Agreement is hereby amended and restated in its entirety to read as follows:

"If the Series A-2 Financing has not been consummated on or prior to February 15, 2019 in a manner that satisfies the condition set forth in Section 6.1(d), the Company may provide written notice to Parent that it is triggering the alternative transaction structure mechanics described in this Section 1.13."

3. Amendment to Section 5.1 of the Agreement. The references to "February 8, 2019" in Sections 5.1(d), 5.1(e) and 5.1(k) shall be amended and restated to read "February 15, 2019".

4. Full Force and Effect; No Waiver of Rights. Except as expressly modified by this Second Amendment, the Agreement is unmodified and this Second Amendment shall not impair the full force and effect of the Agreement and shall not constitute a waiver of any right held by any party under the Agreement.

5. General Provisions. The provisions of Article VII (*Termination*) and Sections 5.10 (*Confidentiality; Public Announcements*), 9.2 (*Notices*), 9.4 (*References*), 9.6 (*Assignment*), 9.7 (*Amendment; Modification*), 9.8 (*Waiver*), 9.9 (*Severability*), 9.10 (*Burden and Benefit*), 9.11 (*Governing Law*), 9.12 (*Consent to Jurisdiction*), 9.13 (*Waiver of Trial by Jury*), 9.14 (*Specific Performance*), 9.15 (*Cumulative Rights*), 9.16 (*Expenses*), 9.17 (*Representation by Counsel*) and 9.18 (*Execution and Counterparts*) of the Agreement shall apply *mutatis mutandis* to this Second Amendment.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have executed this Second Amendment or caused this Second Amendment to be duly executed on their respective behalf, by their respective officers thereunto duly authorized, all as of the day and year first above written.

SANA BIOTECHNOLOGY, INC.

By: /s/ Steven D. Harr, M.D.
Name: Steven D. Harr, M.D.
Title: Chief Executive Officer

SANA BIOTECHNOLOGY IV, INC.

By: /s/ Nathan Hardy
Name: Nathan Hardy
Title: President and Chief Executive Officer

COBALT BIOMEDICINE, INC.

By: /s/ Geoffrey von Maltzahn
Name: Geoffrey von Maltzahn
Title: President

VENTURELABS VI, INC.

By: /s/ Chuck Carelli
Name: Chuck Carelli
Title: Treasurer

Exhibit 2.2

Execution Version

STOCK PURCHASE AGREEMENT

by and among

SANA BIOTECHNOLOGY, INC.,

CYTOCARDIA, INC.,

each of the stockholders of Cytocardia, Inc.,

and

Scott Thies, as Sellers' Representative,

dated as of

November 12, 2019

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Schedules

STOCK PURCHASE AGREEMENT

This STOCK PURCHASE AGREEMENT (this "Agreement"), dated as of November 12, 2019, is by and among Sana Biotechnology, Inc., a Delaware corporation ("Purchaser"), Cytocardia, Inc., a Delaware corporation (the "Company"), each of the stockholders of the Company (the "Sellers"), and Scott Thies, solely in his capacity as representative of the Sellers (the "Sellers' Representative").

RECITALS

WHEREAS, the boards of directors of each of Purchaser and the Company have determined that it is advisable and in the best interests of the respective companies and their respective stockholders, as applicable, that Purchaser acquire the Company by the purchase of all outstanding capital stock of the Company (the "Acquisition") upon the terms and subject to the conditions set forth herein and, in furtherance thereof, have approved this Agreement and the transactions contemplated hereby;

WHEREAS, each of the Sellers has approved, and deems it advisable and in the best interests of such Seller to consummate, the Acquisition and concurrently with the execution and delivery of this Agreement, the spouses of each of the Stockholders has delivered a spousal consent in the form provided by Purchaser (the "Spousal Consents"); and

WHEREAS, concurrently with the execution and delivery of this Agreement, as a material inducement to Purchaser to enter into this Agreement: (i) each of the Persons set forth on Schedule A-1 hereto (collectively, the "Key Employees") has entered into an at-will employment arrangement with Purchaser or a subsidiary thereof pursuant to his or her execution of an offer letter (each an "Offer Letter") and a proprietary rights agreement (each a "Proprietary Rights Agreement"), in each case, in the form provided by Purchaser; (ii) each of the Persons set forth on Schedule A-2 hereto (collectively, the "Key Consultants") has entered a consulting agreement with Purchaser or a subsidiary thereof, in the form provided by Purchaser, to be effective as of the Closing (the "Consulting Agreements"); and (iii) each of the Persons set forth on Schedule A-3 has executed and delivered a restrictive covenants agreement in substantially the form attached hereto as Exhibit A (each a "Restrictive Covenants Agreement"), which agreements shall become effective only at the Closing.

NOW, THEREFORE, in consideration of the foregoing and the respective representations, warranties, covenants and agreements set forth herein, the parties hereto agree as follows:

ARTICLE I

PURCHASE AND SALE OF SHARES

Section 1.1 Sale and Transfer of Shares. Subject to the terms and conditions of this Agreement, at the Closing each Stockholder shall sell, convey, assign, transfer and deliver to Purchaser the number of shares of Outstanding Common Stock set forth opposite such Stockholder's name on the Spreadsheet (the "Shares"), free and clear of all Liens.

Section 1.2 Purchase Price.

(a) Definitions.

(i) "Base Purchase Price" means eight million dollars ($8,000,000).

(ii) "Closing Consideration" means (A) the Base Purchase Price, minus (B) the Estimated Indebtedness and Estimated Acquisition Expenses, minus (C) the Holdback Amount.

(iii) "Pro Rata Percentage" means, with respect to each Seller, the percentage set forth opposite such Seller's name on Schedule 1.2(a)(iii) hereto with respect to the Closing Consideration, any amount released from the Holdback or the applicable Earn-Out Payment, as the case may be.

(iv) "Purchase Price" means the aggregate consideration payable to the Sellers pursuant to this Agreement.

(b) Subject to the terms and conditions of this Agreement, in consideration of the aforesaid sale, conveyance, assignment, transfer and delivery to Purchaser of all of the Outstanding Common Stock, Purchaser shall pay to each of the Sellers (i) an amount in cash at the Closing equal to such Seller's Pro Rata Percentage of the Closing Consideration, plus (ii) such Seller's Pro Rata Percentage of any amount released from the Holdback, in accordance with Section 1.3 and Section 8.6(e), plus (iii) such Seller's Pro Rata Percentage of any Earn-Out Payment (as defined below) that becomes due and payable pursuant to Section 1.8 in accordance with the terms thereof.

Section 1.3 Holdback. An amount equal to one million two hundred thousand dollars ($1,200,000) (the "Holdback Amount") shall be withheld from the Purchase Price as partial security for the indemnification obligations of the Sellers pursuant to Article IX of this Agreement. Any undistributed portion of the Holdback Amount shall accrue interest at the rate of 3% annually (the Holdback Amount, together with such interest, the "Holdback"). Within ten (10) Business Days after the end of the fifteen (15) month period beginning on the Closing Date (the "Holdback Release Date"), Purchaser shall cause the Holdback Release Amount, if any, to be released from the holdback and distributed to the Sellers in accordance with their respective Pro Rata Percentage. Within ten (10) Business Days after final resolution of each Unresolved Claim, Purchaser shall cause the applicable portion of the Retained Amount that was retained in respect of such Unresolved Claim and that is not paid or payable to Purchaser in respect of such Unresolved Claim or payable to Purchaser in respect of any other Unresolved Claim, if any, to be released from the Holdback and distributed to the Sellers in accordance with their respective Pro Rata Percentage.

Section 1.4 The Closing. Unless this Agreement is earlier terminated pursuant to Section 8.1, the closing of the transactions contemplated hereby (the "Closing") shall take place at 10:00 a.m., Pacific time, on a date to be specified by the parties, which shall be no later than the fifth (5th) Business Day after satisfaction or waiver of all of the conditions set forth in Article VII of this Agreement (the "Closing Date"), at Woodside Counsel, P.C., 203 Redwood Shores Parkway, Suite 610, Redwood Shores, CA 94065, unless another time, date or place is agreed to in writing by Purchaser and the Company.

Section 1.5 Spreadsheet.

(a) Attached hereto as Schedule 1.5 is a spreadsheet (the "Spreadsheet"), which includes with respect to each Seller: (i) such Seller's name, address and email address; (ii) the number, class and series of shares of Company Capital Stock held by such Person and the name of any Person with any community or marital property interest therein; (iii) the respective certificate number(s) representing such shares; (iv) the respective date(s) of acquisition of such shares; (v) the portion of the Purchase Price to be paid to such Seller at the Closing; (vi) whether any Taxes are required to be withheld from the Purchase Price payable to such Seller (but not the amount of Tax withholding required; and assuming for this purpose that (A) the Company delivers the FIRPTA Certificate in accordance with Section 4.6, and (B) each Seller delivers an IRS Form W-9 or the appropriate series of IRS Form W-8, or another exemption applies, such that no withholding is required pursuant to Section 3406 of the Code); and (vii) such other information as Purchaser may reasonably request.

(b) Not later than three (3) Business Days prior to the Closing Date, the Company will prepare and deliver to Purchaser (i) an estimated schedule of all Liabilities of the Company as of the close of business on the day immediately preceding the Closing Date (the "Estimated Closing Date Schedule") including the Company's good faith estimate of (A) the amount of Indebtedness of the Company and its Subsidiaries as of immediately prior to the Closing (the "Estimated Indebtedness") and (B) the total Acquisition Expenses (the "Estimated Acquisition Expenses"). The Estimated Closing Date Schedule will be prepared in good faith in accordance with this Section 1.5 and will be subject to Purchaser's review, comment and approval. The Estimated Closing Date Schedule will be accompanied by all relevant backup materials and schedules reasonably requested by Purchaser, including final invoices for all Acquisition Expenses and written payment instructions for all Indebtedness, Acquisition Expenses and Closing Consideration.

(c) Not less than three (3) Business Days prior to the Closing Date the Company will prepare and deliver to Purchaser, in a form reasonably acceptable to Purchaser, an updated Spreadsheet that reflects any changes permitted by this Agreement, including any changes to the Closing Consideration or the portion thereof payable to the Sellers as a result of changes in the Estimated Indebtedness or Estimated Acquisition Expenses. The Company will cause the Spreadsheet to be certified as true, complete and correct by the President of the Company (such certification, the "Spreadsheet Certificate").

Section 1.6 Tax Withholding(a) . Purchaser or Purchaser's agent will be entitled to deduct and withhold from the Purchase Price, or any other payment otherwise payable pursuant to this Agreement, such amounts as may be required to be deducted and withheld under any provision of Federal, state, local or foreign Tax Law and to request any necessary tax forms or information, including Form W-9 or the appropriate series of Form W-8, as applicable, or any similar information, and to share such forms with Purchaser, its Affiliates and the Purchaser's agent. To the extent that amounts are so deducted and withheld, such deducted and withheld amounts will be treated for all purposes of this Agreement as having been paid to the Person in respect of whom such deduction and withholding was made.

Section 1.7 Transfer Taxes. The Sellers will pay any transfer, documentary, sales, use, stamp, registration, and other such Taxes and any conveyance fees, recording charges and other fees and charges arising out of the transactions contemplated by this Agreement (collectively, "Transfer Taxes") as and when due; provided, however, that if any Purchase Price is to be issued to any Person(s) other than the registered holder(s) of a surrendered Certificate, it shall be a condition of the issuance and delivery of such consideration that the amount of any stock transfer taxes (whether imposed on the registered holder(s) or such Person(s)) payable on account of the transfer (or transfers) of the surrendered stock shall be delivered to Purchaser by the registered holder(s) or such other Person(s) to whom the payment will be delivered or satisfactory evidence of the payment of such taxes or non-applicability thereof will be submitted to Purchaser before such Purchase Price will be issued or paid. In no event shall Purchaser or the Company bear any of the Taxes listed in the previous sentence or any other Tax imposed in connection with any Seller's receipt of Purchase Price, or other payment otherwise payable pursuant to this Agreement, to which such Seller is entitled.

Section 1.8 Earn-Out

(a) Certain Definitions.

(i) "Annual Net Sales" means Net Sales during any twelve-month period commencing on January 1 and ending on December 31 of any year during the Commercial Milestone Period.

(ii) "Commercial Milestone Period" means the period beginning on the date of realization of the Approval Milestone and ending on December 31 of the year in which the ten (10) year anniversary of realization of the Approval Milestone occurs.

(iii) "Commercially Reasonable Efforts" shall mean the efforts and resources, consistent with the exercise of prudent scientific and business judgment and its normal business practices, that Purchaser would expend for a research program or product candidate, as applicable, owned or licensed by it with similar commercial and development potential and at a similar stage of development or commercialization, taking into consideration, among such other things as Purchaser deems necessary or appropriate in its discretion, complexity of development, safety and efficacy, product profile, the competitiveness of alternative products, regulatory concerns, potential market and market size, proprietary position and potential profitability.

(iv) "Company Pluripotent Stem Cell Technology" means any and all proprietary Company Intellectual Property that is (a) owned by or licensed to the Company immediately prior to and immediately following the Closing, including, but not limited to, the Company Intellectual Property set forth on Schedule 1.8(a)(iv), but excluding any knowhow that has been or becomes published or is or becomes publicly available, and (b) directed to pluripotent stem cell derived cardiac technology, and/or to the use of pluripotent stem cell derived cardiac technology in human heart cell regeneration.

(v) "Earn-Out Payment" means the IND Milestone Payment, POC Milestone Payment, the Approval Milestone Payment or any Commercial Milestone Payment, as applicable.

(vi) "Earn-Out Product" means any therapeutic product for human heart cell regeneration developed by or on behalf of Purchaser or any of its Subsidiaries that uses, contains, or incorporates and is materially dependent upon Company Pluripotent Stem Cell Technology. The parties acknowledge and agree that Schedule 1.8(a)(iv) may not be a complete summary of the Company Pluripotent Stem Cell Technology. Accordingly, so long as Dr. Charles Murry is an employee or consultant of Purchaser in good standing and has provided services to the Purchaser continuously since the Closing at or in excess of the minimum services commitments set forth on Schedule 1.8(a)(vi) at the time an investigational new drug application is filed by Purchaser or any of its Subsidiaries with the FDA or the European Medicines Agency for any therapeutic product for human heart cell regeneration developed by or on behalf of Purchaser or any of its Subsidiaries that uses, contains, or incorporates any Company Pluripotent Stem Cell Technology, then such product shall be deemed an Earn-Out Product.

(vii) "Licensees" with respect to Purchaser means any third party to whom Purchaser has granted authority to develop or sell any Earn-Out Product, including any licensee or sublicensee, but shall exclude any third party contractor (e.g., manufacturer, contract research organization, distributor, etc.) that performs activities on behalf of Purchaser. "Licensees" with respect to Assignee shall have the same meaning as set forth above, provided, that references to "Purchaser" shall refer instead to Assignee and references to "Earn-Out Products" shall refer instead to Royalty Products.

(viii) "Milestone" means the IND Milestone, the POC Milestone, the Approval Milestone or any Commercial Milestone, as applicable.

(ix) "Net Sales" with respect to Earn-Out Products means the amount invoiced by Purchaser, its Subsidiaries, parent company or Licensees for the sale of such Earn-Out Products in the ordinary course of business less the following: (a) sales returns and allowances actually paid, granted or accrued on such Earn-Out Products, including trade, quantity, prompt pay and cash discounts, and any other similar adjustments, including those granted on account of price adjustments or billing errors; (b) all credits, reserves or allowances given or made for rejection, return, recall of, and for uncollectible amounts (net of any amounts subsequently collected) on such Earn-Out Products, or for rebates or retroactive price reductions; (c) taxes, duties or other governmental charges (other than income tax) levied on the production, sale, transportation, delivery, or use of such Earn-Out Products; (d) charges for freight, transport, packing, handling, customs, and insurance related to the sale and distribution of such Earn-Out Products; and (e) wholesaler, distributor and product administration fees related to the Earn-Out Products; provided, that Net Sales shall not include any amounts due and payable or otherwise received for such products utilized for clinical trials or provided without charge for education, compassionate use or other non-commercial purposes. "Net Sales" with respect to Royalty Products shall have the same meaning as set forth above, provided, that references to "Purchaser, its Subsidiaries, parent company or Licensees" shall refer instead to Assignee, its Subsidiaries, parent company or Licensees, references to "Purchaser or a Subsidiary of Purchaser" shall refer instead to Assignee or a Subsidiary of Assignee, references to "Purchaser" shall refer instead to Assignee, and references to "Earn-Out Products" shall refer instead to Royalty Products.

(x) "Phase II Clinical Trial" means a human clinical trial of a cellular therapy product in the United States that satisfies the requirements of U.S. 21 C.F.R. Part 312.21(b) and is intended to generate evidence of clinical safety and effectiveness for a particular indication or indications in a target patient population. For clarity, if a portion of a Phase I/II clinical trial, or a portion of a Phase II/III clinical trial, meets the requirements of the definition of a Phase II Clinical Trial set forth above, such portion (and only such portion) will also be considered a Phase II Clinical Trial for the purposes of this Agreement. A patient in any such Phase I/II clinical trial or Phase II/III clinical trial will only be considered treated as part of a Phase II Clinical Trial if such patient was treated as part of the portion of such clinical trial that satisfies the requirements of the definition of a Phase II Clinical Trial set forth above.

(b) Development Milestones. Subject to the limitations of this Agreement, the Sellers shall be entitled to receive from Purchaser payments of additional cash amounts based on realization after the Closing Date of the Development Milestones set forth below.

(i) *IND Milestone*. Upon the acceptance of an investigational new drug application, as defined in 21 C.F.R. § 312.3, filed by Purchaser or any of its Subsidiaries or Licensees with the FDA for an Earn-Out Product (wherein "acceptance" means that a clinical study in humans may be initiated based on such investigational new drug application) prior to the ten (10) year anniversary of the Closing Date (the "IND Milestone Date"), Purchaser shall pay to the Sellers eight million dollars ($8,000,000) (the "IND Milestone Payment") in accordance with this Section 1.8.

(ii) *POC Milestone*. Upon treatment of a human patient with an Earn-Out Product in a Phase II Clinical Trial by Purchaser or any of its Subsidiaries or Licensees prior to the ten (10) year anniversary of the Closing Date (the "POC Milestone"), Purchaser shall pay to the Sellers seventeen million dollars ($17,000,000) (the "POC Milestone Payment") in accordance with this Section 1.8.

(iii) *Approval Milestone*. Upon receipt of the first approval by the FDA or the European Medicines Agency of the marketing and sale by Purchaser or any of its Subsidiaries or Licensees of an Earn-Out Product in the United States, France, Germany, Italy, Spain or the United Kingdom prior to the fifteen (15) year anniversary of the Closing Date (the "Approval Milestone" and, together with the IND Milestone and the POC Milestone, the "Development Milestones"), Purchaser shall pay to the Sellers fifty million dollars ($50,000,000) (the "Approval Milestone Payment" and, together with the IND Milestone Payment and the POC Milestone Payment, the "Development Milestone Payments") in accordance with this Section 1.8.

(iv) Purchaser shall notify the Sellers' Representative in writing of the occurrence of any Development Milestone within thirty (30) days of such occurrence. Within ten (10) Business Days after notification by Purchaser to the Seller's Representative of the realization of such Development Milestone as provided herein, Purchaser shall pay or cause to be paid the applicable Development Milestone Payment to the Sellers in accordance with Section 1.2(b). Purchaser shall not be required to make more than one IND Milestone Payment, more than one POC Milestone Payment, or more than one Approval Milestone Payment.

(v) Following the Closing, Purchaser shall use Commercially Reasonable Efforts to achieve the IND Milestone and the POC Milestone prior to the ten (10) year anniversary of the Closing Date and the Approval Milestone prior to the fifteen (15) year anniversary of the Closing Date.

(vi) Notwithstanding the foregoing, Purchaser's obligations under Section 1.8(b)(v) to use Commercially Reasonable Efforts shall be deemed to have been satisfied and shall terminate once Purchaser, its parent company, and its Subsidiaries have spent, directly or indirectly, an aggregate of fifty million dollars ($50,000,000) towards achieving the Development Milestones for the Earn-Out Product(s).

(c) Commercial Milestones. Subject to the limitations of this Agreement, if the Approval Milestone is realized prior to the fifteen (15) year anniversary of the Closing Date, the Sellers shall be entitled to receive from Purchaser payments of additional cash amounts based on qualifying sales, if any, of Earn-Out Products during the Commercial Milestone Period, as follows.

(i) Purchaser shall pay to the Sellers the amount set forth below opposite the applicable Commercial Milestone (each a "Commercial Milestone Payment") for the first period in which Annual Net Sales of Earn-Out Products equal or exceed any of the applicable thresholds set forth below (each a "Commercial Milestone").

Commercial Milestone – Annual Net Sales	**Commercial Milestone Payment**
One hundred million dollars ($100,000,000)	Five million dollars ($5,000,000)
Two hundred fifty million dollars ($250,000,000)	Ten million dollars ($10,000,000)
Five hundred million dollars ($500,000,000)	Twenty million dollars ($20,000,000)
One billion dollars ($1,000,000,000)	Thirty million dollars ($30,000,000)

(ii) Within sixty (60) days after the end of each calendar year during the Commercial Milestone Period, Purchaser shall deliver to the Sellers' Representative a statement (each such statement, an "Earn-Out Statement") indicating in reasonable detail the amount of Annual Net Sales for the preceding calendar year; provided, however, that such reporting obligations shall cease after delivery of the Earn-Out Statement for the year in which the Earn-Out Period ends. If one or more of the Commercial Milestones is realized for such calendar year, Purchaser shall, within ten (10) Business Days after delivery of the Earn-Out Statement, pay or cause to be paid the applicable Commercial Milestone Payment or Commercial Milestone Payments to the Sellers in accordance with Section 1.2(b).

(iii) Notwithstanding the foregoing, Purchaser (A) shall not be required to make more than one Commercial Milestone Payment with respect to any Commercial Milestone even if such Commercial Milestone is again realized in a subsequent annual period, and (B) shall not be required to make Commercial Milestone Payments in excess of sixty-five million dollars ($65,000,000) in the aggregate.

(iv) Notwithstanding the foregoing, Net Sales shall not include (A) any amounts due and payable or otherwise received in connection with any sale, license, transfer or other disposition of assets by Purchaser, its Subsidiaries, parent company or Licensees to a third party, where a portion of such assets includes the Earn-Out Products; (B) any amounts due and payable or otherwise received in connection with any acquisition of Purchaser, its Subsidiaries, parent company or Licensees that includes the acquisition of the Earn-Out Products; or (C) any consideration received from a third party in connection with research and development of the Earn-Out Products, investment or partnering of Purchaser, its Subsidiaries, parent company or Licensees, other than, in each of clauses (A) through (C), amounts or consideration received for sales of Earn-Out Products in the ordinary course of business.

(d) Miscellaneous.

(i) Purchaser shall maintain, and shall cause its Subsidiaries and Licensees to maintain, reasonable documentation, consistent with Purchaser's customary practices, regarding development activities relating to the efforts undertaken to achieve the Milestones. In addition, until the earliest of (A) such time as all Milestone Consideration has been paid by Purchaser pursuant to this Section 1.8, (B) either (1) if the Approval Milestone is realized on or prior to the fifteen (15) year anniversary of the Closing Date, the end of the Commercial Milestone Period, or (2) otherwise, the fifteen (15) year anniversary of the Closing Date, or (C) a Termination Decision (the "Earn-Out Period"), if the Sellers' Representative requests in writing a meeting with representatives of Purchaser to discuss the status of the Milestones, Purchaser shall make available for such a meeting to be held in Purchaser's offices at such date and time as shall be mutually agreed upon by Purchaser and the Sellers' Representative one or more representatives of Purchaser (as determined by Purchaser) (each such person, a "Purchaser Milestone Representative"). The Sellers' Representative may not request more than two (2) meetings with Purchaser in any twelve (12) month period. In the absence of a written request by the Sellers' Representative for such a meeting, Purchaser shall not have any further obligations to hold any such meeting. Any information disclosed in such meeting shall be subject to Section 6.1 hereof.

(ii) If Purchaser sells the Company or sells or exclusively licenses all or substantially all of the assets of the Company during the Earn-Out Period, Purchaser shall provide the Sellers' Representative written notice of such transaction and cause the acquirer to agree in writing (A) to fulfill Purchaser's obligations pursuant to this Section 1.8 with respect to any Earn-Out Product acquired by such Person in connection with such transaction and (B) to fulfill Purchaser's obligations pursuant to Section 1.9. Purchaser and its Subsidiaries, including the Company, shall not, directly or through one or more intermediaries (i.e., whether through one or more assignments, one or more levels of licenses and/or sublicenses, any combination thereof or otherwise), otherwise license, sublicense, assign or transfer the Company Intellectual Property to any Person other than Purchaser or Purchaser's Affiliates unless Purchaser remains ultimately responsible for the payment of all applicable Earn-Out Payments if and as they become due and owing.

(iii) If the Sellers' Representative in good faith believes that Purchaser has breached its obligations under this Section 1.8 or Section 1.9 below, then the Sellers' Representative may provide Purchaser with written notice thereof, which notice shall specify the alleged breach. If such notice is given, the Purchaser shall designate one or more Purchaser representatives to meet with the Sellers' Representative (in person at Purchaser's offices or by telephone) within fifteen (15) Business Days from the date of such notice to address the Sellers' Representative's belief that Purchaser has breached its obligations under this Section 1.8 or Section 1.9 below. In the event that the Sellers' Representative and the Purchaser representatives are unable to resolve the Sellers' Representative's claim of the alleged breach by (A) the date that is one hundred twenty (120) days after such meeting, or (B) the date that is one hundred fifty (150) days after the written notice from the Sellers' Representative to Purchaser of the alleged material breach if no meeting (whether in person or by telephone) has been held by such date, then the Sellers' Representative may pursue any available remedies, unless Purchaser and the Sellers' Representative mutually agree to an extension to the foregoing time periods or Purchaser has cured (or caused to be cured) any applicable breach within such time period.

(iv) The parties acknowledge and agree that Purchaser's or the Company's achievement of the Milestones are material factors in determining the valuation of the Company by Purchaser.

(v) The right of the Sellers to receive any portion of any Earn-Out Payment: (A) is solely a contractual right and is not a security for purposes of any federal or state securities Laws (and shall confer upon each such Person only the rights of a general unsecured creditor under applicable state Law), (B) will not be represented by any form of certificate or instrument, (C) is not redeemable, and (D) may not be sold, assigned, gifted, conveyed, transferred or otherwise disposed of other than by operation of law (each, for purposes of this Section 1.8, a "Transfer") and any purported Transfer in violation of this clause shall be null and void. Nothing in this Section 1.8 shall (A) create any employment right or entitlement of any Person that is an employee of the Company prior to the Closing Date, or any Person that is an employee of Purchaser after the Closing Date; (B) represent an ownership interest in Purchaser; or (C) create any fiduciary duty on the part of Purchaser to any Person with respect to any Earn-Out Payment.

(vi) Subject to Section 9.6(f) hereof, any Earn-Out Payment that is payable to the Sellers shall be reduced by the Offset Amount (as defined below), if any, as of the date immediately prior to the payment date of the Earn-Out Payment.

Section 1.9 Assignment Transaction; Right of First Negotiation.

(a) Notice of Termination Decision. If Purchaser's board of directors affirmatively determines in its discretion to terminate and abandon all development activities with respect to all Earn-Out Products prior to the earlier of (i) such time as all Development Milestone Payments have been paid by Purchaser pursuant to Section 1.8, and (ii) the fifteen (15) year anniversary of the Closing Date (such decision, a "Termination Decision"), Purchaser shall promptly thereafter send written notice thereof to the Sellers' Representative together with an explanation of the reasons for such cessation of activities and why Purchaser has determined that such cessation is consistent with its obligation to use Commercially Reasonable Efforts as required under Section 1.8(b)(iv). If the Sellers' Representative desires to assume the assets and related liabilities described in clause (b) below pursuant to the terms thereof (the "Assignment Election"), or to exercise a right of first negotiation pursuant to clause (c) below (the "Negotiation Election"), the Sellers' Representative shall deliver written notice of his election to do so to the Purchaser within twenty (20) Business Days after receipt of notice of the Termination Decision. If the Sellers' Representative does not provide either such notice within such period, then Purchaser shall have no further obligation with respect to this Section 1.9. As used in Section 1.9(b) below only, the term "Assignor" means the Purchaser, as assignor; the term "Assignee" means the Sellers' Representative or his designated assignee (for the benefit of the Sellers), as assignee; and the term "Assignment Transaction" means the transfer of the Assigned Assets (as defined below), the assumption of the Assumed Liabilities (as defined below) and the license of the Licensed Assets (as defined below).

(b) Assignment of Assets and Assumption of Liabilities. Subject to the limitations and conditions herein, following receipt of an Assignment Election, the Assignor and Assignee agree to incorporate the following terms and conditions into definitive agreements that effect the Assignment Transaction (the "Definitive Agreements"):

(i) Assigned Assets. Assignor shall transfer and assign to Assignee all of Assignor's right, title and interest, if any, in or to the following assets (the "Assigned Assets"):

(A) the UW License (to the extent not terminated), including the rights of Assignor, if any, thereunder to all Licensed Know-How, Licensed Clinical Trial Information and Licensed Program Materials (as defined therein);

(B) the Rockefeller License, if executed, and the Material Transfer Agreement, dated as of the Closing Date, between the University of Washington and Purchaser (the "UW MTA"), including the rights of Assignor and Assignee, if any, thereunder to the original, existing cell-lines set forth on Schedule 1.9(b)(i)(B) (the "Identified Cell-lines") and any cell-lines derived therefrom that are modified to enhance cardiac engraftment or improve arrhythmia and that are solely related to and useful only in connection with any Identified Earn-Out Product; provided, however, that the foregoing shall exclude, and Assignor may retain any rights pursuant to such agreements in or related to, any cell-lines derived from the Identified Cell-lines that are not solely related to and useful only in connection with any Identified Earn-Out Product;

(C) any Registered Intellectual Property that is solely related to and useful only in connection with one or more "Identified Earn-Out Products," which for purposes of this Agreement shall mean any Earn-Out Product (i) for which an investigational new drug application has been filed by Purchaser or any of its Subsidiaries with the FDA or foreign equivalent or (ii) for which Purchaser or any of its Subsidiaries have demonstrated intervention resulting in twenty percent (20%) increase in graft size, twenty percent (20%) reduction in amount of time in engraftment arrhythmia (premature ventricular contractions, accelerated idioventricular rhythm, ventricular tachycardia or ventricular fibrillation), or twenty percent (20%) reduction in the rate of engraftment arrhythmia, in each case (a) in a relevant pig or non-human primate model and (b) relative to the best data generated by Dr. Charles Murry's lab in pig or nonhuman primate model with current best practice methods for production of stem cell-derived cardiomyocyte product on the date of this Agreement, as set forth on Schedule 1.9(b)(i)(C).

(D) all regulatory filings, regulatory approvals and written correspondence with the FDA or other applicable Regulatory Authorities with respect thereto ("Regulatory Filings") that are solely related to and useful only with respect to any Identified Earn-Out Product; and

(E) all data generated by or on behalf of Assignor in the development of any Identified Earn-Out Product that is solely related to and useful only with respect to any Identified Earn-Out Product (the "Assigned Data").

Notwithstanding the foregoing, the Assigned Assets shall not include (1) any assets purchased, acquired or in-licensed by Assignor after the Closing, or (2) any assets of any licensor, partner, acquirer, Affiliate (other than a wholly owned Subsidiary of Assignor) or parent entity of Assignor, other than assignment of the Rockefeller License and the UW MTA pursuant to clause (B) above; provided such assets were not transferred to such entity by Assignor for the purpose of avoiding its obligations hereunder.

The foregoing assignment shall be made on an "as is" basis, without representation or warranty from the Assignor of any type, whether express or implied, including the sufficiency of the Acquired Assets for any purposes, or any implied warranty of merchantability, fitness for a particular purposes or non-infringement. The Assigned Assets shall be subject to any and all joint ownership rights or obligations, licenses or other Liens of Assignor relating to the Assigned Assets as in effect at the time of the Assignment Transaction. The Assigned Assets shall not include the transfer of any asset or any interest therein which Assignor is unable to effect unilaterally, except to the extent such consent is expressly obtained, as provided below.

(ii) Assumed Liabilities. Assignee shall agree to assume and become liable for, and to pay, perform and discharge as and when due, all Liabilities (whether known or unknown, vested or unvested, asserted or unasserted, absolute or contingent, accrued or unaccrued, assessed or unassessed, actual or potential, and due or to become due), arising from or related to the Assigned Assets, including covenants, payments, premiums, penalties or obligations (collectively, the "Assumed Liabilities"). The Assumed Liabilities shall exclude any Liabilities arising from the conduct of the business related to the Assigned Assets prior to the closing of the Assignment Transactions other than any Liabilities that pre-date such closing but become due and payable or arise as a result of the conduct of the business related to the Assigned Assets thereafter and are disclosed to Assignee prior to closing (the "Excluded Liabilities"), including, without limitation, additional payment or royalty obligations that thereafter become due and payable to the University of Washington under the UW License, to the Rockefeller University under any license relating to the Identified Cell-lines, or under any other contract or license of Assignor that is assigned or transferred to Assignee.

(iii) Licensed Assets. Assignor shall agree to license to Assignee on a non-exclusive basis under Assignor's right and interest, if any, in or to the following assets, other than any Manufacturing-Relating Assets, solely for use in the field of therapeutic products for human heart cell regeneration:

(A) any cell-lines derived from the Identified Cell-lines that are modified to enhance cardiac engraftment or improve arrhythmia;

(B) any Registered Intellectual Property;

(C) all Regulatory Filings; and

(D) all data generated by or on behalf of Assignor in the development of any Identified Earn-Out Product;

provided, that, in the case of each of clauses (A) – (D), such asset is solely related to any Identified Earn-Out Product, but is also useful for Assignor activities outside the scope of the Identified Earn-Out Product(s) (the "Licensed Assets").

Notwithstanding the foregoing, the Licensed Assets shall not include (1) any assets purchased, acquired or in-licensed by Assignor after the Closing, (2) any assets of any licensor, partner, acquirer, Affiliate (other than a wholly owned Subsidiary of Assignor) or parent entity of Assignor, other than the Rockefeller License; provided such assets were not transferred to such entity by Assignor for the purpose of avoiding its obligations hereunder, or (3) any assets relating to manufacturing processes, development processes or analytical development, including any Registered Intellectual Property or data related thereto and the Chemistry, Manufacturing and Controls or similar portion of any Regulatory Filing and any correspondence related thereto ("Manufacturing-Related Assets").

The foregoing license shall be made on an "as is" basis, without representation or warranty from the Assignor of any type, whether express or implied, including the sufficiency of the Licensed Assets for any purposes, or any implied warranty of merchantability, fitness for a particular purposes or non-infringement, and shall include confidentiality provisions satisfactory to Assignor. The Licensed Assets shall be subject to any and all joint ownership rights or obligations, licenses or other Liens of Assignor relating to the Licensed Assets as in effect at the time of the license. The Licensed Assets shall not include the license of any asset or any interest therein which Assignor is unable to effect unilaterally, except to the extent such consent is expressly obtained, as provided below.

(iv) Indemnification.

(A) Assignee shall agree to indemnify, hold harmless and reimburse the Assignor, its Affiliates and their employees, directors, agents and representatives (the "Assignor Indemnitees") for any and all Damages incurred or sustained by them, including Damages arising from third party claims, that arise from or relate to (i) any failure to obtain any Required Consent, (ii) operation of the business relating to the Assigned Assets or use of the Licensed Assets by Assignee after the closing of the Assignment Transaction except to the extent such Damages arise directly from any Excluded Liability, and (iii) the Assumed Liabilities.

(B) Assignor shall agree to indemnify, hold harmless and reimburse the Assignee, its Affiliates and their employees, directors, agents and representatives (the "Assignee Indemnitees") for any and all Damages incurred or sustained by them, including Damages arising from third party claims, that arise from or relate to the operation of the business relating to the Assigned Assets and Licensed Assets prior to the closing of the Assignment Transaction (other than the Assumed Liabilities).

(v) Conditions. The Parties' obligations to effect the Assignment Transaction shall be conditioned upon the following:

(A) Assignee and Assignor shall have entered into the Definitive Agreements, including a rudimentary bill of a sale and assignment of liabilities, specifying with particularity the Assigned Assets and the Assumed Liabilities contemplated above, a license of the Licensed Assets and such other documents as may be reasonably requested by Assignor, in form and substance satisfactory to Assignor;

(B) Assignee shall have obtained (at Assignee's sole expense) all consents, waivers, permits and approvals from all third parties and Governmental Entities that either Assignor or Assignee determines prior to the closing of the Assignment Transaction are necessary or appropriate to effect the Assignment Transaction ("Required Consents"), which shall include where necessary or appropriate in Assignor's reasonable determination, a full release and novation in favor of Assignor, in each case in form and substance reasonably satisfactory to Assignor;

(C) The Assignment Transaction shall be permitted by applicable law, and no Governmental Entity shall have issued or entered any stay, decree, judgment, injunction, statute, rule or regulation which makes the Assignment Transaction illegal or prohibits it;

(D) No Proceeding shall be pending or threatened against the Assignor with respect to the Assigned Assets, the Assumed Liabilities or the Licensed Assets; and

(E) Such other customary conditions as are necessary or appropriate in Assignor's commercially reasonable determination, based on the facts and circumstances then existing, including Assignor having obtained any stockholder consent that is necessary or appropriate to effect the Assignment Transaction and reporting and audit covenants with respect to the royalty obligations.

(vi) Covenants.

(A) Each of Assignor and Assignee shall use reasonable commercial efforts to effect the Assignment Transaction on a timely basis; provided, that in no event shall the Assignor be required to bear any out-of-pocket expense or incur any incremental Liability to do so other than fees and expenses of Assignor's counsel; provided, further, that the forgoing shall not obligate either Assignor or Assignee to continue to use reasonable efforts if at any time Assignee determines it does not want to move forward with the Assignment Transaction.

(B) Assignor shall assist Assignee (at Assignee's sole expense) in obtaining the third party consents contemplated by clause (v)(B) above.

(C) During the six (6) months following the effective date of the assignment, Assignor shall use commercially reasonable efforts to effect the transfer of the Assigned Data.

(D) Assignee shall bear any and all Taxes arising in connection with the Assignment Transaction.

(vii) Royalty.

(A) Generally. In consideration of the Assignment Transaction, Assignee shall pay to Assignor a royalty equal to (without duplications) (i) 3% of the Net Sales that arise from or relate to the commercialization, licensing or sale of any Royalty Product (as defined below) covered by a Valid Claim (as defined below) or (ii) 1.5% of the Net Sales that arise from or relate to the commercialization, licensing or sale of any Royalty Product that is not covered by a Valid Claim.

(B) Definitions.

"Royalty Patents" means the Licensed Patents (as defined in the UW License) and any Patents included in the Assigned Assets.

"Royalty Product" means any Earn-Out Product or other therapeutic product for human heart cell regeneration derived from or developed through use of an Earn-Out Product, any Assigned Assets or any Licensed Assets by or on behalf of Assignee, its Subsidiaries, parent company or Licensees.

"Valid Claim" means (a) a claim in an issued, unexpired United States or granted foreign patent included in the Royalty Patents that: (i) has not been held invalid, unpatentable, or unenforceable by a decision of a court or other governmental agency of competent jurisdiction and not subject to appeal, (ii) has not been admitted to be invalid or unenforceable through reissue, inter partes review, disclaimer, or otherwise, (iii) has not been lost through an interference, reexamination, or reissue proceeding; or (b) a pending claim of a pending patent application included in the Royalty Patents.

(C) Assumption. If Assignee sells or exclusively licenses all or substantially all of the Assigned Assets, Assignee shall provide Assignor written notice of such transaction and cause the acquirer to agree in writing to fulfill Assignee's obligations pursuant to this Section 1.9(b)(vii) with respect to any Royalty Product acquired by such Person in connection with such transaction. Assignee and its Subsidiaries shall not, directly or through one or more intermediaries (i.e., whether through one or more assignments, one or more levels of licenses and/or sublicenses, any combination thereof or otherwise), otherwise license, sublicense, assign or transfer the Assigned Assets to any Person unless Assignee remains ultimately responsible for the payment of all applicable royalty payments if and as they become due and owing

(viii) Termination. In the event that Assignee and Assignor have not entered into the Definitive Agreements within six (6) months of the date of a Termination Decision, then this Section 1.9(b) shall terminate along with the obligations of the parties arising thereunder.

(c) Right of First Negotiation. Subject to the limitations and conditions herein, following receipt of a Negotiation Election, Purchaser hereby grants to the Sellers' Representative (for the benefit of the Sellers), a right of first negotiation (the "Right of First Negotiation") with respect to a license to Seller's right, title and interest in any Intellectual Property Rights developed by Purchaser or its Subsidiaries arising from and related to the Company Pluripotent Stem Cell Technology (such assets and liabilities, the "Program Assets" and such license, the "Program License") that are not transferred or assigned or licensed pursuant to Section 1.9(b). Purchaser and the Sellers' Representative shall negotiate exclusively and in good faith concerning the commercially reasonable terms of the Program License, including the structure and economics thereof, for a period of two (2) months from the date of Sellers' Representative's receipt of notice of the Termination Decision (the "Exclusive Negotiation Period"). If the Purchaser and the Sellers' Representative enter into a term sheet with respect to the Program License on mutually acceptable terms within the Exclusive Negotiation Period, the Exclusive Negotiation Period shall be automatically extended for an additional two (2) months, during which period Purchaser and the Sellers' Representative shall negotiate exclusively and in good faith the definitive documentation for the Program License. If the Program License is not entered into within the Exclusive Negotiation Period, then this Section 1.9(c) shall terminate along with the obligations of the parties arising thereunder. Notwithstanding the foregoing, the parties acknowledge and agree that neither the Sellers Representative nor the Purchaser has any obligation to license the Program Assets, in each case, for any or no reason, whether at fair market value or otherwise.

(d) Miscellaneous. Notwithstanding anything to the contrary set forth herein, nothing in this Section 1.9 shall impose or imply any limitation, condition or restriction on the ability of Purchaser or its Affiliates to develop, commercialize or exploit any of the assets or business acquired pursuant to this Agreement, it being acknowledged and agreed that Purchaser shall remain free to operate its business in its discretion. In furtherance thereof, nothing in this Section 1.9 shall (1) impose or imply any limit or requirement on Purchaser to maintain exclusive ownership of any asset contemplated hereby; (2) prohibit or limit Purchaser from entering into any research, development, licensing, partnering or other commercial arrangements with respect to the assets contemplated hereby; (3) prohibit or limit Purchaser from granting any lien or security interest or otherwise encumbering any of the assets contemplated hereby; or (4) prohibit or limit Purchaser from transferring or selling any or all of the assets contemplated hereby or the sale of Purchaser, subject to the limitations of Section 1.8(c)(ii). In furtherance thereof, the Sellers' Representative acknowledges and agrees that the operation of the business by Purchaser after the Closing may diminish or even extinguish the value of the assets and related business covered by this Section 1.9 and the ability of the Purchaser to effectively assign, sell or transfer the assets contemplated thereby.

ARTICLE II

REPRESENTATIONS AND WARRANTIES OF THE COMPANY

Except as set forth in the disclosure schedule delivered to Purchaser prior to the execution of this Agreement (the "Disclosure Schedule") the Company represents and warrants to Purchaser that the following are true and correct as of the date hereof and true and correct as of the Closing Date as if such representations and warranties were made at and as of the Closing Date (except for such representations and warranties as are made only as of a specific date, which shall only be made as of such date).

Section 2.1 Organization.

(a) The Company is a corporation duly incorporated, validly existing and in good standing under the Laws of the jurisdiction of its incorporation and has all requisite corporate power and authority to own, lease and operate its assets and properties and to carry on its the business as currently being conducted. The Company does not have any Subsidiaries. The Company is duly qualified or licensed as a foreign entity to do business, and is in good standing in each jurisdiction in which the property owned, leased or operated by it or the nature of the business conducted by it makes such qualification or licensing necessary, except in such jurisdictions where the failure to be so duly qualified or licensed and in good standing would not have a Company Material Adverse Effect. The Company has made available to Purchaser accurate and complete copies of the Company's certificate of incorporation, as amended to date (the "Certificate of Incorporation"), and bylaws, as amended to date (collectively, the "Charter Documents").

(b) Section 2.1(b) of the Disclosure Schedule lists the directors and officers of the Company and each Subsidiary of the Company.

(c) Except as set forth in Section 2.1(a) of the Disclosure Schedule, the Company does not control, directly or indirectly, does not have, and has never had, any direct or indirect equity or other ownership interest in, or any obligations to acquire any Securities of, or make any contribution to, or debt or equity investment in, any Person.

Section 2.2 Capitalization.

(a) The authorized capital stock of the Company consists of (i) 10,000,000 shares of Company Common Stock, of which 7,894,737 shares are issued and outstanding (none of which are Restricted Stock), and (ii) no shares of Preferred Stock. All of the outstanding shares of Company Capital Stock are duly authorized, validly issued, fully paid and non-assessable and are not subject to preemptive rights created by statute, the Charter Documents, or any agreement to which the Company is a party or by which it is bound. The Spreadsheet will be, as of the Closing, true, correct and complete and the payments made in accordance therewith at the Closing as well as any Holdback Release Amount, Remaining Amount and Earn-Out Payment, when paid pursuant to this Agreement will be in accordance with the Certificate and the terms of each outstanding Security of the Company.

(b) Section 2.2(b) of the Disclosure Schedule contains a true, complete and correct list of all stockholders of the Company, setting forth for each such stockholder's address of record, the number, class and series of shares of Company Capital Stock held by such Person along with the date of acquisition, the amount of consideration paid therefor, whether such shares are Restricted Stock, the vesting schedule and each repurchase and/or redemption right to which such shares are subject. No dividends have been paid since the Company's inception and no dividends will be due or payable with respect to any shares of Company Capital Stock prior to or in connection with the Closing.

(c) The Company has not reserved any shares of Company Common Stock for issuance pursuant to any stock option plan and no Company Stock Option, Restricted Stock or other compensatory Security or Company Warrant has been granted, promised or issued to any Person.

(d) All outstanding Securities of the Company have been issued and exercised, if applicable, in compliance with the Charter Documents, all financing documents of the Company and all applicable Laws, including federal securities laws and any applicable state securities or "blue sky" laws.

(e) No Security will by its terms require an adjustment in connection with the Acquisition. Neither the consummation of transactions contemplated by this Agreement, nor any action taken or to be taken by the Company or any of its Subsidiaries in connection with such transactions, will result in (i) any acceleration of exercisability or vesting, whether or not contingent on the occurrence of any event on or after the Closing, in favor of any Security of the Company or any of its Subsidiaries, (ii) any additional benefits for any holder of any Security of the Company or any of its Subsidiaries in their capacity as such, or (iii) the inability of Purchaser after the Closing to exercise any right or benefit held by the Company or any of its Subsidiaries prior to the Closing with respect to any shares of Company Capital Stock or other Securities previously issued upon exercise of any Security.

(f) Except as set forth above, (i) there are no other Securities of the Company or any of its Subsidiaries authorized, issued or outstanding; (ii) there are no options, warrants, calls, preemptive rights, Indebtedness having general voting rights or debt convertible into securities having such rights ("Voting Debt"), convertible securities, or subscriptions or other rights, agreements, arrangements or commitments of any character, written or oral, to which the Company or, to the Knowledge of the Company, any Seller is a party or by which the Company or, to the Knowledge of the Company, any Seller is bound, relating to issued or unissued Securities of the Company or any of its Subsidiaries, obligating the Company or, to the Knowledge of the Company, any Seller to issue, transfer, sell, or cause to be issued, transferred, or sold, any Securities or Voting Debt of, or other equity interest in, the Company or any of its Subsidiaries or securities convertible into or exchangeable for such equity interests, or obligating the Company or any of its Subsidiaries to make any payment linked to the value of the Company Capital Stock or the sale price of the Company, or obligating the Company or any of its Subsidiaries to grant, extend, accelerate the vesting of, change the price of, otherwise amend or enter into any such option, warrant, call, subscription, or other right, agreement, arrangement or commitment; and (iii) there are no outstanding contractual obligations of the Company or any of its Subsidiaries to repurchase, redeem or otherwise acquire any Company Capital Stock or other Securities of the Company or any of its Subsidiaries. There are no outstanding or authorized stock appreciation, phantom stock, profit participation, or other similar rights with respect to the Company or any of its Subsidiaries.

(g) There are no (i) voting trusts, proxies, or other agreements or understandings with respect to the voting stock of the Company to which the Company or, to the Knowledge of the Company, any Seller is a party or (ii) agreements to which the Company or, to the Knowledge of the Company, any Seller is a party relating to the registration, sale or transfer (including agreements relating to rights of first refusal, co-sale rights or "drag along" rights) of any Company Capital Stock. All such agreements and understandings will terminate at or prior to the Closing.

(h) Following the Closing, (i) Purchaser will be the sole record and beneficial holder of all issued and outstanding Securities of the Company and all rights to acquire or receive any Securities of the Company, (ii) the Company will be the sole record and beneficial holder of all issued and outstanding Securities of the Company's Subsidiaries, (iii) there will be no other Securities of the Company or the Company's Subsidiaries outstanding, and (iv) no other Person will have any right to receive Securities of the Company or its Subsidiaries upon exercise, conversion or vesting of Securities or otherwise.

Section 2.3 Authority.

(a) The Company and each of its Subsidiaries has all requisite corporate power and authority to execute and deliver this Agreement and any Ancillary Agreements to which it is a party and to consummate the transactions contemplated hereby and thereby. The execution, delivery and performance of this Agreement and any Ancillary Agreements to which the Company or any of its Subsidiaries is a party and the consummation of the transactions contemplated hereby and thereby have been duly and validly authorized by all necessary corporate action on the part of the Company and each of its Subsidiaries, and no further corporate action is necessary on the part of the Company or any of its Subsidiaries to authorize this Agreement or any Ancillary Agreement to which it is a party or to consummate the transactions contemplated hereby or thereby. This Agreement and each of the Ancillary Agreements to which the Company or any of its Subsidiaries is a party have been duly executed and delivered by the Company or such Subsidiary, as applicable, and, assuming the due authorization, execution and delivery by the other parties hereto and thereto, constitute valid and binding obligations of the Company or such Subsidiary, as applicable, enforceable against the Company or such Subsidiary in accordance with their terms, subject to the Bankruptcy and Equity Exception.

(b) Without limiting the generality of the foregoing, the Board of Directors of the Company, at a meeting duly called and held, or acting by written consent, has unanimously (i) determined that the Acquisition and the other transactions contemplated hereby are advisable, fair to, and in the best interests of, the Company and its stockholders, and (ii) approved and adopted this Agreement, the Ancillary Agreements to which the Company is a party, the Acquisition, and the other transactions contemplated hereby and thereby in accordance with the provisions of the DGCL and the Charter Documents. No vote of the holders of any class or series of Company Securities is necessary under the Charter Documents and applicable Law (including the DGCL) to approve this Agreement, the Ancillary Agreements to which the Company is or will be a party and to consummate the transactions contemplated hereby and thereby, including the Acquisition.

Section 2.4 No Conflict; Consents.

(a) No consent, notice, waiver, approval, order or authorization of, or registration, declaration or filing with any Governmental Entity is required by, or with respect to, the Company or any of its Subsidiaries in connection with the execution and delivery of this Agreement and any Ancillary Agreement to which the Company or any of its Subsidiaries is a party or the consummation by the Company of the other transactions contemplated hereby and thereby (including the Acquisition).

(b) The execution and delivery by the Company of this Agreement and any Ancillary Agreement to which the Company or any of its Subsidiaries is a party, and the consummation of the transactions contemplated hereby and thereby (including the Acquisition), will not conflict with or result in any violation of or default under (with or without notice or lapse of time, or both) or give rise to a right of termination, cancellation, modification or acceleration of any obligation or loss of any benefit under, or result in the creation of any Lien under (any such event, a "Conflict"): (i) any provision of the Charter Documents or the organizational documents of any Subsidiary of the Company, (ii) any Material Contract, or (iii) any Law applicable to the Company or any of its Subsidiaries or any of their respective properties or assets (whether tangible or intangible). Section 2.4(b) of the Disclosure Schedule sets forth all necessary consents, waivers and approvals of parties to any Material Contracts required thereunder in connection with the Acquisition or the other transactions contemplated hereby, or for any such Material Contract to remain

in full force and effect without limitation, modification or alteration after the Closing. Following the Closing, the Company will continue to be permitted to exercise all of its rights under the Material Contracts without payment of any additional amounts or consideration other than ongoing fees, royalties or payments which the Company would otherwise be required to pay pursuant to the terms of such Contracts had the transactions contemplated by this Agreement not occurred.

Section 2.5 "Size of Person" Threshold(a) .

(a) The Company and its Subsidiaries do not meet the "size of person" threshold under the Hart-Scott-Rodino Antitrust Improvements Act (the "HSR Act"), and the rules and regulations promulgated thereunder. The Company regularly prepares unaudited balance sheets on a monthly basis. The Company is its own ultimate parent entity (as such term is defined in 16 C.F.R. § 801.1(a)(3)) and is not controlled (as such term is defined in 16 C.F.R. § 801.1(b)) by any other entity (as such term is defined in 16 C.F.R. § 801.1(a)(2)).

(b) Neither the Company nor any of its Subsidiaries is engaged in manufacturing (as such term is defined in 16 C.F.R. § 801.1(j) and interpreted by the Federal Trade Commission's Premerger Notification Office (for purposes of this Section 2.6, the "PNO")).

(c) The Company's and its' Subsidiaries' annual net sales (as such term is defined in 16 C.F.R. § 801.11 and interpreted by the PNO) as stated on its Last Regularly Prepared Annual Statement of Income and Expense will be below $180 million.

(d) The Company's and its' Subsidiaries' total assets (as such term is defined in 16 C.F.R. § 801.11 and interpreted by the PNO) as stated on its most recent regularly prepared balance sheet will be below $18 million.

(e) This representation and warranty is made solely for the purpose of determining the applicability of the HSR Act to the transactions contemplated by this Agreement.

Section 2.6 Absence of Undisclosed Liabilities.

(a) Section 2.6(a) of the Disclosure Schedule sets forth all bank accounts and cash and cash equivalents of the Company and its Subsidiaries.

(b) Neither the Company nor any of its Subsidiaries has any Liabilities, except for (i) the Liabilities set forth in Section 2.6(b) of the Disclosure Schedule, (ii) Acquisition Expenses set forth on the Estimated Closing Date Schedule, and (iii) written contractual liabilities pursuant to Material Contracts incurred in the ordinary course of business of the Company consistent with past practice that are not required by GAAP to be reflected on a balance sheet and, in each case in clause (iii), none of which results from, arises out of, relates to, is in the nature of, or was caused by any breach of contract, breach of warranty, tort, infringement or violation of Law and which do not exceed $25,000 in the aggregate.

(c) Since its date of formation, neither the Company, any Subsidiary of the Company, nor any of their Representatives, including any auditor or accountant, has received any material complaint, allegation, assertion or claim, whether written or oral, regarding the accounting or auditing practices, procedures, methodologies or methods of the Company or any of its Subsidiaries or of its internal controls over financial reporting, including any complaint, allegation, assertion or claim that the Company or any of its Subsidiaries has engaged in questionable accounting or auditing practices. There have been no instances of fraud, whether or not material, that occurred involving the management of the Company or any of its Subsidiaries or other employees or consultants of the Company or any of its Subsidiaries.

(d) Except as set forth in Section 2.6(b) of the Disclosure Schedule, neither the Company nor any of its Subsidiaries has any outstanding Indebtedness. No Indebtedness of the Company or any of its Subsidiaries contains any restriction upon (i) the prepayment of any of such Indebtedness without penalty, premium or other costs of any kind beyond principal and accrued interest, (ii) the incurrence of Indebtedness by the Company or any of its Subsidiaries, or (iii) the ability of the Company or any of its Subsidiaries to grant any lien on its properties or assets. All Indebtedness of the Company and its Subsidiaries will be repaid prior to the Closing or included as Estimated Indebtedness.

Section 2.7 Absence of Certain Changes. Since December 31, 2017, neither the Company nor any of its Subsidiaries has:

(a) suffered any Company Material Adverse Effect; or

(b) taken any action prohibited by Section 5.1 hereof.

Section 2.8 Litigation. There is no action, suit, claim, litigation, arbitration, proceeding, or investigation pending before any Governmental Entity nor, to the Company's Knowledge, threatened in which the Company or any of its Subsidiaries is a party. The foregoing includes, without limitation, actions pending or threatened involving the prior employment of any of the Company's or any of its Subsidiaries' employees or consultants, their use in connection with the business of such Person of any Intellectual Property allegedly proprietary to any of their current or former employers, or their obligations under any agreements with current or former employers. Neither the Company nor any of its Subsidiaries is a party or subject to the provisions of any judgment, order or decree of any Governmental Entity. There is no action, suit, claim, litigation, arbitration, proceeding or investigation which the Company or any of its Subsidiaries presently intends to initiate. To the Company's Knowledge, there are no occurrences, facts, or circumstances that would reasonably be expected to give rise to any claim against the Company or any of its Subsidiaries, or against any Person to which the Company or any of its Subsidiaries owes any obligation of indemnification or defense, for the violation of the rights of any third party or the violation of any Law.

Section 2.9 Compliance with Laws.

(a) Each consent, license, permit, grant or other authorization (i) pursuant to which the Company or any of its Subsidiaries currently operates or holds any interest in any of its properties, or (ii) which is required under applicable Law for the operation of the business of the Company or any of its Subsidiaries as currently conducted or the holding of any such interest, except for those the lack of which would not be material to the Company or such Subsidiary, has been issued or granted to the Company or such Subsidiary and is in full force and effect.

(b) The Company and each of its Subsidiaries is in compliance with, and has not violated, any applicable Law that affects the business, properties or assets of the Company or any of its Subsidiaries and no notice, charge, claim or action has been received by the Company or any of its Subsidiaries or, to the Company's Knowledge, has been filed, commenced or threatened against the Company or any of its Subsidiaries alleging any such violation.

(c) Neither the Company nor any of its Subsidiaries nor, to the Knowledge of the Company, any manager, director, officer, agent, distributor, employee or other person acting on behalf of or in the name of the Company or any of its Subsidiaries: (i) is, or is owned or controlled by, a Person subject to the sanctions administered by the Office of Foreign Assets Control of the U.S. Department of the Treasury or included on any list of restricted entities, Persons or organizations published by the government of the United States of America including the List of Specially Designated Nationals and Blocked Persons,

Denied Persons List, Entities List, Debarred Parties List, Excluded Parties List and Terrorism Exclusion List, or any similar applicable Law (any such Person, a "Restricted Party") or (ii) has engaged in any unlicensed transaction with any Restricted Party or has otherwise been in breach of any such sanctions, export controls, restrictions or any similar foreign, federal or state applicable Law. The Company, each of its Subsidiaries and each of their respective directors, officers, employees, agents and representatives are, and at all times have acted in compliance with, and have not violated any Trade Law. Neither the Company nor any of its Subsidiaries has received notice that it has been the subject of any investigation, complaint or claim of any violation of any Trade Law by any Governmental Entity. There are no actions, conditions, or circumstances pertaining to any of the Company's or any of its Subsidiaries' transactions that are reasonably likely to give rise to any future claims under any Trade Law.

(d) The Company and each of its Subsidiaries has obtained or completed all permits, licenses, license exceptions, and other consents, notices, waivers, approvals, orders, authorizations, registrations, declarations, classifications and filings required in accordance with any Trade Law for the conduct of the Company's and its Subsidiaries' business including (x) the export, re-export, and import of products, services, software and technologies and (y) releases of technologies and software to foreign nationals located in the United States and abroad, and any permits, licenses and other authorizations that have been received within the past five (5) years (including any that are currently in effect and any pending license applications) have been disclosed and are described in Section 2.9(d); and the Company and each of its Subsidiaries is and has been in compliance with the terms of all licenses that have been received within the past five (5) years or are currently in effect.

(e) Neither the Company nor any of its Subsidiaries manufactures, exports or otherwise trades in, or brokers defense articles, related technical data and defense services as defined in the International Traffic in Arms Regulations (22 C.F.R. § 120 *et seq.*) or is registered with the U.S. Department of State, Directorate of Defense Trade Controls pursuant to the International Traffic in Arms Regulations.

Section 2.10 Taxes.

(a) The Company and each of its Subsidiaries has timely filed, or has caused to be filed on its behalf, with the appropriate Tax Authorities all income and other Tax Returns required to be filed by them (taking into account any extensions of the due date for filing), and such Tax Returns are true, correct, and complete in all material respects.

(b) The Company and each of its Subsidiaries has paid all Taxes required to be paid other than those (i) currently payable without penalty or interest, or (ii) being contested in good faith by appropriate proceedings properly instituted and diligently pursued, which in the case of both clauses (i) and (ii) are set forth in Section 2.6(a) of the Disclosure Schedule. All liabilities for unpaid Taxes of the Company attributable to the period commencing on the date following the date hereof will be included as Liabilities on the Estimated Closing Date Schedule. The Company has not incurred any liability for Taxes arising from extraordinary gains or losses, as that term is used in GAAP, or any Taxes incurred outside the ordinary course of business.

(c) There are no Liens for Taxes upon any property or assets of the Company or any of its Subsidiaries except for liens for Taxes not yet due and payable or that are being contested in good faith by appropriate proceedings properly instituted and diligently pursued.

(d) No Federal, state, local or foreign Audits are presently pending with regard to any Taxes or Tax Returns of the Company or any of its Subsidiaries, and no such Audit is threatened in writing, and no deficiency or adjustment for any Taxes has been proposed, asserted, or assessed in writing against the Company or any of its Subsidiaries. No material adjustments have been asserted as a result of any Audit which have not been resolved and fully paid. Neither the Company nor any of its Subsidiaries has received written notice of any claim made by a Tax Authority in a jurisdiction where such Person does not file a Tax Return that it is or may be subject to taxation by that jurisdiction.

(e) There are no outstanding requests, agreements, consents or waivers to extend the statutory period of limitations applicable to the assessment of any Taxes or deficiencies against the Company or any of its Subsidiaries, and no power of attorney granted by the Company or any of its Subsidiaries with respect to any Taxes or Tax Returns (other than an employee of the Company or any of its Subsidiaries responsible for Tax matters) is currently in force.

(f) Neither the Company nor any current or former Subsidiary (i) has been a member of an affiliated group (within the meaning of Section 1504 of the Code) filing a consolidated federal income Tax Return or an affiliated, combined, consolidated, unitary, or similar group for state, local or foreign Tax purposes, other than the group of which the Company is the common parent, and (ii) has any liability for or in respect of the Taxes of, or determined by reference to the Tax liability of, another Person (other than the Company and any of its Subsidiaries) under Treasury Regulation Section 1.1502-6 (or any similar provision of Law).

(g) Neither the Company nor any of its Subsidiaries is a party to, is bound by, or has any obligation under, any Tax sharing agreement, Tax allocation agreement, Tax indemnification agreement, agreement where liability is determined by reference to the Tax liability of a third party, or any similar Contract, in each case, other than commercial agreements entered into in the ordinary course of business the principal purpose of which is not Tax that are set forth in Section 2.15 of the Company Disclosure Schedule.

(h) (i) The payments made pursuant to the Offer Letters and Consulting Agreements will not constitute, and (ii) neither the Company nor any of its Subsidiaries is a party to, any agreement, plan, contract or arrangement that either alone or in connection with the transactions contemplated by this Agreement could, separately or in the aggregate, fail to be deductible to Purchaser or the Company by virtue of Section 162(m) or 280G of the Code. Neither the Company or any of its Affiliates has any agreement or obligation to provide any Person any form of excise tax gross-up for Taxes which may be imposed upon such Person by Section 4999 of the Code.

(i) Neither the Company nor any of its Subsidiaries has agreed or is required to include in income any adjustment under either Section 481(a) of the Code (or an analogous provision of Law) by reason of a change in accounting method or otherwise which would have an effect on any taxable period following the Closing.

(j) Neither the Company nor any of its Subsidiaries will be required to include an item of income in, or exclude an item of deduction from, a Post-Closing Tax Period as a result of (i) an installment sale transaction occurring during a Pre-Closing Tax Period governed by Section 453 of the Code (or any similar provision of state, local or foreign Law), (ii) a transaction occurring during a Pre-Closing Tax Period reported as an open transaction for any Tax purposes, (iii) the receipt of deferred revenue or a prepaid amount received prior to the Closing, (iv) intercompany transactions or any excess loss account described in Treasury Regulations under Section 1502 of the Code (or any corresponding or similar provision of state, local or foreign income Tax law), or (v) election under Code Section 965 made on or prior to the Closing Date.

(k) The Company has previously made available to Purchaser complete and accurate copies of each of (i) all audit reports, letter rulings, technical advice memoranda and similar documents issued by a Tax Authority, (ii) the United States federal income Tax Returns, and those state, local and foreign income Tax Returns filed by the Company and each of its Subsidiaries for the taxable periods ending on or after December 31, 2014, and (iii) any closing agreements entered into by the Company or any of its Subsidiaries with any Tax Authority.

(l) Each Benefit Plan that is a "nonqualified deferred compensation plan" as defined under Section 409A of the Code is exempt from, or if subject to, is, and has been since the inception of such plan, in operational and documentary compliance with Section 409A of the Code. No stock option or other right to acquire Common Stock or other equity of the Company or any of its Subsidiaries (i) has an exercise price that has been or may be less than the fair market value of the underlying equity as of the date such option or right was granted, (ii) has any feature for the deferral of compensation other than the deferral of recognition of income until the later of exercise or disposition of such option or rights, or (iii) has been granted with respect to any class of stock of the Company or any of its Subsidiaries that is not "service recipient stock" (within the meaning of applicable regulations under Section 409A. Neither the Company, nor any Affiliate of the Company has any agreement or obligation to provide any Person any form of income tax reimbursement or tax gross-up for Taxes which may be imposed upon such Person by Section 409A of the Code or any such similar state Taxes imposed for any failure to operate such nonqualified deferred compensation plan in accordance with Section 409A of the Code.

(m) The Company and each of its Subsidiaries has duly and timely reported and withheld from employee salaries, or wages or other compensation (whether or not paid in cash) and other amounts paid to creditors, independent contractors and other third parties, and has paid over to the appropriate Governmental Entity all amounts required to be so withheld and paid over for all periods under all applicable Tax or other Laws.

(n) The Company is not and has not been, at any time, a "United States Real Property Holding Corporation" within the meaning of Section 897(c)(2) of the Code.

(o) Neither the Company nor any of its Subsidiaries has ever constituted either a "distributing corporation" or a "controlled corporation" in a distribution of stock intended to qualify for tax-free treatment under Section 355 of the Code.

(p) Neither the Company nor any of its Subsidiaries has engaged in a "listed transaction" under Treasury Regulation Section 1.6011-4(b)(2).

(q) All applicable transfer pricing rules have been complied with in all material respects.

(r) Nothing in this Section 2.10 or otherwise in this Agreement shall be construed as a representation or warranty with respect to (i) the amount or availability of any net operating loss, capital loss, Tax credit, Tax basis or other Tax asset or attribute of the Company in any taxable period (or portion thereof) beginning after the Closing Date hereof or (ii) any Tax position that Purchaser or its Affiliates (including the Company or any of its Subsidiaries) may take in respect of any taxable period (or portion thereof) beginning after the Closing Date.

Section 2.11 Employee Benefits.

(a) Section 2.11(a) of the Disclosure Schedule contains a true, complete and correct list of each plan, program, policy, practice, arrangement, agreement or material understanding (whether formal or informal) providing for employment, compensation, incentive or deferred compensation, severance, relocation, retention or change of control compensation or benefits, termination pay, retirement pay, pension, profit sharing, performance awards, stock or stock-related awards, vacation, disability, death

benefit, hospitalization, life or other benefits-related insurance, supplemental unemployment benefits, fringe benefits or other benefits, including each "employee benefit plan" as defined in Section 3(3) of ERISA, (i) which is or has been sponsored, maintained or contributed to or required to be contributed to by the Company or any of its Subsidiaries or by any trade or business, whether or not incorporated (an "ERISA Affiliate"), that together with the Company would be deemed a "single employer" within the meaning of Section 4001(b)(1) ERISA, for the benefit of any current or former employee, director or consultant of the Company or any of its Subsidiaries, or (ii) with respect to which the Company or any of its Subsidiaries could have any Liability (all the foregoing being herein referred to as "Benefit Plans"). The Company has made available to Purchaser a true and correct copy of all documents related to the Benefit Plans, including but not limited to: (u) a copy of each written Benefit Plan (including all amendments thereto) or a written description of any Benefit Plan that is not otherwise in writing and the most recent Summary Plan Description, any Summary of Material Modifications or Form 5500 Series if required under ERISA, (v) the three most recent annual reports or Form 5500 Series filings if required under ERISA, filed with the Internal Revenue Service (the "IRS") with respect each Benefit Plan, (w) each trust agreement and group annuity contract, if any, relating to such Benefit Plan, (x) the most recent actuarial report or valuation relating to each Benefit Plan subject to Title IV of ERISA or providing post-retirement health and/or life insurance benefits, (y) a current determination, opinion, advisory or notification letter received from the Internal Revenue Service with respect to each Benefit Plan intended to qualify under Section 401(a) of the Code and (z) all contracts relating to the Benefit Plans with respect to which the Company, or any ERISA Affiliate may have any Liability, including, but not limited to, insurance contracts, investment management agreements, subscription and participants agreements and record keeping agreements.

(b) No Benefit Plans are subject to Title IV of ERISA. No event has occurred and there exists no condition or set of circumstances which are reasonably likely to occur in connection with which the Company or any of its Subsidiaries would be subject to any Liability (except Liability for benefits claims and funding obligations payable in the ordinary course), under ERISA, the Code or any other applicable Law.

(c) With respect to Benefit Plans, in the aggregate, there are no funded benefit obligations for which contributions have not been made or properly accrued and there are no unfunded benefit obligations which have not been accounted for by reserves.

(d) Each of the Benefit Plans is and has been administered in all material respects in compliance with its terms and with applicable Laws, including, but not limited to, ERISA, the Consolidated Omnibus Budget Reconciliation Act of 1985, the Health Insurance Portability and Accountability Act of 1996, the Code and federal and state securities Laws.

(e) Each of the Benefit Plans that is intended to be a qualified plan within the meaning of Section 401(a) of the Code has been determined by the IRS to be so qualified and nothing has occurred to cause the loss of such qualified or tax-exempt status, or the Company has applied to the IRS for such a determination prior to the expiration of the requisite period under applicable Treasury Regulations or IRS pronouncements in which to apply for such a determination and to make any amendments necessary to obtain a favorable determination, advisory or notification letter, or has been established under a standardized prototype plan for which an IRS opinion letter has been obtained by the plan sponsor and is valid as to the adopting employer. Each fund established under a Benefit Plan that is intended to satisfy the requirements of Section 501(c)(9) of the Code has so satisfied such requirements.

(f) Neither the Company nor any of its Subsidiaries has any obligation for retiree health, medical or life insurance benefits under any Benefit Plan other than (i) coverage mandated by applicable Laws, (ii) death or retirement benefits under any "employee pension plan" as defined in Section 3(2) of ERISA, or (iii) benefits the full cost of which is borne by the current or former employee (or beneficiary thereof).

(g) No Benefit Plan is a "multiemployer pension plan," as such term is defined in Section 3(37) of ERISA or a "multiple employer plan" as such term is defined in Section 413(c) of the Code.

(h) Each Benefit Plan can be terminated within a period of thirty (30) days, without payment of any additional compensation or amount or the additional vesting or acceleration of any benefits.

(i) No Benefit Plan is under actual or, to the Company's Knowledge, threatened investigation, audit or review by any Governmental Entity, or the subject of any claim, lawsuit, arbitration or other proceeding.

Section 2.12 Employment and Labor Matters.

(a) The Company and each of its Subsidiaries are, and have at all times been, in material compliance with all applicable Laws respecting labor and employment, including Laws relating to employment practices, terms and conditions of employment, equal employment opportunity, discrimination, disability, fair labor standards, workers compensation, wrongful discharge, immigration, occupational safety and health, family and medical leave, wages and hours, overtime classification, paid time off, immigration, and employee terminations, and in each case, with respect to any current or former employee (each, for purposes of this Section 2.12, an "Employee"), consultant, independent contractor, advisor or director (each, for purposes of this Section 2.12, an "Advisor") of, in each case, the Company or any Subsidiary or ERISA Affiliate and each: (i) has withheld and reported all amounts required by Law or by agreement to be withheld and reported with respect to wages, salaries and other payments to such Persons, (ii) is not liable for any arrears of wages, severance pay or any penalty for failure to comply with any of the foregoing, and (iii) is not liable for any payment to any trust or other fund governed by or maintained by or on behalf of any Governmental Entity, with respect to unemployment compensation benefits, social security or other benefits or obligations for such Persons (other than routine payments to be made in the normal course of business and consistent with past practice). There are no actions, suits, claims or administrative matters pending, or, to the Company's Knowledge, threatened against the Company, any of its Subsidiaries or any of its Employees or Advisors relating to the Company or any of its Subsidiaries or any Benefit Plan. There are no pending or, to the Company's Knowledge, threatened claims or actions against the Company, any of its Subsidiaries or any Company trustee under any worker's compensation policy or long-term disability policy. Section 2.12(a) of the Disclosure Schedule lists all Liabilities of the Company or any of its Subsidiaries to any Employee or Advisor that result from the termination by the Company, such Subsidiary or Purchaser of such Person's employment or provision of services, a change of control of the Company or its Subsidiaries, or a combination thereof.

(b) Neither the Company nor any of its Subsidiaries is a party to any collective bargaining agreement, works council agreement or similar agreement and, to the Knowledge of the Company, there are no labor unions or other organizations representing, purporting to represent or attempting to represent, any Employee. The Company does not have any Knowledge of any strikes, slowdowns, work stoppages, lockouts, or threats thereof, by or with respect to any Employees.

(c) Section 2.12(c) of the Disclosure Schedule contains a complete and accurate list of all current Employees and shows with respect to each such Employee (i) the Employee's name, position held, principal place of employment, base salary or hourly wage rate, as applicable, including each Employee's designation as either exempt or non-exempt from the overtime requirements of the Fair Labor

Standards Act, and all other remuneration payable and other benefits provided by the Company or any of its Subsidiaries or which the Company or any of its Subsidiaries is bound to provide (whether at present or in the future) to each such Employee, or any Person connected with any such Employee, and includes, if any, particulars of all profit sharing, incentive and bonus arrangements, (ii) the date of hire, (iii) vacation eligibility and accrued vacation for the current calendar year (including accrued vacation from prior years), (iv) leave status (including type of leave, and expected return date, if known), (v) visa status and the expiry date thereof, if applicable, (vi) accrued sick days for current calendar year, (vii) relevant prior notice period required in the event of termination, (viii) eligibility for Company car or similar benefits, (ix) any severance or termination payment (in cash or otherwise) to which any Employee could be entitled under existing contractual or other obligations, and (x) average over-time payments per month during the preceding twelve-month period for non-exempt Employees. Section 2.12(d) of the Disclosure Schedule also contains a complete and accurate list of all former Employees involved in the development of Company Intellectual Property and shows the name, dates of service and position held by such Person at the time of termination. The Company or the applicable Subsidiary has entered into a duly executed offer letter with each Employee.

(d) Section 2.12(d) of the Disclosure Schedule contains an accurate and complete list of (i) all current Advisors, (ii) the location at which such Persons have been or are providing services, (iii) the rate of all regular, bonus or any other compensation payable to such Persons, and (iv) the start and termination date of any Contract binding such Persons. All Advisors can be terminated immediately and without notice or Liability on the part of the Company or any of its Subsidiaries. Neither the Company nor any Subsidiary has any Liability with respect to misclassification of any Person as an independent contractor rather than as an "employee", including any Person leased from another employer, or with respect to any Person currently or formerly classified as exempt from overtime wages. Section 2.12(d) of the Disclosure Schedule also contains a complete and accurate list of all former Advisors involved in the development of Company Intellectual Property and shows the name, dates of service and position held of such Person at the time of termination.

(e) The Company has made available to Purchaser true, correct and complete copies of all written and summaries of all unwritten personnel policies, rules or procedures applicable to employees of the Company and its Subsidiaries. The Company and its Subsidiaries conduct routine background checks as part of its hiring process with the requisite employee consent and in accordance with applicable Law.

Section 2.13 Material Contracts.

(a) Except as set forth in Section 2.13(a) of the Disclosure Schedule (organized by the appropriate paragraph and applicable subsection), neither the Company nor any of its Subsidiaries is a party to any of the following:

(i) any Contract that (A) limits or restricts the ability of the Company or any of its Subsidiaries (or, after the Acquisition, Purchaser, the Company or any of their Affiliates) to compete in any business or with any Person in any geographical area or otherwise restricts the operations or business of such Persons, (B) requires the Company or any of its Subsidiaries (or, after the Acquisition, Purchaser, the Company or any of their Affiliates) to conduct any business on a "most favored nations basis" with any Person, or (C) provides for exclusivity or any similar requirement in favor of any Person;

(ii) any employment, independent contractor or consulting Contract with an employee, independent contractor, consultant, advisor, or salesperson, or any Contract to grant any severance or termination pay (in cash or otherwise) to any such Person;

(iii) any Contract, including any Benefit Plan, any of the benefits of which will become payable, be increased or accelerated by the consummation of, or calculated on the basis of, any of the transactions contemplated by this Agreement;

(iv) any lease of personal property or other Contract affecting the ownership of, leasing of, or other interest in, any personal property and involving future payments in excess of $10,000 individually or $50,000 in the aggregate;

(v) any Contract relating to capital expenditures and involving future payments by the Company or its Subsidiaries in excess of $10,000 individually or $50,000 in the aggregate;

(vi) any Contract relating to the disposition or acquisition of assets or any interest in any business enterprise outside the ordinary course of business, other than as expressly contemplated by this Agreement and the Ancillary Agreements and the transactions contemplated hereby and thereby;

(vii) any Contract relating to the incurrence of Indebtedness by the Company or any of its Subsidiaries or any extension of credit by the Company or any of its Subsidiaries to any Person;

(viii) any Contract that involves performance of services or delivery of software, goods or materials by or to the Company or any of its Subsidiaries of an amount or value in excess of $10,000 individually or $50,000 in the aggregate;

(ix) any Contracts with any Governmental Entity;

(x) any joint venture, partnership, strategic alliance or similar arrangement;

(xi) any Contract relating to the research, development, maintenance, manufacturing, distribution, supply, resale, marketing or co-promotion of, or collaboration with respect to, any Company Products or Company In-Development Products;

(xii) any power of attorney or surety or guarantee agreement or other similar undertaking with respect to contractual performance;

(xiii) any stand-alone nondisclosure, confidentiality or similar stand-alone agreement;

(xiv) any Contract which contains a non-solicit or no-hire provision that restricts the Company or any of its Subsidiaries;

(xv) any Contract that provides for indemnification or defense by the Company or any of its Subsidiaries of any other Person;

(xvi) any joint defense, common interest or similar agreement with any Person; or

(xvii) any other Contracts that are material to the business, financial condition, working capital, assets, Liabilities, reserves or operations of the Company or any of its Subsidiaries.

(b) Each Contract required to be disclosed pursuant to Section 2.13, Section 2.14(e), Section 2.14(f), Section 2.14(m), Section 2.17, and Section 2.19 of the Disclosure Schedule is referred to herein as a "Material Contract" and collectively, the "Material Contracts").

(c) Each Material Contract to which the Company or any of its Subsidiaries is a party or any of its properties or assets (whether tangible or intangible) is subject is a valid and binding agreement of the Company or such Subsidiary enforceable against the Company or such Subsidiary in accordance with its terms, and is in full force and effect with respect to the Company or such Subsidiary and, to the Knowledge of the Company, any other party thereto. The Company or such Subsidiary is in compliance with, has performed all obligations required to have been performed to date by the Company or such Subsidiary under, and has not breached, violated or defaulted under, or received written notice that it has breached, violated or defaulted under, any of the terms or conditions of any Material Contract, nor, to the Knowledge of the Company, is any party obligated to the Company or any of its Subsidiaries pursuant to any Material Contract in breach, violation or default thereunder, nor does the Company have Knowledge of any presently existing facts or circumstances that, with the lapse of time, giving of notice, or both would constitute such a breach, violation or default by the Company, of its Subsidiaries or any such other party. None of the Company, any of its Subsidiaries or any other party thereto has given notice or other indication of any intention to cancel or otherwise terminate any Material Contract and no event has occurred or failed to occur which (i) could be expected to result in the cancellation or termination of any Material Contract, or (ii) would entitle any such Person to terminate any Material Contract.

Section 2.14 Intellectual Property.

(a) *Definitions*. For all purposes of this Agreement, the following terms shall have the following meanings:

"Company In-Development Products" means any and all potential new products, processes, assays and services that are not yet commercially available, marketed, distributed, supported, sold, or licensed out, by or on behalf of the Company or any of its Subsidiaries but which are currently being developed by or on behalf of the Company or any of its Subsidiaries.

"Company Intellectual Property" means any and all Intellectual Property that is or is purported to be (i) owned by the Company or any of its Subsidiaries (whether owned singularly or jointly with a third party or parties) or (ii) licensed to the Company or any of its Subsidiaries, in each case, as used in, held for use in, being developed for use in, or necessary for, the conduct of the business of the Company and its Subsidiaries as currently conducted or as proposed to be conducted.

"Company Products" means any and all products, processes, assays and services that have been or are being made commercially available, marketed, distributed, supported, sold, or licensed out, by or on behalf of the Company or any of its Subsidiaries since their respective formations.

"Company Registered Intellectual Property" shall mean any and all Registered Intellectual Property that is part of Company Intellectual Property.

"Company Technology" shall mean any and all Technology that is or is purported to be (i) owned by the Company or any of its Subsidiaries (whether owned singularly or jointly with a third party or parties) or (ii) exclusively licensed to the Company or any of its Subsidiaries.

"Infringement" or "Infringe," with respect to a given item or activity, shall mean that such item or activity directly or indirectly infringes, misappropriates, unlawfully dilutes, constitutes unauthorized use of, or otherwise violates Intellectual Property Rights of any Person.

"Intellectual Property" shall mean any and all Intellectual Property Rights and Technology.

"Intellectual Property Rights" shall mean any and all intellectual property, industrial property, and proprietary rights worldwide, whether registered or unregistered, including rights in and to (i) patents and other governmental grants for the protection of inventions or industrial designs, including any applications for any such patents or grants, whether already filed or in preparation or contemplation of filing ("Patents"), (ii) copyrights and Moral Rights (including analogous rights thereto), (iii) rights of publicity, (iv) trade secrets and know-how (including analogous rights thereto and whether or not reduced to practice), (v) trademarks, trade names, logos, service marks, designs, emblems, signs, insignia, slogans, other similar designations of source or origin and general intangibles of like nature, together with the goodwill of the Company or such Person's business symbolized by or associated with any of the foregoing ("Trademarks"), (vi) domain names, web addresses and other universal resource locator (URL) registrations, (vii) database rights, (viii) provisionals, substitutions, divisions, continuations, continuations-in-part, foreign counterparts, renewals, reissuances, re-examinations, extensions and supplementary protection certificates of any and all of the foregoing (as applicable), (ix) registrations or applications for registration for any and all of the foregoing, and (x) rights to sue for past, present, and future Infringement of any and all of the rights set forth above.

"Moral Rights" shall mean moral or equivalent rights in any Intellectual Property, including the right to the integrity of the work, the right to be associated with the work as its author by name or under a pseudonym and the right to remain anonymous.

"Registered Intellectual Property" shall mean any and all Intellectual Property that has been registered, filed, certified, granted or otherwise perfected or recorded with or by any Governmental Entity or quasi-public legal authority (including domain name registrars), and any applications for any of the foregoing.

"Technology" shall mean any and all (i) schematics, models, algorithms and works of authorship including documentation and computer programs (including source code, executable code and architecture), (ii) inventions (whether or not patentable and whether or not reduced to practice), discoveries and improvements, (iii) proprietary information and confidential information, (iv) databases, data compilations, arrays and collections (including databases, compilations, arrays and collections of data, sequences, diagnostic, prognostic, identifying or phenotypic information, cells, biomolecules, compounds, tissues or other biologic materials), and customer and technical data, (v) methods, assays and processes, (vi) reagents, kits, components, devices, prototypes, systems, industrial and other designs and schematics, and (vii) tangible items related to, constituting, disclosing or embodying any or all of the foregoing, including any and all versions of any and all of the foregoing.

(b) *Intellectual Property.* Section 2.14(b)(i) of the Disclosure Schedule lists all Company Registered Intellectual Property and all material unregistered Intellectual Property owned, used or held for use by the Company or its Subsidiaries, setting forth in each case and to the extent applicable the jurisdictions in which such Company Registered Intellectual Property have been issued, or applications have been filed, the name of the owner, the application or registration number, the filing date, the date of registration and the expiration date of such Company Registered Intellectual Property. The Company has made available to Purchaser complete and accurate copies of all applications that are not publicly available related to each item included in the Company Registered Intellectual Property. Section 2.14(b)(ii) of the Disclosure Schedule lists all proceedings or actions before any court or tribunal or Government Entity (including the United States Patent and Trademark Office or equivalent authority anywhere in the world) in which claims are or were raised relating to the validity, enforceability, scope, ownership or Infringement of any of the Company Registered Intellectual Property. The Company has made available to Purchaser a

complete and accurate copy of the Company's Registered Intellectual Property docket report as of November 6, 2019, a copy of which is set forth in Section 2.14(b)(iii) of the Disclosure Schedule. Except as described in Section 2.14(b)(i) of the Disclosure Schedule, neither the Company nor any of its Subsidiaries owns or purports to own, or is or purports to be an exclusive licensee of, any Registered Intellectual Property. With respect to each item of Company Registered Intellectual Property, (A) all necessary registration, maintenance and renewal fees have been paid, and all necessary documents and certificates have been filed with the relevant Patent, copyright, trademark or other authorities or registrars, as the case may be, for the purposes of registering, filing, certifying, maintaining or otherwise perfecting or recording such Company Registered Intellectual Property with or by any Governmental Entity or quasi-public legal authority, as applicable; (B) each such item is currently in compliance with applicable formal legal requirements (including payment of filing, examination and maintenance fees and proofs of use); and (C) each such item is not subject to any unpaid maintenance fees or taxes. To the Knowledge of the Company, there are no facts, information, or circumstances, including any information or facts that would constitute prior art, that would render any of the Company Registered Intellectual Property invalid or unenforceable, or would adversely affect any pending application for any Company Registered Intellectual Property. None of the Company or any of its Subsidiaries have misrepresented, or knowingly failed to disclose, any facts or circumstances in any application for, or in connection with seeking registration, certification or grant of, any Company Registered Intellectual Property that would constitute fraud or a misrepresentation, based in each case on the rules of the applicable Governmental Entity or quasi-public legal authority, with respect to such Company Registered Intellectual Property or that would otherwise affect the enforceability of any Company Registered Intellectual Property.

(c) *Transferability of Intellectual Property*. Following the Closing, all Company Intellectual Property will be fully usable, transferable, alienable and licensable by Purchaser, the Company, or their respective Affiliates without restriction and without payment of any kind, or any obligation, to any third party.

(d) *Title to Intellectual Property*. The Company or a Subsidiary thereof is the exclusive licensee (i) of each item of Company Intellectual Property (including all items listed in Section 2.14(b)(i) of the Disclosure Schedule) and (ii) except for any software or other Intellectual Property licensed to the Company in any Contract listed in Section 2.14(d)(ii) of the Disclosure Schedule, of each Company Product and Company In-Development Product, free and clear of any Liens. The Company or the applicable Subsidiary thereof, directly or indirectly, has obtained all consents necessary or appropriate for the collection, storage and use of all human biological material incorporated or used in the Company Products, Company In-Development Products or Company Technology or in connection with the conduct of the business of the Company and its Subsidiaries, including for the use of such materials or derivatives thereof in clinical and commercial applications. Neither the Company nor any of its Subsidiaries has received any notice from any third party challenging or threatening to challenge the right, title or interest of the Company, its Subsidiaries or its licensor or grantor, as the case may be, in, to or under any Company Intellectual Property, or the validity, enforceability, scope of coverage or claim construction, as applicable, of any Company Intellectual Property. All documents and instruments necessary to establish, perfect and maintain the rights of the Company or its Subsidiaries in any Company Registered Intellectual Property have been validly executed, delivered, filed and/or recorded in a timely manner with the appropriate Governmental Entity. To the Knowledge of the Company, all Intellectual Property Rights of the Company and its Subsidiaries in the Company Intellectual Property are valid, subsisting and enforceable. The Company has the first right to bring a claim or suit against any third party for Infringement of the Company Intellectual Property. Neither the Company nor any of its Subsidiaries has (x) granted any exclusive license with respect to any Company Intellectual Property to any other Person, or (y) carried out any act or failed to take any action that could cause any rights of the Company or any of its Subsidiaries in any Company Intellectual Property to enter into the public domain.

(e) *Third Party Intellectual Property*. Section 2.14(e) of the Disclosure Schedule lists all Contracts under which a third party licenses or provides, or has licensed or provided, any Intellectual Property (including covenants not to sue, non-assertion provisions or releases or immunities from suit that are applicable to such Intellectual Property) to the Company or any of its Subsidiaries. Other than Intellectual Property licensed to the Company or any of its Subsidiaries under the licenses set forth in Section 2.14(e) of the Disclosure Schedule, (i) no third party Intellectual Property is used in, held for use in, or necessary for the conduct of the business of the Company and its Subsidiaries as currently conducted or as proposed to be conducted, and (ii) no third party Intellectual Property is used in, held for use in, or necessary for the continued development of the Company In-Development Products by the Company or its Subsidiaries as such development is currently conducted or proposed to be conducted by or on behalf of the Company and its Subsidiaries.

(f) *Licenses of Company Intellectual Property*. Copies of the Company's and its Subsidiaries' standard form(s) of non-disclosure agreement (collectively, the "Standard Form Agreements"), are attached to Section 2.14(f) of the Disclosure Schedule. Other than non-disclosure agreements that do not differ in any material respect from the Standard Form Agreements and that have been entered into in the ordinary course of business, Section 2.14(f) of the Disclosure Schedule lists all Contracts under which the Company or any Subsidiary has granted, licensed, disclosed or provided any Company Intellectual Property to third parties, including any Contracts containing covenants not to sue, non-assertion provisions, or releases or immunities from suit with respect to Intellectual Property Rights included in the Company Intellectual Property.

(g) *No Infringement*. To the Knowledge of the Company, the operation of the business of the Company and its Subsidiaries as it has been conducted since their respective formations, as currently conducted and as proposed to be conducted by the Company and its Subsidiaries, and the design, development, use, branding, advertising, promotion, marketing, sale, distribution and licensing out of any Company Product or any Company In-Development Product, (i) has not and does not Infringe any Intellectual Property Rights of any Person, and (ii) with respect to Intellectual Property Rights of any Person that exist or have been applied for as of the Closing Date, will not Infringe any such Intellectual Property Rights when such operation, design, development, use, branding, advertising, promotion, marketing, sale, distribution or licensing out is conducted in substantially the same manner by Purchaser or its Affiliates following the Closing. Neither the Company nor any of its Subsidiaries has received notice from any Person claiming that any part of the operation of the business of the Company and its Subsidiaries as it has been conducted since the formation of the Company or such Subsidiary, as currently conducted and as proposed to be conducted by the Company and its Subsidiaries, or any act, Company Product, Company In-Development Product, Company Technology or Company Intellectual Property Infringes any Intellectual Property Rights of any Person (nor does the Company have Knowledge of any basis for or threat of any of the foregoing). No Company Product, Company In-Development Product, Company Technology or Company Intellectual Property is subject to any proceeding or outstanding decree, order, judgment, agreement or stipulation that restricts in any manner the use, provision, transfer, assignment or licensing thereof by the Company or any of its Subsidiaries or may affect the validity, registrability, use or enforceability of such Company Product, Company In-Development Product, Company Technology or Company Intellectual Property.

(h) *Third Party Rights*. No third party that has licensed (including by means of any covenant not to sue, non-assertion provision, or any release or immunity from suit) or provided to the Company or any of its Subsidiaries any Intellectual Property that is incorporated into or used in any Company Intellectual Property, any Company Technology, any Company Products, any Company In-Development Products, or any part of the operation of the business of the Company and its Subsidiaries as it has been conducted since their respective formations, as currently conducted and as proposed to be conducted, has retained ownership of or any other rights to any Intellectual Property (including any improvements or derivative works) made or invented solely or jointly by the Company or any of its Subsidiaries.

(i) *Restrictions on Business*. Neither this Agreement nor the transactions contemplated hereby will cause (i) Purchaser, the Company or any of their Affiliates to lose any right to, or grant to any third party any right or additional right to or with respect to, any Intellectual Property or Company Intellectual Property owned by, or licensed to, any of Purchaser, the Company or any of their Affiliates or (ii) Purchaser or any of its Affiliates to be obligated to pay any royalties or other fees or consideration with respect to Intellectual Property of any third party that (A) is included in any of the Company Products, Company In-Development Products or Company Intellectual Property, or (B) is used in the conduct of the business of the Company and its Subsidiaries, which, in the case of clause (A) or (B) would be in excess of those payable by the Company in the absence of this Agreement or the transactions contemplated hereby.

(j) *No Third Party Infringement*. To the Knowledge of the Company, no Person has Infringed any Intellectual Property Rights included in the Company Intellectual Property or any Intellectual Property Rights in or to the Company Technology.

(k) *Proprietary Information Agreements*. Copies of the Company's and its Subsidiaries' standard form of proprietary information, confidentiality and assignment agreement for employees (the "Employee Proprietary Information Agreement") and the Company's and its Subsidiaries' standard form of consulting agreement and advisory agreement containing proprietary information, confidentiality and assignment provisions for consultants, independent contractors and advisors (the "Consultant Proprietary Information Agreement") are attached to (i) and (ii), respectively, of the Disclosure Schedule. Each (A) current and former officer and employee of the Company or any of its Subsidiaries, (B) current and former consultant, independent contractor and advisor of the Company or any of its Subsidiaries, and (C) other individual who is or has been involved in the creation, invention or development of Intellectual Property or Company Products for or on behalf of the Company or any of its Subsidiaries (each of (A) through (C), a "Contributor"), has executed and delivered (and to the Company's Knowledge is and always has been in compliance with) an agreement in the form of the Employee Proprietary Information Agreement or Consultant Proprietary Information Agreement, as applicable, that has been duly countersigned by the Company or the applicable Subsidiary, that does not deviate from such applicable standard form in any material respect, that contains no exceptions or exclusions from the scope of coverage of such applicable form, and that applies during the entire duration of such Contributor's employment with or period of service to the Company or its Subsidiaries, and each such executed agreement has been made available to Purchaser. No Contributor has claimed or alleged that any such Employee Proprietary Information Agreement or Consultant Proprietary Information Agreement is invalid or unenforceable and neither the Company nor any of its Subsidiaries has any reason to believe any such claim or allegation will be forthcoming. Without limiting the foregoing, except as described in Section 2.14(e) or Section 2.14(k)(iii) of the Disclosure Schedule, no Contributor owns or has any right, including any right to assert any Moral Rights, to any of the Company Products, Company In-Development Products or Company Intellectual Property, nor has any Contributor made to the Company or any of its Subsidiaries or threatened any assertions with respect to any alleged ownership, interest or rights with respect to any of the Company Products, Company In-Development Products or Company Intellectual Property. To the Knowledge of the Company, no Contributor is, or has been at any time during employment with or period of service to the Company or any of its Subsidiaries, subject to any Contract with any other Person which requires or has required such Contributor to assign, license or grant any right, title or interest in or to any Company Intellectual Property to any Person other than the Company or its Subsidiaries.

(l) *Protection of Confidential Information*. The Company and each of its Subsidiaries has taken commercially reasonable and customary steps to protect the confidentiality of all confidential information and trade secrets of the Company and its Subsidiaries and of all confidential information and trade secrets of any third party that has provided any confidential information to the Company or its Subsidiaries.

(m) *Government Funds and Contracts*.

(i) No funding, facilities or resources, including any grants, incentives, benefits, qualifications or subsidies, of any (A) Governmental Entity, (B) university, college or other educational institution, (C) multi-national, bi-national or international governmental or quasi-governmental organization or (D) governmental or non-profit research center (collectively, "Government Grants") have been granted to the Company or any of its Subsidiaries or otherwise used in the development of any Company Products, Company In-Development Products, Company Intellectual Property or Company Technology.

(ii) The Company and its Subsidiaries (A) do not have any obligation whatsoever with respect to royalties or other payments relating to, arising out of or in connection with any Government Grants and (B) are not in violation of the terms, conditions or requirements of any Government Grants.

(iii) No Governmental Entity has any license or rights, including any rights of assignment or grant-back, to any Company Products, Company In-Development Products, Company Intellectual Property or Company Technology.

(n) *IP Assignment.* Neither the Company nor any of its Subsidiaries has (i) assigned or transferred any Intellectual Property Rights, including any Company Intellectual Property, or any Company Technology to any Person (including any customer or potential customer), including pursuant to any Contract, purchase order, "work made for hire" or other arrangement, or (ii) customized any Company Product for any Person in a manner that would limit or impair the Company's exclusive ownership of the related Intellectual Property Rights.

Section 2.15 Regulatory Compliance.

(a) *Definitions*. For all purposes of this Agreement, the following terms shall have the following meanings:

(i) "FDA" means the United States Food and Drug Administration or any successor agency thereto.

(ii) "Regulatory Authority" means any federal, national, or multinational governmental health regulatory agency or authority within a regulatory jurisdiction, with the authority to grant approvals, licenses, registrations or authorizations necessary for the development, manufacture, use, and sale of a human cellular product.

(b) Neither the Company nor, to the Knowledge of the Company, any of its officers, key employees, or agents acting for the Company, has committed any act, made any statement or failed to make any statement that would reasonably be expected to provide a basis for the FDA to invoke its policy with respect to "Fraud, Untrue Statements of Material Facts, Bribery, and Illegal Gratuities" set forth in 56 Fed. Reg. 46191 (September 10, 1991) and any amendments thereto. Additionally, neither the Company, nor any officer, employee or, to the Knowledge of the Company, agent of the Company has been convicted of any crime or engaged in any conduct that would reasonably be expected to result in (i) debarment under 21 U.S.C. Section 335a or any similar state or foreign applicable Law or (ii) exclusion under 42 U.S.C. Section 1320a-7 or any similar state or foreign applicable Law.

(c) All animal studies and manufacturing activities performed by or on behalf of the Company either (i) have been conducted in accordance with applicable Good Laboratory Practice regulations as described in 21 C.F.R. Part 58 and any comparable state and other applicable Laws or (ii) if not required to be conducted in accordance with Good Laboratory Practices, have employed the procedures and controls generally used by qualified experts in animal studies of products comparable to those being developed by the Company.

(d) No clinical or regulatory-related activities (including any FDA correspondence, calls or meetings) have been conducted, sponsored or funded by or on behalf of: (a) the Company; or (b) to the Knowledge of the Company, the University of Washington with respect to the Company Intellectual Property or Company Technology or any product or product candidate that incorporates, or is covered by, any of the Company Intellectual Property or Company Technology. No pre-clinical activities have been conducted, funded or sponsored by or on behalf of the Company.

(e) The Company has made available to Purchaser accurate and complete copies of all correspondence and minutes of meetings or memoranda of meetings or regulatory contacts with a Regulatory Authority that concerns any Company Product or Company In-Development Product.

Section 2.16 Title to Properties; Encumbrances. The Company and its Subsidiaries have good and valid title to, or, in the case of leased properties and assets, valid leasehold interests in, all tangible properties and assets, real, personal, and mixed, used or held for use in or necessary for the conduct of the business of the Company and its Subsidiaries as currently conducted, free and clear of any Liens, except Permitted Liens. The equipment of the Company and each of its Subsidiaries, taken as a whole, is in good operating condition and repair, reasonable wear and tear excepted.

Section 2.17 Real Property. Neither the Company nor any of its Subsidiaries owns or has ever owned any real property. Neither the Company nor any of its Subsidiaries has entered into or is bound by any lease, lease guaranty, sublease, agreement for the leasing, use or occupancy of, or otherwise granting a right in or relating to any real property.

Section 2.18 Environmental Matters.

(a) For all purposes of this Agreement, the following terms shall have the following respective meanings:

"Environmental Laws" shall mean any federal, state or local Laws (including common law) applicable to the Company or any of its Subsidiaries that regulate the protection of the environment, exposure of any individual to Hazardous Materials, or that regulate the handling, use, manufacturing, processing, storage, treatment, transportation, discharge, release, emission, disposal, re-use or recycling of Hazardous Materials, including the federal Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. Section 9601, et seq., as amended, and the federal Resource Conservation and Recovery Act, 42 U.S.C. Section 6901, et seq., as amended.

"Hazardous Materials" shall mean any material, chemical, gas, compound, substance, mixture or by-product that is identified, defined, designated, listed, restricted or otherwise regulated under Environmental Laws as a "hazardous constituent," "hazardous substance," "hazardous material," "acutely hazardous material," "extremely hazardous material," "hazardous waste," "hazardous waste constituent," "acutely hazardous waste," "extremely hazardous waste," "infectious waste," "medical waste," "biomedical waste," "pollutant," "toxic pollutant," or "contaminant" or that is otherwise regulated under Environmental Law.

(b) (i) The Company and each of its Subsidiaries has complied at all times in all material respects with all applicable Environmental Laws, holds all material environmental permits, licenses, franchises, variances, exemptions, orders and other governmental authorizations, consents and approvals necessary for the conduct of the business of the Company and each of its Subsidiaries as currently conducted and is in compliance with respect thereto; (ii) none of the tangible property or assets (real, personal or mixed) currently owned, leased or operated by the Company or any of its Subsidiaries (including soils, groundwater, surface water, buildings or other structures) are contaminated with any Hazardous Materials as a result of the Company's or any of its Subsidiaries use or occupation of such property or assets or, to the Knowledge of the Company, otherwise, in a manner that could result in material Liability to, or a corrective action obligation on the part of, the Company; (iii) neither the Company nor any of its Subsidiaries is subject to material Liability for any Hazardous Materials disposal or contamination by the Company or any of its Subsidiaries on any third party property; (iv) neither the Company nor any of its Subsidiaries has received any written notice alleging that the Company or any of Subsidiaries may be in violation of or subject to material Liability under any applicable Environmental Law; (v) neither the Company nor any of its Subsidiaries is a party to, or named in, any order, decree, injunction or other agreement with any Governmental Entity relating to material Liability of the Company or any of its Subsidiaries under any Environmental Law or relating to Hazardous Materials; and (vi) the Company has made available to Purchaser copies of all written environmental reports, studies and sampling data in its possession relating to the Company or any of its Subsidiaries or any of their property or assets (real, personal or mixed, tangible or intangible).

Section 2.19 Transactions with Affiliates.

(a) For purposes of this Section 2.19, the term "Affiliated Person" means (i) any holder of Company Capital Stock, (ii) any director, officer, employee or manager of the Company or any of its Subsidiaries, (iii) any Person that Controls, is Controlled by, or is under common Control with the Company, or (iv) any member of the immediate family of any natural Person described in the preceding clauses (i), (ii) or (iii) and any Person that is Controlled by, or is under common Control with any such immediate family member. For the purposes of this Section 2.19, "Control", means the possession, directly or indirectly, of the power to direct the management or policies of a Person, whether through ownership of voting securities, by contract or otherwise or the ownership, directly or indirectly, of at least fifty percent (50%) of the voting securities or other ownership interests of such Person; and the terms "Controlling" and "Controlled" have meanings that correspond to the foregoing.

(b) Neither the Company nor any of its Subsidiaries has, in the ordinary course of business or otherwise, (i) purchased, leased or otherwise acquired any property or assets or obtained any services (other than services rendered in the ordinary course of business as director, officer, employee or manager of the Company or any of its Subsidiaries) from, (ii) sold, leased or otherwise disposed of any property or assets or provided any services to, (iii) entered into or modified in any manner any Contract with, or (iv) borrowed any money from, or made or forgiven any loan or other advance to, any Affiliated Person.

(c) The (i) Contracts of the Company and its Subsidiaries do not include any obligation or commitment between the Company or any of its Subsidiaries and any Affiliated Person, (ii) assets of the Company and its Subsidiaries do not include any receivable or other obligation or commitment from any Affiliated Person to the Company or any of its Subsidiaries, and (iii) liabilities of the Company and its Subsidiaries do not include any payable or other obligation or commitment from the Company or any of its Subsidiaries to any Affiliated Person.

(d) All Contracts, agreements and arrangements set forth in Section 2.19(b) and (c) of the Disclosure Schedule were entered into on an arms'-length basis.

(e) To the Knowledge of the Company, no Affiliated Person of the Company or any of its Subsidiaries is a party to any Contract with any vendor or supplier of the Company or any of its Subsidiaries.

Section 2.20 Unlawful Payments.

(a) None of the Company, any of its Subsidiaries or, to the Knowledge of the Company, any manager, director, officer, agent, distributor, employee or other Person acting on behalf of or in the name of the Company or any of its Subsidiaries with authority to do so has: (i) offered or used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expense relating to any political campaign or activity; (ii) offered or made a direct or indirect unlawful payment or conveyance of something of value to any foreign or domestic government official, employee or political candidate or established or maintained any unlawful or unrecorded funds; (iii) violated any provision of the U.S. Foreign Corrupt Practices Act of 1977 (the "FCPA") or any equivalent to the FCPA or concerning such unlawful payments or gifts in any jurisdiction; (iv) offered or given any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment or gift of money or anything of value to any foreign or domestic government official or employee of any Governmental Entity; (v) received any unlawful discounts or rebates in violation of any applicable Law relating to antitrust or competition; or (vi) breached or waived any applicable foreign, federal or state law regarding business conduct, or any code of ethics promulgated by an applicable industry representative organization or trade organization applicable to the business of the Company and its Subsidiaries as currently conducted regarding business conduct.

Section 2.21 Brokers or Finders; Acquisition Expenses. No agent, broker, investment banker, financial advisor or other firm or Person is or will be entitled to any brokers' or finder's fee or any other commission or similar fee in connection with the origination, negotiation or execution of this Agreement or the consummation of the Acquisition or any of the other transactions contemplated by this Agreement or the Ancillary Agreements. True and correct copies of all agreements between the Company or any of its Subsidiaries and any Person mentioned in Section 2.21 of the Disclosure Schedule, including without limitation any fee arrangements, have been made available to Purchaser. All Acquisition Expenses will be set forth in the Estimated Closing Date Schedule.

Section 2.22 Books and Records. The minute books and stock records of the Company and each of its Subsidiaries made available to Purchaser contain all (i) minutes of meetings of the Board of Directors and Stockholders of the Company and each of its Subsidiaries, (ii) written statements of actions taken by the Board of Directors and Stockholders of the Company and each of its Subsidiaries without a meeting, and (iii) records of the issuance, transfer and cancellation of all shares of Company Capital Stock and other Securities of the Company and each of its Subsidiaries, in each case since the date of incorporation of the Company and the date of formation of each of its Subsidiaries. Such minute book and stock record book are true and complete.

Section 2.23 State Takeover Statutes. The Board of Directors of the Company has taken all action necessary to ensure that any restrictions on business combinations contained in the DGCL (including Section 203 of the DGCL) or any other applicable Law will not apply to the Acquisition and the other transactions contemplated by this Agreement. No other "fair price," "moratorium," "control share acquisition" or other similar anti-takeover statute or regulation or any anti-takeover provision in the Charter Documents is, or at the Closing will be, applicable to the Company, the shares of Company Capital Stock, the Acquisition or the other transactions contemplated by this Agreement.

Section 2.24 Complete Copies of Materials. The Company has made available to Purchaser true and complete copies of each document listed on the Disclosure Schedule, including each Material Contract.

ARTICLE III

REPRESENTATIONS AND WARRANTIES OF THE SELLERS

Except as set forth in the Disclosure Schedule, each Seller (severally and not jointly and solely as to itself, himself or herself) represents and warrants to Purchaser that the following are true and correct as of the date hereof and true and correct as of the Closing Date as if such representations and warranties were made at and as of the Closing Date (except for such representations and warranties as are made only as of a specific date, which shall only be made as of such date).

Section 3.1 Several Seller Representations(a) .

(a) Such Seller is the record and beneficial owner of the number of the Shares, free and clear of all Liens, except for any Liens created by this Agreement, the community property rights of persons identified on the Spreadsheet and transfer restrictions arising under the Securities Act or state securities laws. Such Seller does not own any Securities issued by, or other obligations of, the Company or any Subsidiary which are not listed on the Spreadsheet.

(b) Such Seller is a natural person or a legal entity of the type set opposite such Seller's name on the Spreadsheet. If such Seller is a natural person: (i) such Seller is competent and has all requisite power and authority to execute and deliver this Agreement and the Ancillary Agreements and to consummate the transactions contemplated hereby and thereby, and (ii) except as set forth on the Spreadsheet, no person has any community property rights by virtue of marriage or otherwise, in any of the Shares. If such Seller is not a natural person, such Seller: (i) has been duly organized and is validly existing and in good standing under the Laws of its jurisdiction of formation, (ii) has all requisite power and authority to execute and deliver this Agreement and the Ancillary Agreements and to consummate the transactions contemplated hereby and thereby, and (iii) has taken all necessary corporate or other action to authorize the execution, delivery and performance of this Agreement and the transaction contemplated hereby.

(c) This Agreement and each of the Ancillary Agreements to which such Seller is a party has been duly executed and delivered by such Seller and, assuming due authorization, execution and delivery by the other parties hereto and thereto, constitute legal, valid and binding obligation of such Seller, enforceable against such Seller in accordance with their terms, subject to the Bankruptcy and Equity Exception. Any Spousal Consent being executed by such Seller's spouse is enforceable against such person in accordance with its terms.

(d) The execution and delivery of this Agreement and any Ancillary Agreement to which such Seller is a party, and the consummation of the transactions contemplated hereby and thereby will not result in a violation of, or a default under, or conflict with, or require any consent, approval or notice under, any contract, trust, commitment, agreement, obligation, understanding, arrangement or restriction of any kind to which such Seller is a party or by which such Seller is bound or to which the Shares are subject. Consummation by such Seller of the transactions contemplated hereby and thereby will not violate, or require any consent, approval or notice under, any provision of any judgment, order, decree, statute, law, rule or regulation applicable to such Seller or the Shares.

(e) This Agreement and the Ancillary Agreements will effectively vest in Purchaser good, valid and marketable title to, and ownership of, the Shares, free and clear of all Liens. Except for the Spousal Consent being executed simultaneously with the execution of this Agreement, no action is or will be required on the part of any person in order to effect the conveyance to Purchaser of such Seller's right, title and interest in the Shares free and clear of any community property interest.

ARTICLE IV

REPRESENTATIONS AND WARRANTIES OF PURCHASER

Except as set forth in the disclosure schedule prepared by an appropriate officer of Purchaser and delivered to the Company prior to the execution of this Agreement (the "Purchaser Disclosure Schedule"), Purchaser represents and warrants to the Company that the following are true and correct as of the date hereof and as of the Closing Date as if such representations and warranties were made at and as of the Closing Date (except for such representations and warranties as are made only as of a specific date, which shall only be made as of such date).

Section 4.1 Organization. Purchaser is a corporation duly organized, validly existing and in good standing under the laws of its state of incorporation.

Section 4.2 Authority Relative to this Agreement. Purchaser has full corporate power and authority to execute and deliver this Agreement and to consummate the transactions contemplated hereby. Purchaser has taken all corporate action necessary to authorize the execution, delivery and performance of this Agreement and the consummation of the transactions contemplated hereby by Purchaser, and no other corporate proceedings on the part of Purchaser are necessary to authorize this Agreement or to consummate the transaction contemplated hereby. This Agreement has been duly executed by Purchaser and, assuming the due authorization, execution and delivery by the other parties hereto, constitutes a valid and binding agreement of Purchaser, enforceable against Purchaser in accordance with its terms, subject to the Bankruptcy and Equity Exception.

Section 4.3 Litigation. As of the date hereof, there is no action, suit or proceeding pending or, to Purchaser's knowledge, threatened against Purchaser that questions the validity of this Agreement or the Ancillary Agreements, or the right of Purchaser to enter into this Agreement or any Ancillary Agreement, or to consummate the transactions contemplated hereby or thereby.

Section 4.4 Conflicts; Consents of Third Parties.

(a) None of the execution and delivery by Purchaser of this Agreement, the consummation of the transactions contemplated hereby, or the compliance by Purchaser with any of the provisions hereof will conflict with, or result in violation of or default (with or without notice or lapse of time, or both) under, or give rise to a right of termination or cancellation under any provision of (i) the certificate of incorporation and by-laws of Purchaser; (ii) any material Contract to which Purchaser is a party or by which any of the material properties or assets of Purchaser are bound that would have a material adverse effect on Purchaser's obligation to effect the Closing; or (iii) any order of any Governmental Entity applicable to Purchaser or by which any of the properties or assets of Purchaser are bound.

(b) No consent, waiver, approval, order, permit or authorization of, or declaration or filing with, or notification to, any Governmental Entity is required on the part of Purchaser in connection with the execution and delivery of this Agreement or the compliance by Purchaser with any of the provisions hereof or the consummation of the transactions contemplated hereby, excluding for purposes of this Section 4.4(b) any of the transactions contemplated by Section 1.9.

ARTICLE V

COVENANTS OF THE COMPANY AND THE SELLERS

The Company and the Sellers covenant and agree to perform, as applicable, as follows:

Section 5.1 Conduct of Business of the Company. During the period from the date of this Agreement until the Closing, the Company agrees (i) to conduct the operations of the Company and each of its Subsidiaries only in the ordinary and usual course of business and consistent with past practices and (ii) to use its best efforts to preserve intact the present business organization of the Company and each of its Subsidiaries, keep available the services of the present officers, employees and consultants of such Person and preserve such Person's present relationships with licensors, licensees, customers, suppliers, employees and others having business relationships with it. Without limiting the generality of the foregoing, the Company and its Subsidiaries hereafter shall not, directly or indirectly, without the prior written consent of Purchaser:

(a) propose or adopt any amendment to or otherwise change the Charter Documents or organizational documents of such Person;

(b) authorize for issuance, sale, pledge, disposition or encumbrance, or issue, sell, accelerate, pledge, dispose of or encumber any Company Capital Stock, Company Stock Option or any other Securities of, or ownership interest in, the Company or any of its Subsidiaries (other than issuance of Company Capital Stock upon exercise of any Company Stock Option or Company Warrant outstanding as of the date hereof), or amend any of the terms of any such Securities or agreements relating thereto outstanding on the date hereof;

(c) (i) reclassify, combine, split or subdivide any shares of Company Capital Stock; (ii) declare, set aside or pay any dividend or other distribution (whether in cash, securities or property or any combination thereof) in respect of any class or series of Company Capital Stock; or (iii) redeem, purchase or otherwise acquire, or propose or offer to redeem, purchase or otherwise acquire, any outstanding Company Capital Stock or other Securities of the Company or any of its Subsidiaries;

(d) organize any new Subsidiary, acquire any equity securities of any Person or acquire any equity or ownership interest (financial or otherwise) in any business;

(e) (i) incur or assume any Liability or Indebtedness, (ii) assume, guarantee, endorse or otherwise become liable or responsible (whether directly, contingently or otherwise) for the obligations of any third party; (iii) make any loans, advances or capital contributions to, or investments in, any third party; (iv) mortgage or pledge any of its material properties or assets, tangible or intangible, or create or suffer to exist any Lien, other than Permitted Liens, thereupon; or (v) authorize any new capital expenditures for property, plant and equipment;

(f) cancel any debts or waive, release or relinquish any contract rights or other rights of substantial value other than in the ordinary course of business, consistent with past practices;

(g) sell, transfer, or otherwise dispose of any of material properties or assets (real, personal or mixed, tangible or intangible);

(h) (i) make any change in the compensation of or payable to any of its directors, officers, employees, agents or consultants or to Persons providing management services to the Company or any of its Subsidiaries, or (ii) enter into or amend, in any material respect, any Benefit Plan;

(i) (i) terminate, fail to renew, abandon, cancel, fail to maintain, permit to lapse, fail to continue to prosecute or defend or dedicate to the public domain any Company Intellectual Property; (ii) license (except for non-exclusive licenses in the ordinary course of business consistent with past practice) or otherwise transfer or dispose of any Company Intellectual Property or any rights in Company Intellectual Property, or disclose to any Person any trade secret, formula, process or know-how not theretofore a matter of public knowledge other than in the ordinary course of business consistent with past practice and subject to appropriate confidentiality restrictions; or (iii) enter into any Contract with respect to or otherwise binding upon any Company Intellectual Property (except for non-exclusive licenses in the ordinary course of business consistent with past practice that do not differ in any material respect from the Standard Form Agreements);

(j) enter into, modify or amend in any material respect, terminate, or waive, release or assign any material rights or claims under, any Material Contract;

(k) authorize, recommend, propose or enter into or announce an intention to authorize, recommend, propose or enter into an agreement, understanding, confidentiality agreement, term sheet, letter of intent, agreement-in-principle or a definitive agreement with respect to any merger, consolidation, liquidation, dissolution, or business combination, any acquisition of a material amount of property, assets or securities, or any disposition of a material amount of property, assets or securities;

(l) make any change with respect to accounting policies or procedures in effect as of the Company's fiscal year ended December 31, 2017;

(m) pay, prepay, discharge or satisfy any material claims, Liabilities, Indebtedness or Acquisition Expenses, other than the payment, discharge or satisfaction in the ordinary course of business, consistent with past practices;

(n) file any amendment to any Tax Return or make any election relating to Taxes, change any election relating to Taxes already made, adopt or change any accounting method relating to Taxes, enter into any closing agreement relating to Taxes, settle any claim or assessment relating to Taxes or consent to any claim or assessment relating to Taxes or any waiver of the statute of limitations for any such claim or assessment;

(o) enter into any agreement to indemnify or hold harmless any Person; or

(p) commit or agree (in writing or otherwise) to take any of the foregoing actions or fail to take any action that could cause the failure of any of the conditions set forth in Article VII.

Section 5.2 Access. The Company shall afford to the officers, employees, accountants, counsel and other Representatives of Purchaser, full access during normal business hours from the date hereof until the Closing or termination of this Agreement, to all of the properties, books, contracts, commitments and records of the Company and its Subsidiaries and, during such period, the Company shall furnish promptly to Purchaser all other information concerning the business, properties and personnel of the Company and its Subsidiaries as Purchaser may reasonably request.

Section 5.3 No Solicitation of Competing Transaction.

(a) Neither the Company nor any Seller shall (and neither the Company nor any Seller shall authorize or permit any Affiliate of the Company or any of its or their respective Representatives, including, but not limited to, investment bankers, attorneys and accountants, to), directly or indirectly, take any action to solicit, initiate, seek, encourage or support any inquiry, proposal or offer from, furnish any

information to, or participate in any negotiations or discussions with any Person or group (other than Purchaser or any of its Affiliates or Representatives) regarding any acquisition of the Company, any merger or consolidation with or involving the Company, any acquisition of all or any material portion of the stock or assets of the Company, any equity or debt issuance or financing, or any partnering or other similar transaction providing a third party with rights in or to any of the Company's Intellectual Property that may serve as an alternative to or otherwise, defer, delay or preclude the consummation of the Acquisition (any such inquiry, proposal or offer being an "Acquisition Proposal"). The Company will notify Purchaser in writing immediately (and no later than within 24 hours) upon receipt by the Company or any Representative of the Company of any Acquisition Proposal, any request for nonpublic information in connection with any Acquisition Proposal or for access to the properties, books or records of the Company by any Person that informs the Company that it is considering making, or has made, an Acquisition Proposal. Such notice shall set forth the identity of the Person making the Acquisition Proposal, the material terms thereof and copies of any written Acquisition Proposal, and the Company shall immediately provide Purchaser with a further notice of regarding any revisions to the terms thereof.

(b) Neither the Board of Directors of the Company nor any committee thereof thereafter will (i) withdraw or modify, or propose to withdraw or modify, in a manner adverse to Purchaser, the approval or recommendation by the Board of Directors of the Company or any committee thereof of this Agreement or transactions contemplated hereby, (ii) approve or recommend or propose to approve or recommend, any Acquisition Proposal, or (iii) enter into any agreement with respect to any Acquisition Proposal.

(c) No Seller shall (A) revoke or rescind his, her or its approval of this Agreement and the transactions contemplated hereby, or (B) enter into any understanding or agreement with respect to any Acquisition Proposal. Each Stockholder will vote all shares of Company Capital Stock beneficially owned by such Person against any Acquisition Proposal submitted to the Stockholders of the Company during the term of this Agreement. No Stockholder shall sell, transfer, assign or hypothecate any shares of Company Capital Stock or other Securities of the Company or take any action that would result in any of the conditions to the Closing not being satisfied or that would delay their satisfaction.

(d) The parties hereto agree that irreparable damage would occur if the provisions of this Section 5.3 were not performed in accordance with their specific terms or were otherwise breached. It is accordingly agreed by the parties hereto that Purchaser will be entitled to an immediate injunction or injunctions, without the necessity of proving the inadequacy of money damages as a remedy and without the necessity of posting any bond or other security, to prevent breaches of the provisions of this Section 5.3 and to enforce specifically the terms and provisions hereof in any court of the United States or any state having jurisdiction, this being in addition to any other remedy to which Purchaser may be entitled at law or in equity.

Section 5.4 Third Party Consents; Notices; Terminations.

(a) The Company and its Subsidiaries shall use all reasonable best efforts to obtain, prior to the Closing Date, all necessary consents, waivers and approvals of any Governmental Entities or any parties to any Contract as are required thereunder in connection with the Acquisition or for any such Contracts to remain in full force and effect after the Closing, so as to preserve all rights of, and benefits to, the Company under such Contract from and after the Closing, all of which are required to be listed in Section 2.4 of the Disclosure Schedule. Such consents, waivers and approvals shall be in a form reasonably acceptable to Purchaser.

(b) The Company or the applicable Subsidiary shall send each of the notices set forth in Schedule 5.4(b) promptly following the date hereof.

(c) The Company or the applicable Subsidiary shall terminate each of the Contracts set forth in Schedule 5.4(c), effective as of the Closing.

Section 5.5 280G Waivers and Consent.

(a) The Company shall obtain and deliver to Purchaser, prior to the initiation of the procedure described in Section 5.5(b), an excess parachute payment waiver, in substantially the form attached hereto as Exhibit B ("280G Waiver"), from each Person who the Company reasonably believes is, with respect to the Company, a "disqualified individual" (within the meaning of Section 280G of the Code) with respect to the Acquisition and who would otherwise receive or have the right or entitlement to receive a "parachute payment" (as defined in Section 280G(b)(2) of the Code) from the Company, or from Purchaser or any trade or business (whether or not incorporated) that is a member of a controlled group or which is under common control with Purchaser within the meaning of Section 414 of the Code, under Section 280G of the Code as a result of the Closing or the consummation of the Acquisition (including in connection with certain changes in any such Person's employment circumstances following the Closing). By the execution of such 280G Waiver, the Person executing the waiver shall agree to waive all of his or her right and entitlement to receive (or if already paid, his or her right and entitlement to keep) any portion of such "parachute payments" which would cause the Person executing the waiver to receive an "excess parachute payment" (as defined in Section 280G(b)(1) of the Code), unless the stockholders of the Company approve such waived payments in accordance with Section 280G(b)(5)(A)(ii) of the Code.

(b) The Company shall submit, in such form as is approved by Purchaser, the payments which are waived pursuant to the waiver agreements described in Section 5.5(a) to its stockholders for their approval in accordance with all applicable requirements of Section 280G(b)(5)(B) of the Code and the Treasury Regulations thereunder, including Q-7 of Section 1.280G-1 of such Treasury Regulations.

Section 5.6 Repayment of Indebtedness; Acquisition Expenses.

(a) The Company and its Subsidiaries shall take all action necessary or appropriate to cause all outstanding Indebtedness of the Company and its Subsidiaries as of the Closing Date to be repaid and extinguished (or, in the case of Indebtedness to the founders of the Company, forgiven) on the Closing Date, without any further Liability to the Company or Purchaser. Not later than three (3) Business Days prior to the Closing Date, the Company will deliver to Purchaser payoff letters or other evidence of payment (or, in the case of Indebtedness to the founders of the Company, forgiveness) for all Indebtedness of the Company and its Subsidiaries each in form and substance satisfactory to Purchaser.

(b) On or prior to the Closing Date, the Company shall deliver to Purchaser termination statements in a form suitable for filing with the applicable Governmental Entities (or payoff letters authorizing Purchaser or the Company to file such termination statements), executed by each Person holding a security interest in any assets of the Company or its Subsidiaries as of the Closing Date, terminating any and all such security interests and evidence reasonably satisfactory to Purchaser that all Liens on assets of the Company and its Subsidiaries, except for Permitted Liens, shall be released on the Closing Date.

Section 5.7 FIRPTA Certificate. At or prior to Closing, the Company shall have delivered to Purchaser (i) a statement from the Company, signed by an authorized officer of the Company, that the Company is not, and has not been at any time during the five (5) years preceding the date of such statement, a "United States real property holding corporation," as defined in Section 897(c)(2) of the Code, such statement in form and substance conforming to the requirements of Treasury Regulations Section 1.1445-2(c)(3) and 1.897-2(h) (the "FIRPTA Certificate"), and (ii) a form of notice to be delivered by Purchaser to the Internal Revenue Service on behalf of the Company in compliance with Treasury Regulation Sections 1.897-2(h)(2) in substantially the form of Exhibit C hereto.

Section 5.8 State Takeover Statutes. In the event that any "fair price," "moratorium," "control share acquisition," or other anti-takeover statute or regulation or any anti-takeover provision of the Charter Documents is or becomes, or at the Closing will be, applicable to the Company, shares of Company Capital Stock, the Acquisition or the other transactions contemplated by this Agreement, the Company, at the direction of its Board of Directors and Purchaser shall each use their respective reasonable best efforts to ensure that the Acquisition and the transactions contemplated by this Agreement may be consummated as promptly as practicable on the terms and subject to the conditions set forth in this Agreement, and otherwise to minimize the effect of such statute or regulation on this Agreement and the transactions contemplated hereby.

Section 5.9 All Commercially Reasonable Efforts. Prior to the Closing, upon the terms and subject to the conditions set forth in this Agreement, the Company, its Subsidiaries and each of the Sellers agrees to use commercially reasonable best efforts to take, or cause to be taken, all actions, and to do, or cause to be done, and to assist and cooperate with the other parties in doing, all things necessary, proper or advisable to consummate and make effective, in the most expeditious manner practicable, this Agreement, the Ancillary Agreements and the transactions contemplated hereby and thereby, including using reasonable efforts to accomplish the following: (i) taking all commercially reasonable acts necessary to cause the conditions precedent set forth in Article VII to be satisfied, (ii) obtaining all necessary actions or non-actions, waivers, consents, approvals, orders and authorizations from Governmental Entities and the making of all necessary registrations, declarations and filings (including registrations, declarations and filings with Governmental Entities, if any) and taking all commercially reasonable steps as may be necessary to avoid any suit, claim, action, investigation or proceeding by any Governmental Entity, (iii) obtaining all necessary consents, approvals or waivers from third parties, and (iv) execution or delivery of any additional instruments necessary to consummate the transactions contemplated by, and to fully carry out the purposes of, this Agreement and the Ancillary Agreements.

ARTICLE VI

OTHER COVENANTS

Section 6.1 Confidentiality; Public Disclosure. Any public announcement, press release or similar publicity regarding this Agreement and the transactions contemplated hereby, including the public disclosure thereof, will be issued, if at all, at such time and in such manner as Purchaser determines; provided, that any such public announcement, press release or similar publicity prior to the Closing shall be subject to the Company's prior written consent. Each of the Company and its Subsidiaries, the Sellers and the Sellers' Representative shall not (and, prior to the Closing, the Company shall cause any Representative of the Company or its Subsidiaries to refrain from), directly or indirectly, disclose or issue or make any statement or communication to any third party (other than its or their respective legal, accounting, and financial advisors that are bound by confidentiality restrictions) regarding the existence or subject matter of this Agreement or the transactions contemplated hereby (including any claim or dispute arising out of or related to this Agreement, or the interpretation, making, performance, breach or termination hereof and the reasons therefor) or any other nonpublic, confidential or proprietary information concerning the Company or any Company Subsidiary (or, after the Closing, Purchaser or any of its Affiliates) without the consent of Purchaser, except (i) to the extent such disclosure is required by applicable Law, in which case the Company, or the Sellers' Representative, as applicable, shall promptly notify Purchaser of such disclosure and cooperate at Purchaser's expense with Purchaser to the extent practicable so as to seek to limit the information disclosed to the information required by applicable Law to be disclosed and will, to the extent practicable and at Purchaser's expense, seek to obtain a protective order over, or confidential

treatment of, such information, or (ii) for disclosures in dispute resolution proceedings to the courts or arbitrators involved in such proceedings and to other Persons involved in such proceedings (e.g., attorneys and expert witnesses) that are bound by confidentiality restrictions; provided, that such proceedings are brought in compliance with this Agreement, including Section 9.6. The University of Washington's obligations under the Washington State Public Records Acts as interpreted by the University of Washington in its sole discretion shall take precedence over any obligation arising under this Agreement.

Section 6.2 Notification of Certain Matters. The Company or Purchaser, as the case may be, shall give prompt notice to the other party following receipt of knowledge of (a) the occurrence (or non-occurrence) of any event that would reasonably be expected to cause any representation or warranty of the Company or Purchaser, respectively and as the case may be, contained in this Agreement to be untrue or inaccurate at or prior to the Closing such that the conditions set forth in Section 7.2(a) or Section 7.2(a), respectively, would not be satisfied, and (b) the occurrence of any material failure of the Company or Purchaser, as the case may be, to comply with or satisfy any covenant, condition or agreement to be complied with or satisfied by it hereunder such that the conditions set forth in Section 7.2(b) or Section 7.2(a), respectively, would not be satisfied; provided, however, that the delivery of any notice pursuant to this Section 6.2 shall not have the effect of updating any disclosure permitted or required or limit or otherwise affect the remedies available to either party hereunder or affect or be deemed to modify any provisions of this Agreement or any Ancillary Agreement.

Section 6.3 Tax Matters.

(a) Purchaser shall prepare or cause to be prepared and file or cause to be filed all Tax Returns for the Company that are required to be filed after the Closing Date taking into account any applicable extensions. All such Tax Returns relating to a Pre-Closing Tax Period shall be prepared, subject to the requirements of applicable Law, in accordance with past practice of the Company and in a manner consistent with Section 6.3(d). To the extent that any such Tax Return includes a Pre-Closing Tax Period and could reasonably be expected to give rise to an indemnity claim by any Indemnified Party under this Agreement, Purchaser shall deliver such Tax Return to the Sellers' Representative at least fifteen (15) calendar days prior to the due date (or if less than fifteen (15) days remain before filing is due, one third (⅓) of the days remaining between Closing and the filing due date to the extent feasible) for its review and approval (which approval shall not be unreasonably withheld or delayed). Within five (5) Business Days following the delivery of such Tax Return to the Sellers' Representative, the Sellers' Representative shall notify Purchaser of any comment or dispute of any item contained therein, which notice shall set forth in reasonable detail the basis for such dispute. If the Sellers' Representative fails to notify Purchaser of any dispute within such five (5) Business Day period, such Tax Return shall be deemed to be accepted by the Sellers' Representative. If the Sellers' Representative notifies Purchaser in writing of any objection regarding such Tax Return within the time periods set forth in this Section 6.3(a), Purchaser and the Sellers' Representative shall cooperate in good faith to resolve such dispute as promptly as possible. If Purchaser and the Sellers' Representative are unable to resolve the dispute within five (5) Business Days after receipt of such objection, the Sellers' Representative shall submit such disputed items to a nationally recognized accounting firm reasonably acceptable to both the Sellers' Representative and Purchaser (for purposes of this Section 6.3, the "Independent Accountants") for resolution. The Independent Accountants shall, within forty-five (45) calendar days following its selection, deliver to Purchaser and the Sellers' Representative a written report setting forth its determination as to such disputed items (and only such disputed items), and its determinations will be conclusive and binding upon the parties thereto for the purposes hereof. If the Independent Accountants cannot resolve the dispute before the Tax Return that is the subject of a disagreement is due, such Tax Return shall be filed as prepared by Purchaser pursuant to this Section 6.3 (a), subject to an amendment of the Tax Return upon resolution. The fees and disbursements of the Independent Accountants shall be apportioned equally (50/50) between the Sellers' Representative (on behalf of the Sellers), on the one hand, and Purchaser, on the other hand.

(b) For purposes of this Agreement, in the case of any Taxes of the Company that are payable with respect to any Tax period beginning prior to the Closing Date and ending after the Closing Date (a "Straddle Period"), the portion of any such Taxes that relates to the Pre-Closing Tax Period shall: (i) in the case of real, personal and intangible property Taxes (and any other Taxes not based on or measured by income or receipts), equal the amount of such Tax for the entire period multiplied by a fraction, the numerator of which is the number of days in the portion of the Straddle Period ending at the end of the day that is the Closing Date and the denominator of which is the number of days in such Straddle Period; and (ii) in the case of Taxes based on or measured by net income, gain, payroll or receipts of the Company and its Subsidiaries, equal the amount due for such other Taxes as if the Company had performed an interim closing of the books as of the close of business on the Closing Date. For purposes of clause (ii) of the preceding sentence, any exemption, deduction, credit or other item (including the effect of any graduated rates of Tax) that is calculated on an annual basis shall be allocated to the portion of the Straddle Period ending on the Closing Date on a pro rata basis determined by multiplying the total amount of such item allocated to the Straddle Period times a fraction, the numerator of which is the number of days in the portion of the Straddle Period ending on the Closing Date and the denominator of which is the number of days in such Straddle Period.

(c) Subject to this Section 6.3, Purchaser shall be responsible for, and shall have sole discretion with respect to, all Tax Returns required to be filed by the Company with respect to any taxable period that begins after the Closing Date.

(d) Following the Closing, Purchaser and its Affiliates (including on or after the Closing Date, the Company and its Subsidiaries) will not (i) except for any Tax Returns prepared and filed in accordance with Section 6.3(a), file or amend any Tax Returns of the Company or its Subsidiaries with respect to any Pre-Closing Tax Period, (ii) amend any Tax Return that was prepared and filed in accordance with Section 6.3(a), (iii) make or change any material Tax election or change any method of accounting that has retroactive effect to a Pre-Closing Tax Period, (iv) agree to extend or waive the statute of limitations with respect to Taxes of any the Company or its Subsidiaries for a Pre-Closing Tax Period, (v) initiate discussions or examinations with any Tax authority (including any voluntary disclosures) regarding Taxes with respect to any Pre-Closing Tax Period, or (vi) engage in any transaction on the Closing Date after the Closing outside the ordinary course of the Company's business (other than as explicitly contemplated by this Agreement), in each such case except (A) with the prior written consent of the Sellers' Representative (which will not be unreasonably withheld, delayed, or conditioned), (B) if such action could not form the basis for a claim of indemnification against the Sellers pursuant to this Agreement, or (C) if Purchaser releases Sellers from any obligation to indemnify the Indemnified Parties on account of Taxes attributable to such action. For the avoidance of doubt, it shall be unreasonable for the Sellers' Representative to withhold, condition or delay consent to any action required by applicable Law.

(e) All income Tax Returns with respect to Pre-Closing Tax Periods described in Section 6.3(a) shall be prepared, and Pre-Closing Taxes and the Closing Consideration shall be calculated, in accordance with the following rules:

(i) To the extent permitted or required under applicable Law, the Closing Date shall be treated as the last day of the taxable period of the Company and its Subsidiaries for all Tax purposes, and the Company shall join the consolidated group that includes Purchaser on the day after the Closing Date; and

(ii) Purchaser and the Sellers agree for all applicable Tax purposes that (A) the right of the Sellers to any Earn-Out Payment shall be treated as deferred contingent purchase price eligible for installment treatment under Section 453 of the Code and any corresponding provision of foreign, state or local Laws, as appropriate, and (B) if and to the extent any Earn-Out Payment is made to the Sellers, interest may be imputed on such amount payable to the Sellers if required by Section 483 or 1274 of the Code. Each of Purchaser, the Company and the Sellers shall prepare and file all Tax Returns consistent with, and shall not take any Tax position inconsistent with, this Section 6.3(e).

Section 6.4 Cooperation and Assistance. Purchaser and the Sellers' Representative shall provide each other with such cooperation and assistance as may be reasonably requested by either of them in connection with the preparation of any Tax Return, any audit or other examination by any Tax Authority, or any judicial or administrative proceedings relating to liability for Taxes, and until the seventh (7th) anniversary of the Closing Date, and each will retain and provide the other with any records or information which may be necessary for such Tax Return Audit, or examination, proceedings or determination. Notwithstanding the foregoing or any other provision herein to the contrary, in no event will the Sellers' Representative be entitled to review or otherwise have access to any Tax Return, or information related thereto, of Purchaser or its Affiliates (other than any Tax Return of the Company or its Subsidiaries that relate to a Pre-Closing Tax Period).

Section 6.5 Indemnification of Company Board and Officers. Purchaser will ensure that the Company fulfills its indemnification obligations to present and former members of the Board of Directors of the Company Board (the "Indemnified D&Os") pursuant to the terms of the Charter Documents as in effect on the date hereof. The provisions of this Section 6.5 shall survive the Closing and are intended to be for the benefit of, and will be enforceable by, each Indemnified D&O and their successors, assigns and heirs and cannot be amended in a manner adverse to an Indemnified D&O without such Person's consent.

Section 6.6 Rockefeller License. After the Closing, Purchaser shall use commercially reasonable efforts to negotiate and execute a tangible materials license agreement between Purchaser or the Company and The Rockefeller University for a non-exclusive license by The Rockefeller University to Purchaser or the Company of the materials and intellectual property developed by or under the supervision of Dr. Ali Brivanlou known as the RUES2 cells and any derivatives generated from the RUES2 cells for use in Earn-Out Products (the "Rockefeller License"). If Purchaser enters into the Rockefeller License, Purchaser will (a) use commercially reasonable efforts to maintain the Rockefeller License in full force and effect and (b) will not terminate or amend the Rockefeller License in a manner that would materially impair the rights of the Sellers' Representative pursuant to Section 1.9 hereof without the prior written consent of the Sellers' Representative, until, in the case of each of clauses (a) and (b), the end of the Earn-Out Period.

ARTICLE VII

CONDITIONS

Section 7.1 Conditions of Obligations of the Sellers. The obligation of the Sellers to effect the Closing shall be subject to the satisfaction at or prior to the Closing of the following conditions, unless waived specifically in writing by the Sellers:

(a) The representations and warranties of Purchaser set forth in this Agreement shall have been true and correct as of the date of this Agreement and shall be true and correct in all material respects (except for representations and warranties containing materiality qualifiers, which shall be true and correct in all respects) as of the Closing Date (except for representations and warranties that address matters only as of a specific date, which shall be true and correct as of such date).

(b) Purchaser shall have performed and complied, in all material respects, with all obligations and covenants required to be performed or complied with by it under this Agreement at or prior to the Closing Date.

Section 7.2 Conditions of Obligations of Purchaser . The obligation of Purchaser to effect the Closing shall be subject to the satisfaction at or prior to the Closing of the following conditions, unless specifically waived in writing by Purchaser:

(a) The Fundamental Reps (disregarding all materiality or Company Material Adverse Effect qualifiers) shall be true and correct in all respects as of the date of this Agreement and the Closing Date. The other representations and warranties of the Company (disregarding all materiality or Company Material Adverse Effect qualifiers) shall have been true and correct as of the date of this Agreement and shall be true and correct in all material respects as of the Closing Date (except for representations and warranties that address matters only as of a specific date, which shall be true and correct as of such date).

(b) The Company, the Sellers and their Affiliates shall have performed and complied, in all material respects, with all obligations and covenants required to be performed or complied with by them under this Agreement or any Ancillary Agreement at or prior to the Closing Date.

(c) The Company shall not have suffered a Company Material Adverse Effect.

(d) (i) All consents, permits and approvals of Governmental Entities and expiration or termination of all waiting periods (including all extensions thereof) that may be necessary in connection with the execution of this Agreement and the Ancillary Agreements and the consummation of the transactions contemplated hereby and thereby, including under applicable Law pertaining to antitrust, competition or fair trade or transactions resulting in control of a U.S. business by a foreign person, and (ii) each private third party notice, consent or waiver and termination of agreement set forth on Schedule 7.2(d)(ii), shall have been provided or obtained with no conditions attached and no expense imposed on the Company, Purchaser or their Affiliates.

(e) No Governmental Entity of competent jurisdiction shall have enacted, issued, promulgated, enforced or entered any order, executive order, stay, decree, judgment or injunction (preliminary or permanent) or statute, rule or regulation which is in effect and which has the effect of making the transactions contemplated by this Agreement or the Ancillary Agreements illegal or otherwise prohibiting consummation of the transactions contemplated by this Agreement or the Ancillary Agreements.

(f) No Proceeding shall be pending or threatened against the Company or its Subsidiaries; and no Proceeding shall be pending or threatened against any Seller or against Purchaser with respect to the Company, this Agreement or the transactions contemplated hereby.

(g) The Board of Directors of the Company shall have unanimously approved this Agreement, the Ancillary Agreements to which the Company is or will be a party, and the other transactions contemplated hereby and thereby, and such approval shall not have been withdrawn, qualified or rescinded.

(h) (i) Each of the Sellers shall have entered into this Agreement, (ii) each Key Employee shall have executed and delivered to Purchaser an Offer Letter and Proprietary Rights Agreement, (iii) each of the Key Consultants shall have executed and delivered to Purchaser a Consulting Agreement, and (iv) each of the Persons set forth on Schedule A-3 hereto shall have executed and delivered to Purchaser a Restrictive Covenants Agreement. Each such agreement shall be and remain in full force and effect, and no such Person shall have terminated or threatened to terminate employment or services or any such agreement.

(i) Purchaser shall have received a certificate of good standing of the Company and each of its Subsidiaries from the Secretary of State of the State of Delaware and all other jurisdictions in which the Company or any of its Subsidiaries is required to be qualified to do business.

(j) The Company shall have received resignation letters from all officers and directors of the Company and each of its Subsidiaries, effective as of the Closing.

(k) Purchaser shall have received the Spreadsheet Certificate from the Company pursuant to Section 1.5(b) in form and substance satisfactory to Purchaser.

(l) The Company shall have delivered to Purchaser the Section 280G Waivers and shall have submitted the payments which were waived to the stockholders as described in Section 5.5(b) in form and substance satisfactory to Purchaser.

(m) Purchaser shall have received from the Company an officer's certificate certifying to the fulfillment of the conditions specified in Section 7.2(a) through (f) in form and substance reasonably satisfactory to Purchaser (the "Company Certificate").

(n) Purchaser shall have received a certificate, validly executed by the Secretary of the Company, certifying as to the resolutions of the Board of Directors of the Company approving this Agreement, the Ancillary Agreements to which the Company is or will be a party, and the transactions contemplated hereby and thereby, in form and substance reasonably satisfactory to Purchaser (the "Secretary's Certificate").

(o) Purchaser shall have received from each Stockholder a Spousal Consent to this Agreement from any Person with any community or marital property interest in the Shares sold by such Stockholder and certificates representing the Shares sold such Stockholder, duly and validly endorsed in favor of Purchaser or accompanied by a separate stock power duly and validly executed by such Stockholder and otherwise sufficient to vest in Purchaser good and marketable title to such Shares.

ARTICLE VIII

TERMINATION AND AMENDMENT

Section 8.1 Termination. This Agreement may be terminated at any time prior to the Closing:

(a) by mutual written consent of the Company and Purchaser;

(b) by either the Company or Purchaser, if

(i) any Governmental Entity shall have issued an order, decree or ruling or taken any other action (which order, decree, ruling or other action the parties hereto shall use their commercially reasonable efforts to lift), which permanently restrains, enjoins or otherwise prohibits the consummation of the Acquisition and such order, decree, ruling or other action shall have become final and non-appealable; or

(ii) if the Acquisition shall not have been consummated before 90 days after the date of this Agreement (unless the failure to consummate the Acquisition by such date shall be due to the action or failure to act of the party seeking to terminate);

(c) by the Company, if Purchaser shall have breached in any material respect any of its representations, warranties or covenants contained in this Agreement, which breach (i) would cause any of the conditions set forth in Section 7.1 (Conditions of Obligations of the Sellers) not to be satisfied, and (ii) shall not have been cured within ten (10) Business Days following receipt by Purchaser of written notice of such breach from the Company;

(d) by Purchaser, if the Company or Sellers shall have breached in any material respect any representation, warranty or covenant contained in this Agreement, which breach (i) would cause any of the conditions set forth in Section 7.2 (Conditions of Obligations of Purchaser) not to be satisfied and (ii) shall not have been cured within ten (10) Business Days following receipt by the Sellers' Representative of written notice of such breach from Purchaser; or

(e) by Purchaser, if a Company Material Adverse Effect shall have occurred and shall not have been cured or remedied within ten (10) Business Days from the date of its occurrence.

Section 8.2 Effect of Termination. Termination of this Agreement shall not relieve either party for a willful breach of the Agreement or fraud prior to such termination. The provisions of Section 6.1 (Confidentiality; Public Disclosure), Section 11.2 (Fees and Expenses), this Section 8.2 (Effect of Termination) and Article XI (Miscellaneous) of this Agreement shall remain in full force and effect and survive any termination of this Agreement.

ARTICLE IX

INDEMNIFICATION

Section 9.1 Indemnification by the Sellers.

(a) From and after the Closing, each Seller shall, severally but not jointly, indemnify, hold harmless and reimburse each of Purchaser, the Company, and any employee, director, officer, Affiliate, agent or representative of each of them (the "Indemnified Parties") for any payment, obligation, assessment, loss, Tax, Liability, damages, cost, interest, award, judgment, penalty or expense (including reasonable attorneys' fees and expenses) (collectively, "Damages") incurred or sustained by the Indemnified Parties, or any of them, arising from, relating to or in connection with, directly or indirectly, whether or not such Damages relate to any third party claim:

(i) any inaccuracy in or breach of any of the representations or warranties of the Company or any Seller in this Agreement or in the Company Certificate, Secretary's Certificate or Spreadsheet Certificate;

(ii) any failure by the Company to perform or comply with any covenant or agreement in this Agreement;

(iii) any claims regarding rights to acquire Company Capital Stock or ownership of Company Capital Stock;

(iv) any inaccuracy or omission in the Spreadsheet;

(v) any intentional or knowing misrepresentation or fraud by the Company or its agents in connection with this Agreement, any Ancillary Agreement or the transactions contemplated hereby or thereby;

(vi) without duplication, all Pre-Closing Taxes, Indebtedness and Acquisition Expenses to the extent not included in the calculation of the Closing Consideration;

(vii) any claim for indemnification, contribution, advancement of expenses or other Liability asserted by any past or present directors, officers, agents or Affiliates of the Company or its Subsidiaries with respect any act or omission on the part of such person that arose or occurred at or prior to the Closing; or

(viii) any matter set forth in Schedule 9.1 hereto (each a "Designated Matter").

(b) From and after the Closing, each Seller shall, severally but not jointly, solely as to himself or itself, indemnify, hold harmless and reimburse each of the Indemnified Parties for Damages incurred or sustained by the Indemnified Parties, or any of them, arising from, relating to or in connection with, directly or indirectly, whether or not such Damages relate to a third-party claim, Seller's breach of such Seller's covenants set forth in Section 6.1.

(c) For the purpose of determining the amount of Damages suffered by an Indemnified Party as a result of any breach of any representation or warranty of the Company or any Seller that is qualified by a materiality or a Company Material Adverse Effect qualifier or standard, such materiality or Company Material Adverse Effect qualifier or standard shall be disregarded.

(d) This Article IX provides for indemnification against all Damages incurred or sustained by one or more of the Indemnified Parties as a result of the matters set forth herein, whether such indemnification is (i) pursuant to a direct claim by any Indemnified Party or (ii) against Damages incurred or sustained as a result of a third party claim.

(e) For Tax purposes, any payment made pursuant to this Article IX shall be treated as an adjustment to the Purchase Price, unless otherwise required by applicable Law.

Section 9.2 Survival of Representations and Warranties.

(a) Subject to Section 9.2(b), (i) the representations and warranties of the Company set forth in Section 2.14 (Intellectual Property) and Section 2.15 (Regulatory Compliance) (collectively, the "Intellectual Property Reps") will survive until the two (2) year anniversary of the Closing Date; (ii) (A) the representations and warranties of the Sellers set forth in Section 3.1 (Several Seller Representations) and of the Company set forth in Section 2.1 (Organization), Section 2.2 (Capitalization), Section 2.4 (Authority), Section 2.6 ("Size of Person" Threshold), Section 2.12 (Taxes), and Section 2.21 (Brokers or Finders; Acquisition Expenses) (collectively, the "Fundamental Reps") and (B) claims for indemnification of Damages based upon the breach of any covenant or obligation (including the indemnifiable matters set forth in Section 9.1(a)(ii)—Section 9.1(a)(viii)) will each survive until the eight (8) year anniversary of the Closing; and (iii) the other representations and warranties of the Company set forth in Article II shall survive until the fifteen (15) month anniversary of the Closing; provided, however, that if a Notice of Claim (as defined in Section 9.6(a)) is given to the Sellers' Representative on or prior to the applicable expiration date of such representation or warranty or obligation, then, notwithstanding anything to the contrary contained in this Section 9.2, such representation or warranty or obligation will not expire as it relates to such claim, but rather shall remain in full force and effect until such time as such claim has been fully and finally resolved. Notwithstanding any other provision of this Agreement, to the extent the survival periods and termination dates applicable to the representations and warranties and indemnifiable matters set forth herein exceed any applicable statute of limitations, the survival periods and termination dates set forth herein shall supersede any statute of limitations applicable to such representations and warranties and indemnifiable matters.

(b) Notwithstanding anything to the contrary contained in Section 9.2(a), the limitations set forth in Section 9.2(a) will not apply in case of a claim based on any intentional or knowing misrepresentation or fraud by the Company or any Seller in connection with this Agreement, any Ancillary Agreement or the transactions contemplated hereby or thereby.

(c) The representations and warranties set forth in Article IV will expire immediately following the Closing.

(d) All covenants and agreements set forth in this Agreement will survive the Closing.

(e) The representations, warranties, covenants and obligations of the Company or the Sellers (as applicable), and the rights and remedies that may be exercised by the Indemnified Parties, will not be limited or otherwise affected by or as a result of any information furnished to, or any investigation made by or any knowledge of, any of the Indemnified Parties or any of their Representatives.

Section 9.3 Indemnification Basket. The provisions for indemnity contained in Section 9.1(a) shall become effective only in the event that the aggregate amount of all Damages for which the Sellers are liable under this Article IX exceeds fifty thousand dollars ($50,000) (the "Indemnification Basket"), in which event, the Sellers shall be responsible for the aggregate amount of such Damages, and not just the amount in excess of the Indemnification Basket; provided, however, that claims for indemnification from and against Damages relating to any the following shall not be subject to the Indemnification Basket: (i) any inaccuracy in or breach of the Intellectual Property Reps or the Fundamental Reps, and (ii) the indemnifiable matters set forth in Section 9.1(a)(ii)—(viii).

Section 9.4 Limitations on Indemnity. The aggregate liability of each Seller for claims of indemnification from and against Damages pursuant to (i) Section 9.1(a)(i) will not exceed for each Seller on a pro rata basis (based upon such Seller's applicable Indemnification Pro Rata Percentage): (A) with respect to Damages arising from or relating to any inaccuracy in or breach of representations and warranties other than the Intellectual Property Reps and the Fundamental Reps, the Holdback; (B) with respect to Damages arising from or relating to any inaccuracy in or breach of the Intellectual Property Reps, the Holdback plus setoff against 10% of each Earn-Out Payment that becomes due and payable and (C) with respect to Damages arising from or relating to any inaccuracy in or breach of the Fundamental Reps, the Purchase Price actually received by or payable to such Seller; provided, that, in the case of any claim pursuant to Section 9.1(a)(i) that relates to an inaccuracy in or breach of the representations and warranties of any Seller pursuant to Section 2.1, only the Seller who committed such breach shall have liability for such claim in excess of the Holdback; and (ii) Section 9.1(a)(ii) – Section 9.1(a)(viii) and Section 9.1(b) will not exceed for each Seller on a pro rata basis (based upon such Seller's applicable Indemnification Pro Rata Percentage) the Purchase Price actually received by or payable to such Seller; provided, however, if and to the extent permitted by applicable law including, but not limited to RCW 28B.20.250, that the preceding limitations shall not apply to or otherwise limit any claims for indemnification from and against Damages for claims based on intentional or knowing misrepresentation or fraud against any Seller who participated in such intentional or knowing misrepresentation or fraud or of which such Seller had actual knowledge. For the avoidance of doubt, in the case of any claim pursuant to Section 9.1(b), only the Seller who committed such breach shall have liability for such claim (and, in the case of any recovery from the Holdback or setoff against an Earn-Out Payment, only such Seller's interest in the Holdback and Earn-Out Payment will be affected).

(b) Claims for indemnification from and against Damages shall be first satisfied by release of cash from the Holdback (in accordance with each Seller's Pro Rata Percentage) in accordance with Section 9.6, and second by setoff against any Earn-Out Payment (in accordance with each Seller's Pro Rata Percentage) then payable pursuant to Section 1.8 in accordance with Section 9.6. To the extent that indemnifiable Damages exceed or may exceed the Holdback and any Earn-Out Payment then payable pursuant to Section 1.8, they shall, subject to the limitations set forth in this Section 9.4 and Section 9.6, be recoverable in any manner permitted by, and subject to the limitations set forth in, this Agreement and applicable Law.

(c) From and after the Closing, the Sellers shall not have any right of contribution, indemnification or right of advancement from Purchaser or any of its Affiliates with respect to any Damages claimed by an Indemnified Party.

Section 9.5 Defense of Third Party Claims. In the event of the assertion or commencement by any Person of any claim or Proceeding with respect to which an Indemnified Party may be entitled to indemnification pursuant to this Article IX, such Indemnified Party shall have the right, at its election, to proceed with the defense of such claim or Proceeding on its own. If such Indemnified Party so proceeds with the defense of any such claim or Proceeding:

(a) the Sellers shall make available to the Indemnified Party any documents and materials in their possession or control (if any) that may be necessary to the defense of such claim or Proceeding;

(b) the Sellers' Representative will be entitled to participate in the defense of any such claim or Proceeding on behalf of the Sellers (but not to appear of record or communicate with the Person asserting any such claim or Proceeding or its Representatives), at the sole cost and expense of the Sellers' Representative (on behalf of the Sellers); and

(c) the Indemnified Party shall have the right to settle, adjust or compromise such claim or Proceeding without the consent of the Sellers' Representative; provided, however, that if the Indemnified Party settles without the consent of the Sellers' Representative, such settlement shall not be deemed conclusive of the existence of an indemnifiable claim or the amount of Damages for purposes of this Article IX.

An Indemnified Party will give the Sellers' Representative notice after it has been served in connection with the commencement of any such claim or Proceeding against any Indemnified Party; provided, however, that any failure on the part of any Indemnified Party to so notify the Sellers' Representative will not limit any of the obligations of the Sellers, or any of the rights of any Indemnified Party, under this Article IX (except to the extent such failure prejudices the defense of such Proceeding). If an Indemnified Party does not elect to proceed with the defense of any such Proceeding, the Sellers' Representative may proceed with the defense of such Proceeding with counsel reasonably satisfactory to the Indemnified Party or Indemnified Parties; provided, however, that the Sellers' Representative may not settle or compromise any such Proceeding without the prior written consent of the Indemnified Party or Indemnified Parties.

Section 9.6 Claim Procedures. Any claim for indemnification pursuant to this Article IX (and, at the option of any Indemnified Party, any other claim for a monetary remedy, such as in the case of a claim based upon intentional misrepresentation or fraud relating to this Agreement) will be brought and resolved exclusively in accordance with this Section 9.6.

(a) *Notice of Claims for Indemnification*. If any Indemnified Party has incurred or suffered or believes that it may incur or suffer, Damages for which it is or may be entitled to be held harmless, indemnified, compensated or reimbursed under this Article IX or for which it is or may be entitled to a monetary remedy (such as in the case of a claim based on intentional misrepresentation or fraud), such Indemnified Party may deliver a notice of claim (a "Notice of Claim") to the Sellers' Representative. Each Notice of Claim shall: (i) state that such Indemnified Party believes that such Indemnified Party is or may be entitled to indemnification, compensation or reimbursement under Article IX of the Agreement or is or may otherwise be entitled to a monetary remedy; (ii) contain a brief description of the circumstances supporting such Indemnified Party's belief that such Indemnified Party is so entitled to indemnification or is or may otherwise be entitled to a monetary remedy; and (iii) if practicable, contain a non-binding, preliminary estimate of the aggregate dollar amount of actual and potential Damages that have arisen and may arise as a result of such circumstances (the aggregate amount of such estimate, as it may be modified by such Indemnified Party from time to time, being referred to as the "Claimed Amount").

(b) *Objecting to Claims for Indemnification*. During the thirty (30) day period commencing upon delivery by an Indemnified Party to the Sellers' Representative of a Notice of Claim (the "Dispute Period"), the Sellers' Representative may deliver to the Indemnified Party who delivered the Notice of Claim a written response (the "Response Notice") in which the Sellers' Representative: (i) agrees that the full Claimed Amount is owed to the Indemnified Party; (ii) agrees that part, but not all, of the Claimed Amount (the "Agreed Amount") is owed to the Indemnified Party; or (iii) indicates that no part of the Claimed Amount is owed to the Indemnified Party. If the Response Notice is delivered in accordance with clause (ii) or (iii) of the preceding sentence, the Response Notice shall also contain a brief description of the facts and circumstances supporting the Sellers' Representative's claim that only a portion or no part of the Claimed Amount is owed to the Indemnified Party, as the case may be. Any part of the Claimed Amount that is not agreed to be owed to the Indemnified Party pursuant to the Response Notice (or the entire Claimed Amount, if the Sellers' Representative asserts in the Response Notice that no part of the Claimed Amount is owed to the Indemnified Party) is referred to herein as the "Contested Amount" (it being understood that the Contested Amount shall be modified from time to time to reflect any good faith modifications by the Indemnified Party to the Claimed Amount). If a Response Notice is not received by the Indemnified Party prior to the expiration of the Dispute Period, then the Sellers' Representative shall be conclusively deemed to have agreed that the full Claimed Amount is owed to the Indemnified Party.

(c) *Payment of Uncontested Amounts*.

(i) If the Sellers' Representative delivers a Response Notice to the Indemnified Party agreeing that the full Claimed Amount is owed to the Indemnified Party or the Sellers' Representative does not deliver a Response Notice during the Dispute Period, then: (A) the lesser of the Then Remaining Holdback Amount (as defined below) and the entire Claimed Amount shall be released from the Holdback Amount; and (B) if the Then Remaining Holdback Amount is less than the Claimed Amount, the Sellers shall, within ten (10) Business Days following the earlier of the delivery of such Response Notice or the expiration of the Dispute Period, pay the amount of such shortfall to Purchaser. The "Then Remaining Holdback Amount" shall mean the amount by which the Holdback exceeds the sum of all amounts previously deemed or determined to be due and owing to any Indemnified Party pursuant to this Article IX.

(ii) If the Sellers' Representative delivers a Response Notice to the Indemnified Party during the Dispute Period agreeing that less than the full Claimed Amount is owed to the Indemnified Party, then: (A) the lesser of the Then Remaining Holdback Amount and the entire Agreed Amount shall be released from the Holdback; and (B) if the Then Remaining Holdback Amount is less than the Agreed Amount, the Sellers shall, within ten (10) Business Days following the delivery of such Response Notice, pay the amount of such shortfall to Purchaser.

(d) *Resolution of Contested Amounts*.

(i) If the Sellers' Representative delivers a Response Notice to the Indemnified Party during the Dispute Period indicating that there is a Contested Amount, the Sellers' Representative and the Indemnified Party shall attempt in good faith to resolve the dispute related to the Contested Amount. If the Indemnified Party and the Sellers' Representative resolve such dispute, then their resolution of such dispute shall be binding on the Sellers and such Indemnified Party and a settlement agreement stipulating the amount owed to the Indemnified Party (the "Stipulated Amount") shall be signed by the Indemnified Party and the Sellers' Representative. Upon execution of a settlement agreement, (A) the lesser of the Then Remaining Holdback Amount and the entire Stipulated Amount shall be released from the Holdback; and (B) if the Then Remaining Holdback Amount is less than the Stipulated Amount, the Sellers shall, within ten (10) Business Days following the execution of such settlement agreement, or such shorter period of time as may be set forth in the settlement agreement, pay the amount of such shortfall to Purchaser.

(ii) If the Sellers' Representative and the Indemnified Party are unable to resolve the dispute relating to any Contested Amount during the thirty (30)-day period commencing upon the delivery of the Response Notice to the Indemnified Party, then either the Indemnified Party or the Sellers' Representative may submit the claim described in the Notice of Claim to arbitration to be settled by binding arbitration in King County, Washington in accordance with the JAMS Comprehensive Arbitration Rules and Procedures then in effect. Arbitration will be conducted by one arbitrator, mutually selected by the Indemnified Party and the Sellers' Representative; provided, however, that if Indemnified Party and the Sellers' Representative fail to mutually select an arbitrator within fifteen (15) days after such dispute is submitted to arbitration, then the arbitrator shall be selected by JAMS in accordance with its Comprehensive Arbitration Rules and Procedures then in effect. The parties agree to use commercially reasonable efforts to cause the arbitration hearing to be conducted within seventy-five (75) days after the appointment of the arbitrator, and to use commercially reasonable efforts to cause the decision of the arbitrator to be furnished within fifteen (15) days after the conclusion of the arbitration hearing. The arbitrator's authority shall be confined to deciding: (a) whether the Indemnified Party is entitled to recover the Contested Amount (or a portion thereof), and the portion of the Contested Amount the Indemnified Party is entitled to recover; and (b) the non-prevailing party in the arbitration. The final decision of the arbitrator shall include the dollar amount of the award to the Indemnified Party, if any (the "Award Amount"), shall be furnished to the Sellers' Representative and the Indemnified Party in writing and shall constitute a conclusive determination of the issue(s) in question, binding upon the Sellers and the Indemnified Party. The non-prevailing party in any such arbitration shall pay the reasonable expenses (including attorneys' fees) of the prevailing party, and the fees and expenses associated with the arbitration (including the arbitrators' fees and expenses). If an Indemnified Party is found to be the prevailing party in any arbitration, the amount of the fees and expenses of such Indemnified Party payable by the non-prevailing party pursuant to the immediately preceding sentence shall be added to the Award Amount. The non-prevailing party shall be determined solely by the arbitrator. Upon determination of an Award Amount in accordance with this Section 9.6(d): (A) the lesser of the Then Remaining Holdback Amount and the entire Award Amount shall be released from the Holdback; and (B) If the Then Remaining Holdback Amount is less than the Award Amount, the Sellers shall, within ten (10) Business Days following the delivery of the final decision of the arbitrator (or such shorter period as may be set forth in such final decision), pay the amount of such shortfall to Purchaser.

(e) *Holdback Release*.

(i) Within ten (10) Business Days after the Holdback Release Date, Purchaser shall determine the aggregate amount, as of the Holdback Release Date, of the Claimed Amounts and Contested Amounts associated with all claims contained in Notices of Claim that have not been finally resolved and paid prior to such date (the "Unresolved Claims") and shall release the amount, if any, by which the Then Remaining Holdback Amount exceeds the aggregate amount of Unresolved Claims (the "Holdback Release Amount") from the Holdback in accordance with Section 1.3. The portion of the Then Remaining Holdback Amount retained by Purchaser pursuant to this Section 9.6(e)(i) is referred to as the "Retained Amount."

(ii) Following the Holdback Release Date, within ten (10) Business Days after the final resolution of each Unresolved Claim and the delivery to all Indemnified Parties of all amounts to be delivered to such Persons with respect to such Unresolved Claim from the Retained Amount, if any, Purchaser shall cause the applicable portion of the Retained Amount that was retained in respect of such Unresolved Claim and that is not paid or payable to Purchaser in respect of such Unresolved Claim or payable to Purchaser in respect of any other Unresolved Claim, if any, to be released from the Holdback and distributed to the Sellers in accordance with Section 1.3. If the remaining Retained Amount is less than the amount to be delivered to the Indemnified Parties with respect to such Unresolved Claim, then the Sellers shall, within ten (10) Business Days following the resolution of such Unresolved Claims, pay the amount of such shortfall to Purchaser, subject to the limitations in Section 9.4.

(f) *Set-Off and Payment of Claimed Amounts*. All payments by the Sellers described in this Section 9.6(f) shall be subject to the limitations on indemnity set forth in Section 9.4.

(i) Purchaser shall have the right to set off and apply against any Earn-Out Payment an amount up to the amount by which all Claimed Amounts specified in any Notice of Claim delivered by Purchaser hereunder prior to the date of the Earn-Out Payment against which such set off is applied exceed the Then-Remaining Holdback Amount if such amount has not otherwise been paid to Purchaser by the Sellers and continues to be owed to or recoverable by any Indemnified Party (the amount so withheld and set-off pursuant to this Section 9.6(f), the "Offset Amount").

(ii) In the event Purchaser exercises its set off rights pursuant to this Section 9.6(f) and withholds an Offset Amount from any Earn-Out Payment, Purchaser shall notify the Sellers' Representative thereof in writing (the "Offset Notification") no later than the day that such Earn-Out Payment is due and upon the final resolution of the claim for indemnification with respect to which the Offset Notification is delivered in accordance with the provisions of this Article IX, Purchaser shall cause the Persons from whom such amount was set off to be paid the amount, if any, by which the Offset Amount exceeds the amount of Damages to which Purchaser has been deemed or determined to be entitled in connection with such resolution and for which such Persons are liable pursuant to this Article IX.

Section 9.7 Exclusive Remedy. The parties agree that after the Closing, this Article IX will constitute the sole remedy of any Indemnified Party for recovery of Damages incurred or sustained by the Indemnified Parties pursuant to this Agreement. Notwithstanding anything herein to the contrary, nothing in this Agreement shall (i) limit or in any way restrict the representations, warranties and covenants of the Assignee under Section 1.9 of this Agreement, of a Seller or the Seller's Representative under Section 6.1 of this Agreement, or of a Seller under an Ancillary Agreement with that Seller or (ii) limit the rights or remedies of Purchaser or any other Indemnified Party with respect to equitable remedies for non-monetary damages, including specific performance, injunctive and other equitable relief.

Section 9.8 Sellers' Representative.

(a) The Sellers authorize, designate and appoint the Sellers' Representative to act as the sole and exclusive agent, attorney-in-fact and representative of each of the Sellers and the Sellers' Representative is hereby authorized and directed to (i) take any and all actions (including without limitation executing and delivering any documents, incurring any costs and expenses for the account of the Sellers and making any and all determinations required by this Agreement) which may be required in carrying out his, her or its duties under this Agreement, (ii) bring any and all claims against Purchaser or its Affiliates for breach of any of their respective representations, warranties, obligations or covenants or other rights of

the Sellers under this Agreement, (iii) exercise such other rights, power and authority as are authorized, delegated and granted to the Sellers' Representative under this Agreement in connection with the transactions contemplated hereby, and (iv) exercise such rights, power and authority as are incidental to the foregoing. Any such actions taken, exercises of rights, power or authority, and any decision or determination made by the Sellers' Representative consistent therewith shall be absolutely and irrevocably binding on each Seller as if such Seller personally had taken such action, exercised such rights, power or authority or made such decision or determination in such Seller's individual capacity.

(b) The Sellers' Representative shall have no duties towards the Sellers, and shall not incur any Liability to the Sellers, and the Sellers shall have no claims, including those that may arise in the future, against the Sellers' Representative for any action or inaction taken or not taken by him, her or it in connection with his, her or its service as the Sellers' Representative, except to the extent that such action or inaction shall have been held by a court of competent jurisdiction to constitute willful misconduct. The Sellers shall severally indemnify and hold the Sellers' Representative harmless against any loss, Liability or expense incurred without gross negligence or bad faith on the part of the Sellers' Representative and arising out of or in connection with the acceptance or administration of his, her or its duties hereunder, including the reasonable fees and expenses of any legal counsel retained by the Sellers' Representative.

(c) The Sellers' Representative shall have reasonable access to information about the Company and the reasonable assistance of the Company's executive officers for purposes of performing his, her or its duties and exercising his, her or its rights hereunder; provided, that the Sellers' Representative shall treat confidentially and not disclose any nonpublic information from or about Purchaser or its Affiliates to anyone (except on a need-to-know basis to individuals who agree in writing to treat such information confidentially); provided, further, that such access and assistance shall not interfere with or adversely affect the Company's business.

(d) A decision, act, consent or instruction of the Sellers' Representative shall constitute a decision of all Sellers and shall be final, binding and conclusive upon each such Seller.

(e) In the event the Sellers' Representative becomes unable to perform his, her or its responsibilities hereunder or resigns from such position, the Sellers (acting by a written instrument signed by Sellers who held, as of immediately prior to the Closing, a majority of the Outstanding Common Stock) shall select another representative to fill the vacancy of the Sellers' Representative, and such substituted representative shall be deemed to be the Sellers' Representative for all purposes of this Agreement. The Sellers' Representative may only be removed upon delivery of written notice to Purchaser signed by Sellers who, as of immediately prior to the Closing, held a majority (by voting power) of the Outstanding Common Stock. The Sellers' Representative shall provide Purchaser prompt written notice of any replacement of the Sellers' Representative, including the identity and address of the new Sellers' Representative.

ARTICLE X

DEFINITIONS AND INTERPRETATION

Section 10.1 Definitions. For all purposes of this Agreement, except as otherwise expressly provided or unless the context clearly requires otherwise:

"280G Waiver" has the meaning set forth in Section 5.5(a) hereof.

"Acquisition Expenses" has the meaning set forth in Section 11.2 hereof.

"Acquisition Proposal" has the meaning set forth in Section 5.3 hereof.

"Affiliate" has the meaning set forth in Rule 12b-2 of the Exchange Act.

"Agreed Amount" has the meaning set forth in Section 9.6(b) hereof.

"Agreement" or "this Agreement" means this Stock Purchase Agreement, together with the Exhibits and Schedules hereto.

"Ancillary Agreements" means the Offer Letters, the Proprietary Rights Agreements, the Consulting Agreements, the Restrictive Covenants Agreements, the Spousal Consents, and any certificate or other transaction document required to be delivered by the Company or any Seller hereby.

"Annual Net Sales" has the meaning set forth in Section 1.8 hereof.

"Approval Milestone" has the meaning set forth in Section 1.8 hereof.

"Approval Milestone Payment" has the meaning set forth in Section 1.8 hereof.

"Assigned Assets" has the meaning set forth in Section 1.9(b) hereof.

"Assigned Data" has the meaning set forth in Section 1.9(b) hereof.

"Assignee" has the meaning set forth in Section 1.9(a) hereof.

"Assignee Indemnitees" has the meaning set forth in Section 1.9(b) hereof.

"Assignor" has the meaning set forth in Section 1.9(a) hereof.

"Assignor Indemnitees" has the meaning set forth in Section 1.9(b) hereof.

"Assignment Election" has the meaning set forth in Section 1.9(a) hereof.

"Assignment Transaction" has the meaning set forth in Section 1.9(a) hereof.

"Assumed Liabilities" has the meaning set forth in Section 1.9(b) hereof.

"Audit" means any audit, assessment, or other examination relating to Taxes by any Tax Authority or any judicial or administrative proceedings relating to Taxes.

"Award Amount" has the meaning set forth in Section 9.6(d) hereof.

"Bankruptcy and Equity Exception" means (i) such enforcement may be subject to applicable bankruptcy, insolvency or other similar Laws, now or hereafter in effect, affecting creditors' rights generally, and (ii) the remedy of specific performance and injunctive and other forms of equitable relief may be subject to equitable defenses and to the discretion of the court before which any proceeding therefor may be brought.

"Base Purchase Price" has the meaning set forth in Section 1.2 hereof.

"Benefit Plans" has the meaning set forth in Section 2.11(a) hereof.

"Business Day" means any day other than Saturday, Sunday or any other day on which commercial banks in the United States are authorized or required by law to close.

"Bylaws" means the Bylaws of the Company.

"Capital Stock" means the Common Stock and Preferred Stock of the Company.

"Certificates" means each certificate or certificates which immediately prior to the Closing represented Outstanding Common Stock or Outstanding Preferred Stock.

"Certificate of Incorporation" has the meaning set forth in Section 2.1(a) hereof.

"Charter Documents" has the meaning set forth in Section 2.1(a) hereof.

"Claimed Amount" has the meaning set forth in Section 9.6(a) hereof.

"Closing" has the meaning set forth in Section 1.4 hereof.

"Closing Consideration" has the meaning set forth in Section 1.2 hereof.

"Closing Date" has the meaning set forth in Section 1.4 hereof.

"Code" means the United States Internal Revenue Code of 1986, as amended.

"Commercial Milestone" has the meaning set forth in Section 1.8 hereof.

"Commercial Milestone Payment" has the meaning set forth in Section 1.8 hereof.

"Commercial Milestone Period" has the meaning set forth in Section 1.8 hereof.

"Commercially Reasonable Efforts" has the meaning set forth in Section 1.8 hereof.

"Common Stock" means the common stock of the Company, par value $0.0001 per share.

"Company" has the meaning set forth in the preamble.

"Company Capital Stock" means Common Stock or preferred stock of the Company.

"Company Certificate" has the meaning set forth in Section 7.2(m).

"Company In-Development Products" has the meaning set forth in Section 2.14(a).

"Company Intellectual Property" has the meaning set forth in Section 2.14(a).

"Company Material Adverse Effect" means any result, occurrence, fact, change, event or effect ("Change") that has, or could be expected to have, individually or in the aggregate, a material adverse effect on the business, capitalization, assets (whether tangible or intangible), Liabilities, results of operations, or condition (financial or otherwise) of the Company and its Subsidiaries, taken as a whole, or that could prevent or materially alter or materially delay the consummation of the Acquisition or any of the other transactions contemplated hereby; except to the extent that any such Change directly results from: (i) Changes in Law or generally accepted accounting principles or the interpretation or method of enforcement thereof; and (ii) changes in general economic or political conditions or the financing or capital markets in general in the United States or any country or region in the world, or changes in currency exchange rates; which, in the cases of each of the foregoing clauses (i) and (ii), does not have a materially disproportionate or unique impact on the Company.

"Company Pluripotent Stem Cell Technology" has the meaning set forth in Section 1.8 hereof.

"Company Products" has the meaning set forth in Section 2.14(a) hereof.

"Company Registered Intellectual Property" has the meaning set forth in Section 2.14(a) hereof.

"Company Stock Option" means options to purchase shares of Company Common Stock, whether vested or unvested.

"Company Technology" has the meaning set forth in Section 2.14(a) hereof.

"Company Warrants" means warrants to purchase Company Capital Stock, whether vested or unvested.

"Conflict" has the meaning set forth in Section 2.4(a) hereof.

"Consultant Proprietary Information Agreements" means has the meaning set forth in Section 2.14(k).

"Consulting Agreement" has the meaning set forth in the recitals hereto.

"Contested Amount" has the meaning set forth in Section 9.6(b) hereof.

"Contract" means any mortgage, indenture, lease, contract, covenant, plan, insurance policy or other agreement, instrument, arrangement, obligation, understanding or commitment, permit, concession, franchise or license, whether oral or written and including any amendment or modification made thereto.

"Contributor" means has the meaning set forth in Section 2.14(k).

"Damages" has the meaning set forth in Section 9.1 hereof.

"Definitive Agreements" has the meaning set forth in Section 1.9(b) hereof.

"Designated Matters" has the meaning set forth in Section 9.1 hereof.

"Development Milestone" has the meaning set forth in Section 1.8 hereof.

"Development Milestone Payments" has the meaning set forth in Section 1.8 hereof.

"DGCL" means the Delaware General Corporation Law.

"Disclosure Schedule" has the meaning set forth in Article II.

"Dispute Period" has the meaning set forth in Section 9.6(b) hereof.

"Earn-Out Payment" has the meaning set forth in Section 1.8 hereof.

"Earn-Out Product" has the meaning set forth in Section 1.8 hereof.

"Earn-Out Statement" has the meaning set forth in Section 1.8 hereof.

"Employee Proprietary Information Agreement" means has the meaning set forth in Section 2.14(k).

"Environmental Laws" has the meaning set forth in Section 2.18(a) hereof.

"ERISA" means the Employee Retirement Income Security Act of 1974, as amended.

"ERISA Affiliate" has the meaning set forth in Section 2.11(a) hereof.

"Estimated Acquisition Expenses" has the meaning set forth in Section 1.5 hereof.

"Estimated Closing Date Schedule" has the meaning set forth in Section 1.5 hereof.

"Estimated Indebtedness" has the meaning set forth in Section 1.5 hereof.

"Exchange Act" means the Securities Exchange Act of 1934, as amended.

"Exclusive Negotiation Period" has the meaning set forth in Section 1.9(c) hereof.

"FCPA" has the meaning set forth in Section 2.20(a) hereof.

"FDA" has the meaning set forth in Section 2.15 hereof.

"FIRPTA Certificate" has the meaning set forth in Section 5.7 hereof.

"fraud" means common law fraud under Delaware law.

"Fundamental Reps" has the meaning set forth in Section 9.2 hereof.

"GAAP" means United States generally accepted accounting principles.

"Government Grants" has the meaning set forth in Section 2.14(m) hereof.

"Governmental Entity" means any United States federal, state or local or any foreign government, or political subdivision thereof, including, without limitation, the Securities and Exchange Commission, the Defense Security Service, or CFIUS, or any multinational organization or authority, or any other authority, agency, commission or entity entitled to exercise any executive, legislative, judicial, regulatory, administrative or taxing authority or power, any court or tribunal (or any department, bureau or division thereof), or any mediator, arbitrator or arbitral body.

"Hazardous Materials" has the meaning set forth in Section 2.18(a) hereof.

"Holdback" has the meaning set forth in Section 1.3 hereof.

"Holdback Amount" has the meaning set forth in Section 1.3 hereof.

"Holdback Release Amount" has the meaning set forth in Section 9.6(e) hereof.

"Holdback Release Date" has the meaning set forth in Section 1.3 hereof.

"HSR Act" has the meaning set forth in Section 2.5 hereof.

"Identified Cell-lines" has the meaning set forth in Section 1.9(b) hereof.

"Identified Earn-Out Products" has the meaning set forth in Section 1.9(b) hereof.

"IND Milestone" has the meaning set forth in Section 1.8.

"IND Milestone Payment" has the meaning set forth in Section 1.8.

"Indebtedness" means (i) all indebtedness, whether or not contingent, for borrowed money or for the deferred purchase price of property or services (including but not limited to amounts referred to by the Company as equipment debt, AR debt, and "growth capital" debt and all Liabilities for reimbursement of patent expenses under the UW License); (ii) any other indebtedness that is evidenced by a note, bond, debenture or similar instrument; (iii) all obligations arising out of any financial hedging, swap or similar arrangements; (iv) all obligations as lessee that would be required to be capitalized in accordance with GAAP, (v) all obligations in connection with any letter of credit, banker's acceptance, guarantee, surety, performance or appeal bond, or similar credit transaction, (vi) all Liabilities secured by any Lien on any property; and (vii) all guarantee obligations, in each case including the principal amount thereof, any accrued interest thereon and any prepayment or other premiums, or termination or other fees with respect thereto, and shall exclude trade payables and accruals incurred in the ordinary course of business .

"Indemnification Basket" has the meaning set forth in Section 9.3 hereof.

"Indemnification Pro Rata Percentage" means, with respect to each Seller, the aggregate amount previously paid or then due and payable to such Seller from the Closing Consideration, any amount released from the Holdback, and the Earn-Out Payments, divided by the total amounts paid or then due and payable to all Sellers from the Closing Consideration, any amount released from the Holdback, and the Earn-Out Payments at the time a Notice of Claim is delivered.

"Indemnified Parties" has the meaning set forth in Section 9.1.

"Infringement" or "Infringe" has the meaning set forth in Section 2.14(a).

"Intellectual Property" has the meaning set forth in Section 2.14(a) hereof.

"Intellectual Property Reps" has the meaning set forth in Section 9.2 hereof.

"Intellectual Property Rights" has the meaning set forth in Section 2.14(a) hereof.

"intentional or knowing misrepresentation" means the making of a representation or warranty in Article II or Article III of this Agreement (in each case as qualified and limited by applicable provisions of the Company Disclosure Schedule) with the actual knowledge at the time of making the representation or warranty that such representation or warranty was false or inaccurate.

"IRS" has the meaning set forth in Section 2.11(a) hereof.

"Key Consultant" has the meaning set forth in the recitals.

"Key Employee" has the meaning set forth in the recitals.

"Knowledge" with respect to the Company means the actual knowledge of the officers and directors of the Company and such information as would reasonably be expected to be known by any individual having the professional duties and responsibilities of such person after reasonable inquiry.

"Law" means any law, statute, rule, ordinance, regulation, judgment, order, injunction or decree of any United States federal, state, local or foreign government or agency thereof, including securities or "blue sky" laws.

"Liabilities" means with respect to any Person, all debts, liabilities, commitments, losses, deficiencies, duties, charges, damages, costs, fees, expenses and obligations of any kind (whether asserted or unasserted, known or unknown, absolute or contingent, accrued, due or to become due, secured or unsecured, liquidated, matured or otherwise), including, but not limited to, accounts payable, royalties payable, and other reserves, accrued bonuses, accrued vacation, employee expense obligations, deferred revenue and all other liabilities of such Person or any of its Subsidiaries, regardless of whether such liabilities are required to be reflected on a balance sheet in accordance with GAAP, including, with respect to the Company, Indebtedness, and Acquisition Expenses.

"Licensed Assets" has the meaning set forth in Section 1.9(b) hereof.

"Licensees" has the meaning set forth in Section 1.8 hereof.

"Lien" means any lien, pledge, charge, claim, mortgage, security interest, defect in title, preemptive right, vesting limitation, right of first offer or refusal, community or marital property interest, transfer restriction of any kind or other encumbrance of any sort.

"Manufacturing-Related Asset" has the meaning set forth in Section 1.9(b) hereof.

"Material Contract" has the meaning set forth in Section 2.13(b) hereof.

"Milestone" has the meaning set forth in Section 1.8 hereof.

"Moral Rights" has the meaning set forth in Section 2.14(a) hereof.

"Negotiation Election" has the meaning set forth in Section 1.9(a) hereof.

"Net Sales" has the meaning set forth in Section 1.8 hereof.

"Notice of Claim" has the meaning set forth in Section 9.6(a) hereof.

"Offer Letter" has the meaning in the recitals hereto.

"Offset Amount" has the meaning set forth in Section 8.6(f) hereof.

"Offset Notification" has the meaning set forth in Section 8.6(f) hereof.

"Outstanding Common Stock" means each share of Common Stock issued and outstanding immediately prior to the Closing.

"Patents" has the meaning set forth in Section 2.14(a) hereof.

"Permitted Liens" means any (a) mechanic's, materialmen's, landlord's and similar Liens, (b) Liens arising under worker's compensation, unemployment insurance, social security, retirement and similar legislation, (c) Liens for Taxes not yet due and payable or that are being contested in good faith by appropriate proceedings properly instituted and diligently pursued, and (d) Liens arising solely by action of Purchaser.

"Person" means a natural person, partnership, corporation, limited liability company, business trust, joint stock company, trust, unincorporated association, joint venture, Governmental Entity or other entity or organization.

"Phase II Clinical Trial" has the meaning set forth in Section 1.8 hereof.

"POC Milestone" has the meaning set forth in Section 1.8.

"POC Milestone Payment" has the meaning set forth in Section 1.8.

"Post-Closing Tax Period" means any taxable period (or portion thereof) that ends after the Closing Date.

"Pre-Closing Tax Period" means any taxable period (or portion thereof) ending on the Closing Date or ending prior to the Closing Date, including the portion of any Straddle Period ending on the Closing Date.

"Pre-Closing Taxes" means Taxes imposed on or payable by the Company for any Pre-Closing Tax Period, including any such Taxes arising in any Straddle Period that are attributable to a Pre-Closing Tax Period in accordance with Section 6.3(b) (including any Tax withholding obligations of the Company with respect thereto); provided, however, that Pre-Closing Taxes shall not include any Taxes (a) resulting from an election under Section 336(e) or Section 338 of the Code with respect to the acquisition of the Company or any of its Subsidiaries, (b) resulting from any transactions of any Indemnified Party (including, following the Closing, the Company and its Subsidiaries) occurring on the Closing Date after the Closing outside the ordinary course of business (other than as explicitly contemplated by this Agreement), (c) resulting from any breach by Purchaser of Section 6.3, or (d) taken into account in the calculation of Closing Consideration; provided, further, that Pre-Closing Taxes shall be calculated in accordance with Section 6.3(d).

"Pro Rata Percentages" has the meaning set forth in Section 1.2 hereof.

"Proceeding" means any action, suit, litigation, arbitration, proceeding (including any civil, criminal, administrative, investigative or appellate proceeding and any informal proceeding), prosecution, contest, hearing, inquiry, inquest, audit, examination or investigation commenced, brought, conducted or heard by or before, or otherwise involving, any Governmental Entity.

"Program Assets" has the meaning set forth in Section 1.9(c) hereof.

"Program License" has the meaning set forth in Section 1.9(c) hereof.

"Proprietary Rights Agreement" has the meaning set forth in the recitals hereto.

"Purchaser" has the meaning set forth in the preamble hereto.

"Purchaser Disclosure Schedule" has the meaning set forth in Article IV.

"Registered Intellectual Property" has the meaning set forth in Section 2.14(a) hereof.

"Regulatory Authority" has the meaning set forth in Section 2.15 hereof.

"Regulatory Filings" has the meaning set forth in Section 1.9(b) hereof.

"Representatives" means a Person's managers, directors, officers, employees, agents or advisors, including investment bankers, attorneys and accountants.

"Required Consents" has the meaning set forth in Section 1.9(b) hereof.

"Response Notice" has the meaning set forth in Section 9.6(b) hereof.

"Restricted Party" has the meaning set forth in Section 2.9(b).

"Restricted Stock" means any stock subject to forfeiture, redemption and/or repurchase pursuant to a restricted stock or similar agreement or arrangement.

"Restrictive Covenants Agreement" has the meaning set forth in the recitals hereto.

"Retained Amount" has the meaning set forth in Section 9.6(e) hereof.

"Right of First Negotiation" has the meaning set forth in Section 1.9(c) hereof.

"Rockefeller License" has the meaning set forth in Section 6.6 hereof.

"Royalty Patents" has the meaning set forth in Section 1.9(b) hereof.

"Royalty Product" has the meaning set forth in Section 1.9(b) hereof.

"SEC" means the United States Securities and Exchange Commission.

"Secretary's Certificate" has the meaning set forth in Section 7.2(n).

"Security" or "Securities" means any common stock, preferred stock, convertible notes, options, warrants, or any other securities convertible into, exercisable for, or subscriptions or rights to acquire, any such securities.

"Securities Act" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

"Securityholder" means any holder of Securities of the Company.

"Sellers" has the meaning set forth in the preamble hereto.

"Sellers' Representative" has the meaning set forth in the preamble hereto.

"Shares" has the meaning set forth in Section 1.1 hereof.

"Spreadsheet" has the meaning set forth in Section 1.5.

"Spreadsheet Certificate" has the meaning set forth in Section 1.5(b).

"Standard Form Agreements" has the meaning set forth in Section 2.14(f) hereof.

"Stipulated Amount" has the meaning set forth in Section 9.6(d) hereof.

"Stockholder" means a holder of the Company's Outstanding Common Stock.

"Straddle Period" has the meaning set forth in Section 6.3(b) hereof.

"Subsidiary" means, with respect to any Person, any corporation or other organization, whether incorporated or unincorporated, of which (i) a majority of the securities or other interests having by their terms ordinary voting power to elect a majority of the Board of Directors or others performing similar functions with respect to such corporation or other organization is directly or indirectly owned or controlled by such party or by any one or more of its Subsidiaries, or by such party and one or more of its Subsidiaries or (ii) such party or any other Subsidiary of such party is a general partner (excluding any such partnership where such party or any Subsidiary of such party does not have a majority of the voting interest in such partnership).

"Tax" or "Taxes" means (i) any and all net income, corporate, capital gains, inheritance, gift, alternative minimum, add-on minimum, gross income, gross receipts, sales, use, ad valorem, transfer, franchise, profits, license, withholding, estimated, payroll, employment, excise, severance, stamp, occupation, premium, property, environmental or windfall profit tax, custom duty or other tax, governmental fee or other like assessment or charge in the nature of a tax, together with any interest and any penalty, addition to tax or additional amount imposed by any Tax Authority, (ii) any liability for the payment of any amounts of the type described in clause (i) of this sentence as a result of being a member of an affiliated, consolidated, combined, unitary or aggregate group during any taxable period, and (iii) any liability for the payment of any amounts of the type described in clause (i) or (ii) of this sentence as a result of being a transferee of or successor to any Person or as a result of any obligation to indemnify (or otherwise assume or succeed to the liability of) any other Person.

"Tax Authority" means the Internal Revenue Service and any other domestic or foreign Governmental Entity responsible for the assessment, determination, collection, imposition or administration of any Taxes.

"Tax Returns" mean all federal, state, local, and foreign tax returns, declarations, statements, reports, schedules, forms, claims for refund, and information returns and any amendments thereto.

"Technology" has the meaning set forth in Section 2.14(a) hereof.

"Termination Decision" has the meaning set forth in Section 1.9(a) hereof.

"Then Remaining Holdback Amount" has the meaning set forth in Section 9.6(c) hereof.

"Trade Law" means all applicable Laws relating to the sale, marketing, promotion, export, re-export, and transfer of goods, software, and technology administered by an agency of the U.S. government, or by a non-U.S. government (except to the extent inconsistent with U.S. law) including: the Arms Export Control Act (22 U.S.C. § 2751 *et seq.*); the International Traffic in Arms Regulations (22 C.F.R. § 120 *et seq.*); the Export Administration Act of 1979, as amended (50 U.S.C. App. §§ 2401-2420); the Export Administration Regulations (15 C.F.R. § 730 *et. seq.*); the International Emergency Economic Powers Act (50 U.S.C. §§ 1701-1706); the Foreign Trade Regulations (15 C.F.R. Part 30); regulations and restrictions administered by the U.S. Department of the Treasury, Office of Foreign Assets Control (31

C.F.R. Part 500 *et seq.*); Executive Orders of the President of the United States regarding restrictions on trade with designated countries and persons; the anti-boycott regulations administered by the U.S. Department of Commerce (15 C.F.R. Part 760); the anti-boycott provisions administered by the U.S. Department of the Treasury (26 U.S.C. § 999 and related Treasury Guidelines); the U.S. Foreign Corrupt Practices Act (15 U.S.C. § 78dd-1, *et seq.*) and applicable Laws governing imports and customs.

"Trademarks" has the meaning set forth in Section 2.14(a) hereof.

"Transfer" has the meaning set forth in Section 1.8 hereof.

"Transfer Taxes" has the meaning set forth in Section 1.7 hereof.

"Termination Decision Notice" has the meaning set forth in Section 1.9 hereof.

"Unresolved Claims" has the meaning set forth in Section 9.6(e) hereof.

"UW License" has the meaning set forth in Section 11.1 hereof.

"UW MTA" has the meaning set forth in Section 1.9(b)(i)(B) hereof.

"Valid Claim" has the meaning set forth in Section 1.9(b) hereof.

"Voting Debt" has the meaning set forth in Section 2.2(f) hereof.

Section 10.2 Interpretation.

(a) When a reference is made in this Agreement to a section or article, such reference shall be to a section or article of this Agreement unless otherwise clearly indicated to the contrary.

(b) Whenever the words "include", "includes" or "including" are used in this Agreement they shall be deemed to be followed by the words "without limitation."

(c) The words "hereof", "herein" and "herewith" and words of similar import shall, unless otherwise stated, be construed to refer to this Agreement as a whole and not to any particular provision of this Agreement, and article, section, paragraph, exhibit and schedule references are to the articles, sections, paragraphs, exhibits and schedules of this Agreement unless otherwise specified.

(d) The plural of any defined term shall have a meaning correlative to such defined term, and words denoting any gender shall include all genders. Where a word or phrase is defined herein, each of its other grammatical forms shall have a corresponding meaning.

(e) A reference to any party to this Agreement or any other agreement or document shall include such party's successors and permitted assigns.

(f) A reference to any legislation or to any provision of any legislation shall include any modification or re-enactment thereof, any legislative provision substituted therefor and all regulations and statutory instruments issued thereunder or pursuant thereto.

(g) Only such documents and information as have been made available to Purchaser in the electronic data room of the Company to which Purchaser was provided access at least two (2) Business Days prior to the date hereof shall be considered to have been "made available" or "provided" to Purchaser for purposes of this Agreement. The Company shall deliver to Purchaser a complete copy on compact disk, DVD or other electronic media of all documents made available in such data room promptly following the date of this Agreement.

(h) The parties have participated jointly in the negotiation and drafting of this Agreement. In the event an ambiguity or question of intent or interpretation arises, this Agreement shall be construed as if drafted jointly by the parties, and no presumption or burden of proof shall arise favoring or disfavoring any party by virtue of the authorship of any provisions of this Agreement.

ARTICLE XI

MISCELLANEOUS

Section 11.1 Release.

(a) To the fullest extent permitted by applicable Law, the Sellers' Representative and each Seller (for purposes of this section, each a "Releasor"), upon the Closing, shall be deemed to have, and hereby does, full, unconditionally and irrevocably release and forever discharge the Company, Purchaser and their Affiliates, along with their predecessors, successors and assigns, as well as each of their respective directors, officers, managers, members, employees and shareholders (for purposes of this section, the "Released Persons"), from any and all claims, counterclaims, charges, complaints, liens, demands, suits, causes of action, obligations, damages, demands, losses and Liabilities, costs and expenses, of every kind and nature whatsoever, past, present or future, at law or in equity, both known and unknown, asserted or unasserted, contingent or otherwise (collectively, for purposes of this section, "Claims"), which the Releasor had, now has or may claim against the Released Persons, in each case arising out of, in connection with, or relating to any act, omission or event which occurred on or before the Closing Date, including, without limitation: (i) with respect to the Releasor's status as a Securityholder of the Company, including any and all issuances by the Company of debt, equity and/or other Securities, the Releasor's right to acquire any Securities of the Company, and any rights of acceleration of exercisability or vesting, whether or not contingent on the occurrence of any event on or after the Closing, in favor of any Security of the Company; (ii) any claims of breach of contract (express or implied), breach of fiduciary duty, misrepresentation, fraud, breach of covenant of good faith and fair dealing, wrongful termination, loss of future earnings, slander, infliction of emotional distress, disability, defamation, violation of federal, state or local labor, equal opportunity or employment discrimination Laws, violation of federal and state securities Laws and other violations of Law, whether in the United States or elsewhere and (iii) in the case of the University of Washington, any Claims arising out of, in connection with, or relating to (x) any omission or event which occurred on or before the Closing Date in connection with the Exclusive Start-Up License Agreement, dated as of October 9, 2018, between the Company and the University of Washington (the "UW License"), as amended to date, or (y) for any additional issuances of Securities pursuant to Section A.3.4 (Equity) or A.3.4.1 (Participation Rights) of Exhibit A to the UW License or any financial obligations, payments or fees pursuant to Section A.3.6 (Acquisition Fee) of Exhibit A to the UW License, all of which have been satisfied by the payment terms and provisions of this Agreement; provided, however, that the release set forth herein shall not include (and the term "Claims" does not include) (A) the Releasor's right to receive the applicable portion of the Purchase Price pursuant to the terms of this Agreement; (B) the right to wages or consulting fees earned by the Releasor with respect to services rendered to the Company during the pay period immediately preceding the Closing but unpaid as of the Closing; (C) claims under the Age Discrimination in Employment Act or Older Workers' Benefits Protection Act; (D) the Releasor's rights or Claims available to it under this Agreement or any agreement entered into by the undersigned in connection with the closing of the transactions contemplated by this Agreement; (E) if (and only if) the undersigned is an officer or director of the Company, the undersigned's rights (1) to continuing indemnification under the Charter Documents or any indemnification agreement between the Company and the undersigned, and (2) under any directors' and officers' liability insurance policy maintained by the Company; or (F) any other claims that may not be released under this release in accordance with applicable Law.

(b) The terms and provisions of Section 11.1(a) are specific terms of the Acquisition, and the approval and adoption of this Agreement, the Ancillary Agreements and the transactions contemplated hereby and thereby by the Sellers pursuant to the execution and delivery of this Agreement shall constitute approval by such Sellers, as specific terms of the Acquisition, and the irrevocable agreement of such Sellers to be bound by such terms and provisions.

Section 11.2 Fees and Expenses. Except as specifically provided in this Agreement, all fees, costs and expenses incurred or accelerated in connection with the process of selling the Company or otherwise relating to the negotiation, preparation, or execution of this Agreement and the Ancillary Agreements and the consummation of the transactions contemplated hereby incurred by the Company or any of its Subsidiaries (including on behalf of the Sellers) at or prior to the Closing (including both paid and unpaid amounts, whether or not invoiced or payable as of the Closing), including (a) all fees, costs and expenses of legal counsel to the Company or its Subsidiaries or their respective boards of directors or managers or accounting, financial and other professional advisors in connection with the transactions contemplated by this Agreement, including all brokers', finders' or similar fees, (b) all liquidation or prepayment premiums on Indebtedness of the Company or other fees or expenses associated with obtaining the release and termination of any Liens and termination of any Benefit Plans, (c) any fees and expenses associated with obtaining necessary or appropriate consents or waivers of any Governmental Entity or third parties, (d) any bonus, change in control, severance or similar payment or benefit made or required to be made as a result of the transactions contemplated by this Agreement, together with the employer portion of any Tax attributable to such payments or benefits, and (e) any Transfer Taxes (collectively, the "Acquisition Expenses"), shall be finally invoiced prior to the Closing and included in Estimated Acquisition Expenses on the Estimated Closing Date Schedule. For purposes of the foregoing definition, any Acquisition Expenses unpaid as of the date of the Estimated Closing Date Schedule, to the extent not reflected thereon, or incurred thereafter, will nonetheless be deemed to be Acquisition Expenses. All fees, costs and expenses incurred by Purchaser or its Affiliates in connection with this Agreement and the consummation of the Acquisition or any of the other transactions contemplated hereby shall be paid by Purchaser or its Affiliates.

Section 11.3 Amendment. This Agreement may not be amended except by an instrument in writing signed by or on behalf of (x) prior to Closing, Purchaser, the Company and the Sellers and (y) following the Closing, Purchaser and the Sellers' Representative.

Section 11.4 Extension; Waiver. At any time prior to the Closing, the parties hereto may, to the extent legally allowed, (i) extend the time for the performance of any of the obligations or other acts of the other parties hereto, (ii) waive any inaccuracies in the representations and warranties contained herein or in any document delivered pursuant hereto and (iii) waive compliance with any of the agreements or conditions contained herein. The waiver of any condition based on any representation, warranty, covenant or obligation will not affect the right to indemnification, payment for Damages, or other remedy related to such representation, warranty, covenant or obligation. Any agreement on the part of a party hereto to any such extension or waiver shall be valid only if set forth in a written instrument signed on behalf of such party.

Section 11.5 Notices. All notices and other communications hereunder shall be in writing (and shall be deemed given upon receipt) if delivered personally, sent by facsimile transmission (receipt of which is confirmed) or by mail to the parties at the following addresses (or at such other address for a party as shall be specified by like notice):

(a) if to the Company, to

Cytocardia, Inc.
3628 W. Viewmont Way W.
Seattle, WA 98199
Attention: Charles Murry, M.D., Ph.D.
Email: cmurry@gmail.com

with a copy (which shall not constitute notice) to

Cooley LLP
1700 Seventh Ave, Suite 1900
Seattle, Washington 98101
Attention: Sonya Erickson
Fax: 360-452-8800
Email: serickson@cooley.com

and

(b) if to Purchaser, to

Sana Biotechnology, Inc.
188 E. Blaine Street, Suite 400
Seattle, Washington 98102
Attention: General Counsel
Email: legal_notices@sana.com
with a copy (which shall not constitute notice) to

Woodside Counsel, PC
203 Redwood Shores Parkway, Suite 610
Redwood Shores, California 94065
Attention: Gregory Smith
Fax: 650-632-1691
Email: Gregory@woodsidecounsel.com

and

(c) if to the Sellers' Representative, to

Scott Thies
3628 W. Viewmont Way W.
Seattle, WA 98199
Email: rsthies@gmail.com

(d) if to a Seller, to the address set forth on such Seller's signature page hereto.

Section 11.6 Descriptive Headings. The descriptive headings herein are inserted for convenience only and are not intended to be part of or to affect the meaning or interpretation of this Agreement.

Section 11.7 Counterparts. This Agreement may be executed in two or more counterparts, all of which shall be considered one and the same agreement and shall become effective when two or more counterparts have been signed by each of the parties and delivered to the other parties, it being understood that all parties need not sign the same counterpart. Counterparts may be delivered via facsimile, electronic mail (including .pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, *e.g.*, www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

Section 11.8 Entire Agreement; Assignment. This Agreement (including the Exhibits and Schedules attached hereto) together with the Ancillary Agreements (a) constitutes the entire agreement and supersedes all prior agreements and understandings, both written and oral, among the parties with respect to the subject matter hereof, any provisions of such agreements which are inconsistent with the transactions contemplated by this Agreement being waived hereby; and (b) shall not be assigned by operation of law or otherwise except that Purchaser may assign, in its sole discretion, any or all of its rights, interests and obligations hereunder to any direct or indirect wholly or majority owned Subsidiary or Affiliate of Purchaser.

Section 11.9 Governing Law. This Agreement shall be governed and construed in accordance with the laws of the State of Delaware without regard to any applicable principles of conflicts of law. Subject to Section 9.6(d), each of the parties hereto irrevocably consents to the exclusive jurisdiction and venue of the Court of Chancery of the State of Delaware (or, in the case of a federal claim as to which federal courts have exclusive jurisdiction, the United States District Court for the District of Delaware) and to the appellate courts therefrom in connection with any matter based upon or arising out of this Agreement or the matters contemplated herein, agrees that process may be served upon them in any manner authorized by the Laws of the State of Delaware for such persons and waives and covenants not to assert or plead any objection which they might otherwise have to such jurisdiction, venue and such process. Subject to Section 9.6(d), each party agrees not to commence any legal proceedings related hereto except in such courts.

Section 11.10 Specific Performance. The Company agrees that if any of the covenants or agreements of the Company pursuant to this Agreement were not performed in accordance with their specific terms or were otherwise breached, irreparable damage would occur, no adequate remedy at law would exist and damages would be difficult to determine, and that Purchaser shall be entitled to seek specific performance of the terms hereof, in addition to any other remedy at law or equity.

Section 11.11 Parties in Interest. This Agreement shall be binding upon and inure solely to the benefit of each party hereto, and nothing in this Agreement, express or implied, is intended to or shall confer upon any other Person or Persons any rights, benefits or remedies of any nature whatsoever under or by reason of this Agreement.

Section 11.12 Waiver of Conflicts; Privilege Matters.

(a) Each party acknowledges and agrees, on its own behalf and on behalf of its directors, members, partners, officers, employees, and Affiliates that from time to time on or prior to the Closing, the Company and the Sellers have been represented by Cooley LLP (the "Firm"). After the Closing, it is possible that the Firm will represent the Sellers and/or the Sellers' Representative (individually and collectively, the "Seller Group") solely in connection with the transactions contemplated by this Agreement, including, for the avoidance of doubt, with respect to any claim for indemnification, compensation or reimbursement against the Sellers. The Purchaser and the Company hereby agree that the Firm (or any successor) may represent all or a portion of the Seller Group in the future solely in connection with issues or obligations that may arise under this Agreement and any claims or litigation that may be made pursuant to this Agreement, including a dispute that arises after the Closing between Purchaser (and/or the Company) and the Sellers' Representative, even though the interests of the Sellers' Representative may be directly adverse to Purchaser or the Company, and even though the Firm may have represented the Company in a

matter substantially related to such dispute or may be handling ongoing matters for the Company. Each party consents thereto, and waives any conflict of interest arising therefrom. Each party acknowledges that such consent and waiver is voluntary, that it has been carefully considered, and that the Parties have consulted with counsel or have been advised they should do so in this connection.

(b) Following the Closing, the attorney-client privilege of the Company related to the Acquisition (the "Privileged Communications") will be deemed to be the right of the Sellers (and the Sellers' Representative), and not that of the Company, and may be waived only by the Sellers' Representative. For the avoidance of doubt, neither Purchaser, nor after the Closing, the Company shall assert any Privileged Communications against the Sellers in connection with any claim for indemnification, compensation or reimbursement brought by Purchaser or any other Indemnified Party pursuant to Article IX, and, following the Closing, the Sellers' Representative and the Sellers will be permitted to use Privileged Communications in connection with the defense of any claim by Purchaser or any other Indemnified Party

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be signed by their respective officers thereunto duly authorized as of the date first written above.

SANA BIOTECHNOLOGY, INC.

By: /s/ Steven Harr, M.D.
Name: Steven Harr, M.D.
Title: President and Chief Executive Officer

COMPANY:

CYTOCARDIA, INC.

By: /s/ Charles E. Murry
Name: Charles E. Murry
Title: President

SELLERS' REPRESENTATIVE:

By: /s/ R. Scott Thies
Name: R. Scott Thies

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be signed by their respective officers thereunto duly authorized as of the date first written above.

SELLERS:

/s/ W Robb MacLellan
W. Robb MacLellan

/s/ Charles E. Murray
Charles E. Murry

/s/ R. Scott Thies
R. Scott Thies

UNIVERSITY OF WASHINGTON

By: /s/ Chris Malins
Name: Chris Malins
Title: Associate Vice President, Treasury

Exhibit 2.3

Execution Version
Confidential

STOCK PURCHASE AGREEMENT

by and among

SANA BIOTECHNOLOGY, INC.,

OSCINE HOLDINGS, LLC,

and

each of the members of OSCINE HOLDINGS, LLC,

dated as of

September 10, 2020

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STOCK PURCHASE AGREEMENT

This STOCK PURCHASE AGREEMENT (this "Agreement"), dated as of September 10, 2020, is by and among Sana Biotechnology, Inc., a Delaware corporation ("Purchaser"), Oscine Holdings, LLC, a Delaware limited liability company ("Seller"), and each of the Seller Members (as defined herein) and, together with Seller, the "Sellers").

RECITALS

WHEREAS, the board of directors of Purchaser and the managers of Seller have determined that it is advisable and in the best interests of the respective companies and their respective stockholders and members, as applicable, that Purchaser acquire Oscine Corp., a Delaware corporation and wholly-owned subsidiary of Seller (the "Company"), by the purchase of all outstanding capital stock of the Company from Seller (the "Acquisition") upon the terms and subject to the conditions set forth herein and, in furtherance thereof, have approved this Agreement and the transactions contemplated hereby; and

WHEREAS, concurrently with the execution and delivery of this Agreement, as a condition and inducement to Purchaser to enter into this Agreement and in consideration for a portion of the Acquisition Consideration payable under this Agreement: (i) Dr. Steven A. Goldman, M.D., Ph.D. (the "Key Employee") has entered into an at-will employment arrangement with Purchaser pursuant to his execution of an offer letter (the "Offer Letter") and an at-will employee agreement (the "At-Will Employment Agreement"), in the forms attached hereto as Exhibit A and Exhibit B, respectively; (ii) Dr. Christina Trojel-Hansen, Ph.D. (the "Key Consultant") has entered a consulting agreement with Purchaser (the "Consulting Agreement") in the form attached hereto as Exhibit C; and (iii) the Key Employee and Key Consultant have each executed and delivered a restrictive covenants agreement in the form attached hereto as Exhibit D (each a "Restrictive Covenants Agreement"), and all such agreements described in clauses (i), (ii) and (iii) above shall become effective at the Closing.

NOW, THEREFORE, in consideration of the foregoing and the respective representations, warranties, covenants and agreements set forth herein, the parties hereto agree as follows:

ARTICLE I

PURCHASE AND SALE OF SHARES

Section 1.1 Sale and Transfer of Shares. Subject to the terms and conditions of this Agreement, at the Closing Seller shall sell, convey, assign, transfer and deliver to Purchaser all of the Outstanding Common Stock, free and clear of all Liens.

Section 1.2 Purchase Price.

(a) Definitions.

(i) "Base Purchase Price" means eight million five hundred thousand dollars ($8,500,000).

(ii) "Closing Consideration" means (A) the Base Purchase Price, minus (B) the Estimated Acquisition Expenses, minus (C) the Holdback Amount.

(iii) "Purchase Price" means the aggregate consideration payable to Seller pursuant to this Agreement.

(b) Subject to the terms and conditions of this Agreement, in consideration of the aforesaid sale, conveyance, assignment, transfer and delivery to Purchaser of all of the Outstanding Common Stock, Purchaser shall pay to Seller (i) at the Closing, an amount in cash equal to the Closing Consideration, plus (ii) the Holdback Release Amount and Remaining Retained Amount, if any, in accordance with Section 1.3 and Section 6.6, (iii) any Earn-Out Payment that becomes due and payable pursuant to Section 1.7 in accordance with the terms thereof.

Section 1.3 Holdback. An amount equal to eight hundred fifty thousand dollars ($850,000) (the "Holdback Amount") shall be withheld from the Purchase Price and used solely as security for the indemnification obligations of the Seller Members pursuant to Article VI of this Agreement. Within five (5) Business Days after the fifteen (15) month anniversary of the Closing Date (the "Holdback Release Date"), Purchaser shall cause the Holdback Release Amount, if any, to be released and paid to Seller in accordance with Section 1.2(b). Within ten (10) Business Days after final resolution of all Unresolved Claims, Purchaser shall cause the Remaining Retained Amount, if any, to be released from the holdback and paid to Seller in accordance with Section 1.2(b).

Section 1.4 The Closing. The closing of the transactions contemplated hereby (the "Closing") shall take place at 10:00 a.m., Pacific time, on the date hereof (the "Closing Date"), at Woodside Counsel, P.C., 203 Redwood Shores Parkway, Suite 610, Redwood Shores, CA 94065.

Section 1.5 Tax Withholding. Purchaser or Purchaser's agent will be entitled to deduct and withhold from the Purchase Price, or any other payment otherwise payable pursuant to this Agreement, such amounts as Purchaser or Purchaser's agent determines in good faith is required to be deducted and withheld under any provision of Federal, state, local or foreign Tax Law and to request any necessary tax forms or information, including Form W-9 or the appropriate series of Form W-8, as applicable, or any similar information, and to share such forms with Purchaser, its Affiliates and Purchaser's agent; provided, however, that in the event Purchaser or Purchaser's agent determines that any such withholding is or may be required by Law, Purchaser shall (or shall cause Purchaser's agent to) provide Seller with commercially reasonable notice of such withholding and a reasonable opportunity to provide any forms, certificates or other documentation as may be necessary to reduce or eliminate such withholding. To the extent that amounts are so deducted and withheld and timely paid to the appropriate Taxing authority, such deducted and withheld amounts will be treated for all purposes of this Agreement as having been paid to the Person in respect of whom such deduction and withholding was made.

Section 1.6 Transfer Taxes. Seller shall be responsible for and pay any transfer, documentary, sales, use, stamp, registration, and other such Taxes and any conveyance fees, recording charges and other fees and charges arising out of the transactions contemplated by this Agreement (collectively, "Transfer Taxes") as and when due, other than fifty (50%) of any Transfer Taxes payable to any United States federal, state or local Governmental Entity with respect to the Base Purchase Price, which Purchaser shall be responsible for and pay as and when due. Any Transfer Taxes taken into account in the calculation of Acquisition Expenses shall be treated as having been paid by Seller for purposes of this Agreement.

Section 1.7 Earn-Out.

(a) Certain Definitions.

(i) "Approved Labeling" means, with respect to a Product, the full prescribing information for such Product that has been approved for sales and marketing by the applicable Regulatory Authority, as set forth in or qualified by the labels and other written, printed, or graphic materials on any container, wrapper, or any package insert that is used with or for such Product that has been approved by such Regulatory Authority.

(ii) "BLA" means a Biologics License Application (as more fully described in U.S. 21 C.F.R. Part 601.20 or its successor regulation) and all amendments and supplements thereto submitted to the FDA, or any equivalent filing in a country or regulatory jurisdiction other than the U.S. with the applicable Regulatory Authority, or any similar application or submission for Regulatory Approval filed with a Regulatory Authority to obtain marketing approval for a biologic product in a country or in a group of countries.

(iii) "Commercially Reasonable Efforts" shall mean, with respect to the development of and efforts to obtain Regulatory Approval of a Product, the level of efforts and resources, consistent with the exercise of prudent scientific and business judgment and its normal business practices, that Purchaser would expend for a research program or product candidate, as applicable, owned or licensed by it with similar commercial and development potential and at a similar stage of development or commercialization, taking into consideration, among other things, complexity of development, safety and efficacy, product profile, the competitiveness of alternative products, regulatory concerns, potential market and market size, proprietary position and potential profitability.

(iv) "Company Pluripotent Stem Cell Technology" means any and all proprietary Company Intellectual Property constituting scheduled patent assets, proprietary trade secrets or know-how that is (A) (1) set forth on Schedule 1.7(a)(iv) and solely owned by or exclusively licensed to the Company, both as of immediately prior to and immediately after Closing, or (2) set forth on Schedule 1.7(a)(iv) and asterisked as covered by this Section 1.7(a)(iv)(A)(2) and non-exclusively licensed to the Company as of immediately prior to the Closing, solely to the extent that such Company Intellectual Property is exclusively licensed to the Company for no additional consideration within ninety (90) days after the Closing, but excluding, in the case of clauses (1) and (2) any trade secrets or other know-how that has been or becomes published or is or becomes publicly available, and (B) directed to pluripotent stem cell derived glial cell precursor technology, and/or to the use of pluripotent stem cell derived glial cell precursor technology in human neurologic disorder cell regeneration. For clarity, any rights reserved by the University of Rochester pursuant to Section 3.2 of the Rochester License shall not preclude any patent assets licensed to the Company thereunder from being considered "exclusively licensed" to the Company for purposes of this definition.

(v) "Distinct Indication" means an Indication that is separate and distinct from another Indication for a given Product that has received Regulatory Approval.

(vi) "Distinct Jurisdiction" means a country or countries that are separate and distinct from a country or countries that has or have received Regulatory Approval for a given Product.

(vii) "Earn-Out Payment" means the Phase II Milestone Payment, the First Approval Milestone Payment, any Subsequent Approval Milestone Payment, any Danish Approval Milestone Payment or any Primary Approval Milestone Payment, as applicable.

(viii) "Earn-Out Period" means the period starting on the Closing Date and continuing until the twentieth (20th) anniversary thereof.

(ix) "Indication" means a discrete disease, disorder, or medical condition that a Product is intended to treat, prevent, cure, or ameliorate, as set forth in the Approved Labeling for such Product.

(x) "Milestone" means the Phase II Milestone, the First Approval Milestone, any Subsequent Approval Milestone, any Danish Approval Milestone, the First Primary Approval Milestone, or the Second Primary Approval Milestone, as applicable.

(xi) "NDA" means a New Drug Application (as more fully described in U.S. 21 C.F.R. Parts 314.50 et seq. or its successor regulation) and all amendments and supplements thereto, submitted to the FDA, or any equivalent filing in a country or regulatory jurisdiction other than the U.S. with the applicable Regulatory Authority, or any similar application or submission for Regulatory Approval filed with a Regulatory Authority to obtain marketing approval for a product containing a small molecule compound or diagnostic product, in a country or in a group of countries.

(xii) "Phase II Clinical Trial" means a human clinical trial of a cellular therapy product in the United States that satisfies the requirements of U.S. 21 C.F.R. Part 312.21(b) and is intended to generate evidence of clinical safety and effectiveness for a particular indication or indications in a target patient population; provided, that a Product administered to a patient in a Phase I/II clinical trial will only be considered administered to such patient as part of a Phase II Clinical Trial if such Product was administered to such patient as part of the portion of such clinical trial that is intended to and expressly satisfies the requirements of the definition of a Phase II Clinical Trial set forth above.

(xiii) "Product" means any therapeutic product for neurologic disorders that: (A) contains (1) glial progenitor cells ("GPCs"), including oligodendrocyte progenitor cells and astrocyte progenitor cells, derived from embryonic stem cells ("ESCs") or induced pluripotent stem cells ("iPSCs"); (2) cells derived from GPCs derived from ESCs or iPSCs; or (3) oligodendrocytes or astrocytes derived from ESCs or iPSCs; and (B) is developed by or on behalf of Purchaser or any of its Subsidiaries; and (C) uses or incorporates and is materially dependent upon Company Pluripotent Stem Cell Technology.

(xiv) "Regulatory Approval" for a Product means, (A) in the United States, approval by the FDA of an NDA or BLA or other applicable regulatory filing and satisfaction of related applicable FDA registration and notification requirements, if any, or (B) in any country other than the United States, approval by Regulatory Authorities having jurisdiction in such country of a single application or set of applications comparable to an NDA or BLA or other applicable regulatory filing and satisfaction of related applicable registration and notification requirements, if any, in each case ((A) or (B)), together with any other approvals, registrations or authorizations of any federal, state or local regulatory agency, department, bureau or other governmental entity or national health service necessary to manufacture and commercialize any Product, including any such pricing and reimbursement approvals required by any such governmental entity or national health service (and excluding any private sector enterprise, including without limitation any private health insurer or insurance company).

(b) Product Development.

(i) During the Earn-Out Period, Purchaser shall use Commercially Reasonable Efforts to develop and obtain Regulatory Approval for the marketing of one or more Products.

(ii) During the three (3) year period beginning on the Closing Date, which period may be extended by Seller for not more than one additional year with written the consent of Purchaser (such consent not to be unreasonably conditioned, withheld or delayed), Purchaser shall use Commercially Reasonable Efforts to spend a minimum of (A) sixteen million dollars ($16,000,000) developing possible Products, including internal Purchaser personnel and other internal Purchaser costs and via sponsored research or other third-party arrangements, and (B) six million five hundred thousand dollars ($6,500,000) on central nervous system cell research-related activities including via sponsored research or other third-party arrangements, which may or may not relate directly or indirectly to a Product. For

purposes of this Section 1.7(b)(ii), the determination as to whether any expenditure is in respect of development pursuant to clause (A) or research-related activities pursuant to clause (B) shall be made by Purchaser in good faith after consultation with the Key Employee. If, thereafter, the Key Employee believes in good faith that any expenditure determined by Purchaser to count toward the spending requirements set forth in clause (A) or (B) of this Section 1.7(b)(ii) is not properly characterized as belonging within the definition of the clause which Purchaser has so determined (including, for the avoidance of doubt, an expenditure that is not properly characterized in either clause (A) or (B)), then the Key Employee may provide Purchaser with written notice thereof expressly referring to this Section 1.7(b)(ii), specifying the contested expenditures. If such notice is given, the Chief Executive Officer of Purchaser shall meet with the Key Employee (by videoconference or telephone call) within ten (10) Business Days after the date of such notice to discuss the Key Employee's belief that such expenditures do not satisfy the requirements set forth in this section. The Key Employee may not request more than two (2) such meetings with the Chief Executive Officer of Purchaser in any twelve (12) month period.

(iii) Within twelve (12) months after receiving substantially all Phase I data related to the prospectively defined primary endpoint and all pre-specified endpoints, along with a substantially complete safety and tolerability data set with respect to the first Product contemplated by the Phase II Milestone below, Purchaser, in consultation with Seller, will decide whether or not to continue with a Phase II study plan. In the event Purchaser decides to continue with a Phase II study plan, Purchaser shall as promptly as reasonably practicable deliver to Seller a Phase II protocol synopsis, fully incorporating any feedback from the FDA during the end-of-Phase I meeting(s).

(c) Development Progress Meetings. Purchaser shall maintain, and shall cause its Subsidiaries and Licensees to maintain, reasonable documentation, consistent with Purchaser's customary practices, regarding development activities relating to the efforts undertaken to achieve the conditions required to satisfy the Milestones. In addition, until the earliest of (i) such time as all Earn-Out Payments have been paid by Purchaser pursuant to this Section 1.7, (ii) the end of the Earn-Out Period, or (iii) a Termination Decision, if Seller requests in writing a meeting with representatives of Purchaser to discuss the status of Purchaser's efforts to achieve the conditions required to satisfy the Milestones (a "Development Progress Meeting"), Purchaser shall make one or more representatives of Purchaser (as determined by Purchaser, provided that at least one of such representatives shall be an appropriate member of the executive management team of Purchaser) available for a Development Progress Meeting (by videoconference or in Purchaser's offices) at such date and time as shall be mutually agreed upon by Purchaser and Seller. At each Development Progress Meeting, Purchaser's representatives shall make a presentation covering material developments since the last meeting and respond to Seller's inquiries in order to reasonably enable Seller to evaluate Purchaser's compliance with its obligations hereunder; provided that in no event shall Purchaser be required to prepare any documentation that does not then exist. Seller may not request more than two (2) Development Progress Meetings with Purchaser in any twelve (12) month period. Any information disclosed in such meeting shall be subject to Section 4.2 hereof.

(d) Milestones. Subject to the limitations of this Agreement, upon realization of the Milestones set forth below, Purchaser shall pay Seller the amounts set forth below in accordance with this Section 1.7:

(i) *Phase II Milestone*. Upon the first administration of a Product in or to a human patient in a Phase II Clinical Trial by or on behalf of Purchaser (the "Phase II Milestone"), Purchaser shall pay to Seller forty-five million dollars ($45,000,000) (the "Phase II Milestone Payment"). In no event shall Purchaser be required to pay for any more than one (1) Phase II Milestone (forty-five million dollars ($45,000,000) total).

(ii) *First Approval Milestone*. Upon receipt by Purchaser of the first Regulatory Approval by the FDA or the EMA for any Product (the "First Approval Milestone"), Purchaser shall pay to Seller twenty million dollars ($20,000,000) (the "First Approval Milestone Payment"). In no event shall Purchaser be required to pay for any more than one (1) First Approval Milestone (twenty million dollars ($20,000,000) total).

(iii) *Subsequent Approval Milestones*. Upon receipt by Purchaser of Regulatory Approval by the FDA or the EMA of the marketing and sale of any Product for a Distinct Indication or in a Distinct Jurisdiction (each such approval, a "Subsequent Approval Milestone"), Purchaser shall pay to Seller ten million dollars ($10,000,000) (each, a "Subsequent Approval Milestone Payment"); provided, however, that in no event shall Purchaser be required to pay for any more than six (6) Subsequent Approval Milestones (sixty million dollars ($60,000,000) total).

(iv) *Danish Approval Milestones*. Upon receipt by Purchaser of the first Regulatory Approval by the applicable Regulatory Authority in Denmark (other than the EMA) for (A) any Product for which Regulatory Approval has not previously been received from the EMA or any other applicable Regulatory Authority in Denmark, or (B) any Product for a Distinct Indication for which Regulatory Approval has not been previously received by the EMA or any other applicable Regulatory Authority in Denmark (each such approval, a "Danish Approval Milestone"), Purchaser shall pay to Seller two hundred thousand dollars ($200,000) (each, a "Danish Approval Milestone Payment"); provided, however, that in no event shall Purchaser be required to pay for any more than four (4) Danish Approval Milestones (eight hundred thousand dollars ($800,000) total).

(v) *Primary Approval Milestones*. (A) Upon receipt by Purchaser of Regulatory Approval by the FDA of the marketing and sale of the first Product for an Indication with an annual U.S. incidence of greater than two thousand (2,000) patients (the "First Primary Approval Milestone"), Purchaser shall pay to Seller fifty million dollars ($50,000,000) (the "First Primary Approval Milestone Payment"), and (B) upon receipt by Purchaser of Regulatory Approval by the FDA of the marketing and sale of the second Product for a Distinct Indication with an annual U.S. incidence of greater than two thousand (2,000) patients (the "Second Primary Approval Milestone" together with the First Primary Approval Milestone, the "Primary Approval Milestones") Purchaser shall pay to Seller fifty million dollars ($50,000,000) (the "Second Primary Approval Milestone Payment" together with the First Primary Approval Milestone Payment, the "Primary Approval Milestone Payments"); provided, that in no event shall Purchaser be required to pay for any more than two (2) Primary Approval Milestones (i.e., one hundred million dollars ($100,000,000) total).

Notwithstanding the foregoing, in no event will Purchaser be required to pay more than two hundred twenty-five million eight hundred thousand dollars ($225,800,000) in aggregate Milestone Payments pursuant to this Section 1.7.

(e) Notification; Payment.

(i) Purchaser shall notify Seller in writing of the achievement of a Milestone within forty-five (45) days after such occurrence (the "Notification Date"). If the Notification Date occurs prior to the initial public offering of the Purchaser Common Stock, then (A) such notice shall be accompanied by copies of (x) Purchaser's financial statements for the most recent fiscal quarter and fiscal year and (y) the most recent investor deck and other similar marketing materials provided to investors and prospective investors of Purchaser and (B) if requested by Seller, Purchaser shall make its Chief Financial Officer available for a meeting (by videoconference or in Purchaser's offices) to address Seller's questions regarding such materials and such other information concerning the Purchaser and its business, operations and financial condition as Seller may reasonably request to discuss, at such time and date as shall be mutually agreed upon by Purchaser and Seller.

(ii) Thereafter, Purchaser and Seller will negotiate in good faith to agree upon the proportion of each Milestone Payment to be paid in cash versus shares of Purchaser Common Stock. If no agreement is reached by Purchaser and Seller within thirty (30) days after the Notification Date, fifty percent (50%) of such Milestone Payment shall be paid in cash and fifty percent (50%) of such Milestone Payment shall be paid in Purchaser Common Stock, unless Purchaser elects in its sole discretion to pay one hundred percent (100%) of such Milestone Payment in cash.

(iii) Purchaser shall pay or cause to be paid (x) the cash portion, if any, of the applicable Milestone Payment to Seller within ten (10) Business Days after the determination of the proportion of the applicable Milestone Payment to be paid in cash versus shares of Purchaser Common Stock in accordance with Section 1.7(e)(ii), and (y) the stock portion, if any, of the applicable Milestone Payment to Seller within thirty (30) calendar days after the determination of the proportion of the applicable Milestone Payment to be paid in cash versus shares of Purchaser Common Stock in accordance with Section 1.7(e)(ii). The cash portion, if any, of any such Milestone Payment shall be paid by wire transfer of readily available funds to a bank account or bank accounts designated in writing by Seller. The stock portion, if any, shall be paid by the issuance to Seller of a number of shares of Purchaser Common Stock equal to (A) the applicable Milestone Payment, divided by (B) (1) if the Purchaser Common Stock is publicly traded on a national stock exchange, the average daily VWAP for the thirty (30) trading days immediately preceding the fifteenth (15th) day after the date of achievement of the applicable Milestone, or (2) if the Purchaser Common Stock is not traded on a national stock exchange, the original issue price per share at which shares of Purchaser preferred stock were issued in Purchaser's last round of preferred stock financing, as set forth in the Purchaser's Certificate of Incorporation as then in effect (any such shares are referred to herein as "Acquisition Shares").

(iv) Notwithstanding the foregoing, payment of the stock portion of any Milestone Payment shall be conditioned upon (A) the representations and warranties of Purchaser in Section 3.5 hereof being true, correct and complete as of the Closing Date and as of the date of issuance of such Acquisition Shares; (B) the representations and warranties of Seller in Section 2.24 hereof being true, correct and complete as of the Closing Date and as of the date of issuance of such Acquisition Shares (excluding the representation set forth in clause (c) thereof if, at such time, the Purchaser Common Stock is traded on a national stock exchange); (C) if Purchaser Common Stock is not traded on a national stock exchange, and if required by Purchaser, Seller's (and if a distribution is to be made of such shares by Seller to the Seller Members, each Seller Member's (including any Permitted Transferee's)) execution and delivery to Purchaser of a joinder agreement or counterpart signature page to (1) the Amended and Restated Right of First Refusal and Co-Sale Agreement, dated as of February 13, 2019, by and among Purchaser and the stockholders party thereto, as amended from time to time (the "ROFR Agreement"), making Seller (or such Seller Member) a party to such agreement as a Key Holder, and (2) the Amended and Restated Voting Agreement, dated as of February 13, 2019, by and among Purchaser and the stockholders party thereto, as amended from time to time (the "Voting Agreement"), each in form reasonably satisfactory to Purchaser; and (D) the execution by Seller and each Seller Member (including any Permitted Transferee) of such other documents, agreements, certifications, and representations as Purchaser may reasonably request solely to the extent each such document, agreement, certification and representation is (1) in furtherance of the restrictions on transfer and voting contemplated by this Section 1.7(e)(iv) or (2) determined in good faith by Purchaser to be necessary to satisfy applicable securities Law requirements, including, if a distribution is to be made of such shares by Seller to the Seller Members, representations and warranties from each Seller Member (including each Permitted Transferee) equivalent to those set forth in Section 2.24. In the event that the conditions set forth in clauses (B) – (D) of the immediately preceding sentence have not been satisfied by Seller and, to the extent applicable, the Seller Members (including any Permitted Transferee)

(each, for purposes of this Section 1.7(e)(iv), a "default"), within 180 days after determination of the proportion of the applicable Milestone Payment to be paid in cash versus shares of Purchaser Common Stock in accordance with Section 1.7(e)(ii), then (i) Purchaser may provide written notice of such default to the defaulting party and the defaulting party shall have twenty (20) Business Days after delivery thereof in accordance with Section 8.4 to cure such default, (ii) if such default is not cured within such twenty (20) Business Day period, Purchaser may provide a second written notice of default to the defaulting party and unless any such default is cured within twenty (20) Business Days after delivery of such second written notice of default in accordance with Section 8.4, (x) in the case of a default by a Seller Member (including any Permitted Transferee), the stock portion of such Milestone Payment otherwise distributable to such defaulting Seller Member (including any Permitted Transferee) shall be cancelled and permanently forfeited, and (y) in the case of a default by Seller, all of the stock portion of such Milestone Payment shall be cancelled and permanently forfeited. In furtherance thereof, any such Seller Member so defaulting irrevocably waives its entitlement to any equity Milestone Payment received by Seller on behalf of any non-defaulting Seller Members and agrees to execute such further documentation, if any, as may be necessary or appropriate to effect such pro rata waiver.

(v) In addition, the payment date for the stock portion of any such Milestone Payment may be delayed as reasonably necessary to allow Purchaser to comply with or to obtain any governmental, regulatory, board, stockholder or other third-party consents necessary to effect such stock issuance in compliance with all applicable Laws and Purchaser's then-existing agreements. In the event that Purchaser is unable to do so within 90 days (provided that if Purchaser determines that (A) any consent or approval of any Governmental Entity is necessary in connection with the payment of the stock portion of such Milestone Payment or (B) if Purchaser is then subject to the periodic reporting requirements of the Securities Exchange Act of 1934, as amended, the approval of Purchaser's stockholders is necessary in connection with the payment of the stock portion of such Milestone Payment, then such period shall be extended to 180 days) after determination of the proportion of the applicable Milestone Payment to be paid in cash versus shares of Purchaser Common Stock in accordance with Section 1.7(e)(ii), Purchaser shall make the applicable payment in full in cash in lieu of stock.

(vi) Each of Purchaser and Seller (A) shall, and shall cause their respective affiliates to, treat all Earn-Out Payments made pursuant to this Agreement as additional Purchase Price for U.S. federal and applicable state and local income tax purposes, and (B) shall not, and shall not cause or permit their respective affiliates to, take any position on any Tax Return or before any Tax authority inconsistent with such treatment, except, in each case, to the extent otherwise required by a change in law after the date hereof or pursuant to a "final determination" by the Internal Revenue Service under Section 1313 of the Code.

(f) Remedies & Limitations.

(i) If Seller believes in good faith that Purchaser has breached its obligations under this Section 1.7, then Seller shall provide Purchaser with written notice thereof, which notice shall specify in reasonable detail the alleged breach (a "Notice of Breach").

(ii) If Seller reasonably determines that Purchaser has not satisfied or likely will not satisfy the spending requirements set forth in Section 1.7(b)(ii) within the period set forth therein (collectively, the "Spending Requirements"), then Seller shall send Purchaser a written notice of negotiation (the "Negotiation Notice"). Upon receipt by Purchaser of the Negotiation Notice, both parties shall negotiate in good faith for a period of up to three (3) months to determine whether or not a breach of the Spending Requirements has occurred, and, if necessary, the creation of a revised budget and related timeline (the "Revised Spending Requirements"). If the parties adopt the Revised Spending Requirements in lieu of the Spending Requirements, then Purchaser shall be required to effect the spending contemplated

thereby within the time period specified therein. If the parties do not adopt the Revised Spending Requirements, then Purchaser shall remain free to satisfy the original Spending Requirements by completing the expenditures contemplated thereby within the later of (A) the original three years contemplated by the Spending Requirements plus a twelve (12) month cure period, and (B) twelve (12) months after receipt of such Notice of Negotiation. If Purchaser nonetheless breaches either the Spending Requirements or the Revised Spending Requirements, as applicable, then Seller's sole remedy for such breach shall be for Seller to cause Purchaser to effect an Assignment Transaction pursuant to Section 1.8. To exercise such remedy, Seller must give written notice thereof to Purchaser within three (3) months after the end of the cure period set forth this paragraph.

(iii) If, prior to the earlier of achievement of the Phase II Milestone and a Termination Decision, Purchaser materially breaches its covenant to use Commercially Reasonable Efforts as provided herein, and fails to reasonably remedy any such breach within three (3) months after receipt of a Notice of Breach, then Seller's sole remedy for such breach shall be either (A) to cause Purchaser to effect an Assignment Transaction pursuant to Section 1.8, or (B) to pursue a breach claim for monetary damages arising from the alleged breach by Purchaser, but not both. To exercise the remedy, Seller must give written notice thereof to Purchaser within three (3) months after the end of the cure period set forth in the immediately preceding sentence.

(iv) If, after the achievement of the Phase II Milestone, Purchaser materially breaches its covenant to use Commercially Reasonable Efforts as provided herein and fails to remedy such breach within three (3) months after receipt of a Notice of Breach, then Seller's sole remedy shall be to pursue a breach claim for monetary damages arising from the alleged breach by Purchaser. To exercise such remedy, Seller must give written notice thereof to Purchaser within three (3) months after the end of the cure period set forth in the immediately preceding sentence

(v) Except with respect to an Assignment Transaction as provided herein, in no event shall Seller be entitled to pursue specific performance or an injunction as a remedy for any breach of the terms of Section 1.7.

(vi) Disputes pursuant to this Section 1.7 shall be subject to the arbitration provisions set forth in Section 8.8. During any such arbitration process, the time periods set forth in this Section 1.7(f) will be tolled.

(g) Miscellaneous.

(i) Notwithstanding the foregoing, with respect to the decision of whether or not to proceed with development efforts through the Phase II Milestone, Commercially Reasonable Efforts may not give effect to other Purchaser product portfolio opportunities (other than other potential Products opportunities) and related financial considerations that are unique to Purchaser and not shared by other industry participants.

(ii) If Purchaser sells, assigns, exclusively licenses or otherwise transfers all or substantially all of the assets of the Company, as such assets exist on the date hereof, during the Earn-Out Period, Purchaser shall cause the acquirer to agree in writing to fulfill Purchaser's obligations pursuant to this Section 1.7 and Section 1.8; provided that the provisions of Section 1.8(c) shall continue to apply to Purchaser in addition to such acquirer.

(iii) The right of Seller to receive any portion of any Earn-Out Payment: (A) is solely a contractual right and is not a security for purposes of any federal or state securities Laws (and shall confer upon such Person only the rights of a general unsecured creditor under applicable state Law), (B) will not be represented by any form of certificate or instrument, (C) is not redeemable, and (D) may not be Transferred and any purported Transfer in violation of this clause shall be null and void.

(iv) Nothing in this Section 1.7 shall (A) create any employment right or entitlement of any Person that is an employee of the Company prior to the Closing Date, or any Person that is an employee of Purchaser after the Closing Date; (B) represent an ownership interest in Purchaser; or (C) create any fiduciary duty on the part of Purchaser to any Person with respect to any Earn-Out Payment. Except as set forth in the development covenants set forth in Section 1.7(b) above and Section 1.7(g)(i), Purchaser assumes no obligation or commitment to cause the realization of any Milestone. In furtherance thereof, Seller acknowledges that the development of the technology acquired hereby consistent with the terms hereof may not result in the realization of any Milestone payments contemplated hereby.

(v) Subject to Section 6.6(f) hereof, any Earn-Out Payment that is payable to Seller shall be reduced by the Offset Amount (as defined below), if any, as of the date immediately prior to the payment date of the Earn-Out Payment.

(vi) Purchaser hereby agrees that if Purchaser or any of its Affiliates, including any other Subsidiaries of Purchaser after the Closing, files for relief under the United States Bankruptcy Code (the "Bankruptcy Code"), or otherwise becomes subject to a Proceeding under the Bankruptcy Code, it shall use its commercially reasonable efforts to obtain as soon as reasonably practicable the entry of an order from the applicable bankruptcy court, pursuant to the provisions of the Bankruptcy Code (including sections 105 and 365 of the Bankruptcy Code), authorizing and directing Purchaser to assume this Agreement and the payments contemplated hereunder. Purchaser and Seller agree that if required pursuant to such an order, the Earn-Out Amount may be paid to Seller in the form of subordinated notes, provided that the unpaid principal amount of such subordinated notes shall accrue interest at a rate per annum equal to the prime rate as published in *The Wall Street Journal*, in effect on the date such payment is required to be made, compounding quarterly from the date such payment was required to be made through the date such payment was actually received.

Section 1.8 Assignment Transaction; Right of First Negotiation.

(a) Notice of Termination Decision. If Purchaser's chief executive officer affirmatively determines in his or her discretion to terminate and abandon all development activities with respect to all Products prior to the end of the Earn-Out Period, then he or she will submit such recommendation to Purchaser's board of directors, and if Purchaser's board of directors in its discretion affirmatively concurs with such determination in due course (such decision, a "Termination Decision"), Purchaser shall promptly thereafter (and in any event within ten (10) Business Days) send written notice thereof to Seller. If Seller desires to accept the assignment of the assets and assume the related liabilities described in clause (b) below pursuant to the terms thereof (the "Assignment Election") and/or exercise a right of first negotiation pursuant to clause (c) below (the "Negotiation Election"), Seller shall deliver written notice of its election to do so to Purchaser within three (3) months after receipt of notice of the Termination Decision. If Seller does not provide either such notice within such period, then Purchaser shall have no further obligation with respect to this Section 1.8. As used in Section 1.8(b) below only, the term "Assignor" means Purchaser, as assignor; the term "Assignee" means Seller or its designated assignee, as assignee; and the term "Assignment Transaction" means the transfer of the Assigned Assets (as defined below), the assumption of the Assumed Liabilities (as defined below) and the license of the Licensed Data (as defined below).

(b) Assignment of Assets and Assumption of Liabilities. Subject to the limitations and conditions herein, following receipt of an Assignment Election, the Assignor and Assignee agree to incorporate the following terms and conditions into definitive agreements that effect the Assignment Transaction (the "Definitive Agreements"):

(i) Assigned Assets. Assignor shall transfer and assign to Assignee all of Assignor's right, title and interest, if any, in or to the following assets of Seller (collectively, the "Assigned Assets"):

(A) the Rochester License;

(B) the Seed Bank Supply Agreement, dated July 9, 2018, between Hadasit Medical Research Services and Development Ltd. and the Company, as amended effective as of the Closing Date and as may be amended from time to time thereafter (the "Hadasit Supply Agreement");

(C) the Rochester SRA; and

(D) any registered trademark then maintained by Assignor that includes the word "Oscine".

For the avoidance of doubt, except as expressly set forth above, the Assigned Assets shall not include any assets of Purchaser existing prior to the Closing or arising thereafter, including any assets developed, purchased, acquired or in-licensed by Assignor after the Closing, or any assets of any licensor, partner, acquirer, Affiliate (other than a wholly-owned Subsidiary of Assignor) or parent entity of Assignor.

The foregoing assignment shall be made on an "as is" basis, without representation or warranty from the Assignor of any type, whether express or implied, including the sufficiency of the Acquired Assets for any purposes, or any implied warranty of merchantability, fitness for a particular purposes or non-infringement. The Assigned Assets shall be subject to any and all joint ownership rights or obligations, licenses or other Liens of Assignor (other than any security interest in the assets of Assignor generally) relating to the Assigned Assets as in effect at the time of the Assignment Transaction or arising thereafter. The Assigned Assets shall not include the transfer of any asset or any interest therein which Assignor is unable to effect unilaterally, except to the extent such consent is expressly obtained, as provided below.

(ii) Assumed Liabilities. Assignee shall agree to assume and become liable for, and to pay, perform and discharge as and when due, all Liabilities (whether known or unknown, vested or unvested, asserted or unasserted, absolute or contingent, accrued or unaccrued, assessed or unassessed, actual or potential, and due or to become due), arising from or related to the Assigned Assets, including covenants, payments, premiums, penalties or obligations, other than the Retained Liabilities and specifically including the Specified Liabilities (collectively, the "Assumed Liabilities"). "Retained Liabilities" means any Liabilities arising from the conduct of the business related to the Assigned Assets prior to the closing of the Assignment Transactions, other than the Specified Liabilities. "Specified Liabilities" means any Liabilities that pre-date the closing of the Assignment Transaction, but become due and payable or arise as a result of the conduct of the business related to the Assigned Assets after such closing, including any additional payment or royalty obligations that thereafter become due and payable to the University of Rochester or its Affiliates under the Rochester License or the Rochester SRA or to Hadasit Medical Research Services and Development Ltd. or its Affiliates under the Hadasit Supply Agreement; provided, that the Specified Liabilities shall not include any Liabilities arising out of or related to any breach of Contract or violation of applicable Law by Purchaser or any of its Affiliates. The Retained Liabilities shall remain the sole and exclusive Liabilities of Purchaser.

(iii) Licensed Data. Subject to the applicable terms and conditions of this Agreement, Assignor shall agree to license to Assignee on a non-exclusive, royalty-free, worldwide, perpetual basis Assignor's right and interest, if any, in or to clinical trial data generated by or on behalf of Assignor under a study protocol for any clinical trial investigating the safety or efficacy of any Product and in which such Product is administered to study subjects enrolled under such study protocol (the "Licensed Data"), solely for use of such data by Assignee in the field of treatment of neurologic disorders with therapeutic products that comprise (A) GPCs, including oligodendrocyte progenitor cells or astrocyte progenitor cells, derived from ESCs or iPSCs, (B) cells derived from GPCs derived from ESCs or iPSCs, or (C) oligodendrocytes or astrocytes derived from ESCs or iPSCs (the "Licensed Field"). Assignee shall not be entitled to sell, assign, sublicense or otherwise transfer the Licensed Data, any portion thereof, or any license thereto granted by Assignor pursuant to the foregoing sentence, except that any such license to the Licensed Data shall be (1) sublicensable by Assignee solely in connection with a sublicense of all or substantially all of (a) the Assigned Assets (to the extent then in existence) and (b) the intellectual property rights then in existence that are owned or controlled by Assignee that at any time were the subject of or within the Assigned Assets, in furtherance of Assignee's research, development and/or commercialization of therapeutic products in the Licensed Field and (2) transferrable by Assignee to an acquiror of all of the Assigned Assets, in each case (1) or (2) with Assignor's prior written consent, which shall not be withheld if such sublicense complies with the terms and conditions of the license for the Licensed Data. Any such license (and any sublicense or transfer of such license as described in the foregoing sentence) for the Licensed Data shall contain and be subject to confidentiality, non-disclosure and indemnification provisions reasonably acceptable to Assignor. Any such license shall be made on an "as is" basis, without representation or warranty from the Assignor of any type, whether express or implied, including the sufficiency of the Licensed Data for any purposes, or any implied warranty of merchantability, fitness for a particular purposes or non-infringement. The Licensed Data shall be subject to any and all joint ownership rights or obligations, licenses or other Liens of Assignor relating to the Licensed Data as in effect at the time of any such license, including any third party rights created or arising subsequent to the Closing Date. The Licensed Data shall not include any data or any interest therein which Assignor is unable to license unilaterally without violation of any applicable Law or any contractual, privacy, or study subject informed consent restrictions, limitations or obligations, except to the extent any applicable consent or waiver is expressly obtained, as provided below.

(iv) Indemnification.

(A) Assignee shall agree to indemnify, hold harmless and reimburse Assignor, its Affiliates and their employees, directors, agents and representatives for any and all Damages incurred or sustained by them, including Damages arising from third party claims, to the extent such Damages arise from or relate to (1) the consummation of the Assignment Transaction, including any failure to obtain any Required Consent, (2) the operation of the business relating to the Assigned Assets or use of the Licensed Data by Assignee after the closing of the Assignment Transaction, and (3) the Assumed Liabilities.

(B) Assignor shall agree to indemnify, hold harmless and reimburse the Assignee, its Affiliates and their employees, directors, agents and representatives for any and all Damages incurred or sustained by them, including Damages arising from third party claims, to the extent such Damages arise from or relate to the operation of the business relating to the Assigned Assets and Licensed Data prior to the closing of the Assignment Transaction (other than the Assumed Liabilities).

(v) Conditions. The parties' obligations to effect the Assignment Transaction shall be conditioned upon the following; provided that any party may, in its sole discretion, waive any condition for its benefit:

(A) Assignee and Assignor shall have entered into the Definitive Agreements, including a bill of sale and an assumption of liabilities, in each case specifying with particularity the Assigned Assets and the Assumed Liabilities contemplated above, as applicable, a license of the Licensed Data, and such other documents as may be reasonably requested by Assignor or Assignee, in form and substance reasonably satisfactory to each party;

(B) Assignee shall have obtained (at Assignee's sole expense) all consents, waivers, permits and approvals from all third parties and Governmental Entities that Assignor determines prior to the closing of the Assignment Transaction are necessary or appropriate to effect the Assignment Transaction ("Required Consents"), which shall include where necessary or appropriate in Assignor's determination, a full release and novation in favor of Assignor, in each case in form and substance reasonably satisfactory to Assignor;

(C) The Assignment Transaction shall be permitted by applicable Law, and no Governmental Entity shall have issued or entered any stay, decree, judgment, injunction, statute, rule or regulation which makes the Assignment Transaction illegal or prohibits it;

(D) No Proceeding shall be pending or threatened against the Assignor with respect to the Assigned Assets, the Assumed Liabilities or the Licensed Data; and

(E) Such other customary conditions as are necessary or appropriate in Assignor's reasonable determination, based on the facts and circumstances then existing, including Assignor having obtained any stockholder consent that is necessary or appropriate to effect the Assignment Transaction.

(vi) Covenants.

(A) Each of Assignor and Assignee shall use commercially reasonable efforts to effect the Assignment Transaction on a timely basis; provided, that in no event shall the Assignor be required to bear any out-of-pocket expense or incur any incremental Liability to do so other than fees and expenses of Assignor's counsel.

(B) Assignor shall assist Assignee (at Assignee's sole expense) in obtaining the Required Consents.

(C) Assignee shall bear all third party fees and expenses arising from, relating to, or necessary to effect the Assignment Transaction (other than fees and expenses of Assignor's counsel).

(D) Assignee shall bear any and all Transfer Taxes arising in connection with the Assignment Transaction, but each party shall be responsible for its respective income taxes, if any, attributable to the Assignment Transaction.

(E) Within twenty (20) Business Days after the closing an Assignment Transaction, (i) if Assignor's name or the name of any of its Subsidiaries includes the word "Oscine", Assignor shall change the name of Assignor and any such Subsidiaries to a name that does not include the word "Oscine" and shall update any state qualifications to do business as a foreign company to reflect such name change, and (ii) Assignor shall cease using the word "Oscine" to identify itself or any Affiliate or in connection with the conduct of any business after the closing of the Assignment Transaction.

(vii) No Purchase Price or Royalty. Assignee shall not be obligated to pay to Assignor any purchase price or royalty for the Assignment Transaction.

(viii) Termination. In the event that Assignee and Assignor have not entered into the Definitive Agreements within six (6) months after the date of a Termination Decision then Assignor shall have no further obligations pursuant to this Section 1.8(b) and this Section 1.8(b) shall terminate (x) on the date that is six months after the date of a Termination Decision, in the event Assignor has not breached, in any material respect, the covenants set forth in this Section 1.8(b), or (y) on the earlier of (A) the date Assignor shall have cured any such breach and (B) the twentieth (20th) Business Day after receipt of written notice of breach from Assignee. To assert any breach contemplated hereby, Assignee must provide written notice to Assignor promptly following the occurrence thereof and in any event prior to such six-month date.

(c) Right of First Negotiation.

(i) Subject to the limitations and conditions herein, following receipt of a Negotiation Election, Purchaser hereby grants to Seller a right of first negotiation on the terms set forth in this Section 1.8(c) with respect to a license to or assignment of Purchaser's right, title and interest in and to the following assets, to the extent reasonably necessary or desirable to further any research relating to, or the development of, the Assigned Assets by Assignee following an Assignment Transaction, and all associated liabilities:

(A) all previously granted regulatory approvals, to the extent exclusively possessed by Purchaser or its Subsidiaries, that are solely related to and useful only in connection with the Assigned Assets or any Product;

(B) any other Intellectual Property Rights derived from or related to the Assigned Assets then exclusively owned by Purchaser or its Subsidiaries that are solely related to and useful only in connection with the Assigned Assets or any Product;

(C) any in-bound license agreement that is solely related to and useful only in connection with the Assigned Assets or any Product; and

(D) any modified cell lines, including any master cell bank and any working cell banks, generated by Purchaser or its Subsidiaries in the course of any research or development activities relating to any Product that are solely related to and useful only in connection with the Assigned Assets or any Product.

To the extent not transferred or assigned pursuant to Section 1.8(b), such assets, collectively, are referred to herein as the "Program Assets". Purchaser and Seller shall negotiate in good faith a term sheet setting forth the terms and conditions of a license to or assignment of the Program Assets (the "Program License"), including the structure and economics thereof, for a period of three (3) months from Purchaser's receipt of notice of exercise of the Negotiation Election (the "Negotiation Period"). If Purchaser and Seller enter into a term sheet with respect to the Program License on mutually acceptable terms within the Negotiation Period, the Negotiation Period shall be automatically extended for an additional three (3) months, during which period Purchaser and Seller shall negotiate in good faith the definitive documentation for the Program License. If the Program License is not entered into within the Negotiation Period then Purchaser shall have no further obligations pursuant to this Section 1.8(c) and this Section 1.8(c) shall terminate (x) at the end of the Negotiation Period, if Purchaser has not breached, in any material respect, the covenants set forth in this Section 1.8(c), or (y) on the earlier of (A) the date Purchaser shall have cured any such breach and (B) the twentieth (20th) Business Day after receipt of written notice of breach from Seller. To assert any breach

contemplated hereby, Seller must provide written notice to Purchaser promptly following the occurrence thereof and in any event prior to the end of the Negotiation Period. To the extent that the Program Assets include any in-bound license agreement under Section 1.8(c)(i)(C), (1) Purchaser's obligations under this Section 1.8(c)(i) with respect to such license agreement shall be satisfied by introducing Seller to the licensor and reasonably cooperating with Seller to effect an assignment of such license agreement or termination of such agreement to permit Assignee to enter into a direct license agreement with the licensor and (2) any out-of-pocket costs, expenses or incremental Liabilities, including any termination or other fees, incurred by Purchaser or its Subsidiaries in connection with actions under this Section 1.8(c)(i) with respect to such license agreement shall be at the expense of Seller (on behalf of Assignee); provided, however, that such expenses borne by Seller shall specifically exclude the first $5,000 of out-of-pocket legal fees and disbursements incurred by Purchaser or its Subsidiaries with respect to each such license.

(ii) During the Negotiation Period, Purchaser and Seller shall also discuss the terms and conditions of a non-exclusive license to Purchaser's right, title and interest in and to the following assets, to the extent necessary or appropriate to further the development of the Assigned Assets by Assignee following an Assignment Transaction, and all associated liabilities:

(A) any regulatory applications or approvals possessed by Purchaser that are related to the Assigned Assets or any Product, but that also are or may be useful for Purchaser activities other than the Products;

(B) any other Intellectual Property Rights developed by Purchaser or its Subsidiaries that are derived from and related to the Assigned Assets or any Product, but that also are or may be useful for Purchaser activities other than the Products;

(C) any data then exclusively owned by Purchaser or its Subsidiaries arising directly out of any clinical trial conducted with respect to a Product that also is or may be useful for Purchaser activities other than the Products; and

(D) any modified cell lines, including any master cell bank and any working cell banks, generated by Purchaser or its Subsidiaries in the course of any research or development activities relating to any Product that also are or may be useful for Purchaser activities other than the Products.

Such assets are collectively referred to herein as the "Additional Assets".

(iii) Notwithstanding the foregoing, (A) neither the Program Assets nor the Additional Assets shall include any assets of any acquirer, Affiliate (other than a wholly-owned Subsidiary of Purchaser) or parent entity of Purchaser; provided, that such assets were not transferred to such entity by Assignor solely for the purpose of avoiding its obligations hereunder, and (B) the parties acknowledge and agree that, subject to compliance with the obligation to negotiate in good faith set forth in Section 1.8(c)(i) above, neither Purchaser nor Seller has any obligation to license the Program Assets or the Additional Assets, whether at fair market value or otherwise.

(d) Miscellaneous. Purchaser shall not effect any sale, assignment, license or other transfer of the Assigned Assets, or any portion thereof, the sole or primary purpose of which is to avoid an Assignment Transaction. Except as set forth in the immediately preceding sentence, nothing in this Section 1.8 shall impose or imply any limitation, condition or restriction on the ability of Purchaser or its Affiliates to develop, commercialize or exploit any of the assets or business acquired pursuant to this Agreement, it being acknowledged and agreed that Purchaser shall remain free to operate its business in its discretion. In furtherance thereof, except as set forth in the first sentence of this Section 1.8(d), nothing in

this Section 1.8 shall (i) impose or imply any requirement by Purchaser to maintain exclusive ownership of any asset contemplated hereby; or (ii) prohibit or limit Purchaser from (A) amending any agreement with a third party relating to any of the assets contemplated hereby, (B) entering into any research, development, licensing, partnering or other commercial arrangements with respect to the assets contemplated hereby or limit the terms that Purchaser may agree to with respect thereto; (C) granting any lien or security interest or otherwise encumbering any of the assets contemplated hereby; or (D) transferring or selling any or all of the assets contemplated hereby or the sale of Purchaser, subject to the limitations of Section 1.7(g)(ii). In furtherance thereof, Seller acknowledges that the operation of the business by Purchaser after the Closing may diminish or even extinguish the value of the assets and related business covered by this Section 1.8 and the ability of Purchaser to effectively assign, sell or transfer the assets contemplated hereby.

ARTICLE II

REPRESENTATIONS AND WARRANTIES OF SELLER

Except as set forth in the disclosure schedule delivered pursuant to this Agreement (the "Disclosure Schedule"), Seller represents and warrants to Purchaser (i) that the representations and warranties set forth in Section 2.1 to Section 2.23 below are true and correct as of the date hereof (except for such representations and warranties as are made only as of a specific date, which shall only be made as of such date); and (ii) that the representations and warranties set forth in Section 2.24 below are true and correct as of the date hereof and as of the date of issuance of any Acquisition Shares (provided that Seller may update Section 2.24 of the Disclosure Schedule prior to any issuance of Acquisition Shares, so long as such update does not limit or impair compliance with all applicable securities Laws, including the availability of an exemption from registration or qualification under such securities Laws for the issuance of such Acquisition Shares, as reasonably determined by Purchaser).

Section 2.1 Organization.

(a) Seller is a limited liability company validly existing and in good standing under the Laws of the jurisdiction of its organization. The Company is a corporation duly incorporated, validly existing and in good standing under the Laws of the jurisdiction of its incorporation. Each of Seller and the Company has all requisite power and authority to own, lease and operate its assets and properties and to carry on its business as currently being conducted and as proposed to be conducted. Section 2.1(a) of the Disclosure Schedule lists each Subsidiary of Seller or the Company. Each of Seller and the Company is duly qualified or licensed as a foreign entity to do business, and is in good standing in each jurisdiction in which the property owned, leased or operated by it or the nature of the business conducted by it makes such qualification or licensing necessary, except in such jurisdictions where the failure to be so duly qualified or licensed and in good standing would not have a Company Material Adverse Effect. Seller has made available to Purchaser accurate and complete copies of Seller's certificate of formation and operating agreement and the Company's certificate of incorporation and bylaws, each as amended to date (collectively, the "Charter Documents"), each of which in full force and effect on the date hereof.

(b) Section 2.1(b) of the Disclosure Schedule lists the managers, directors and officers of Seller and the Company.

(c) Except as set forth in Section 2.1(a) of the Disclosure Schedule, neither Seller nor the Company controls, directly or indirectly, has, or has ever had, any direct or indirect equity or other ownership interest in, or any obligations to acquire any Securities of, or make any contribution to, or debt or equity investment in, any Person.

Section 2.2 Capitalization.

(a) The authorized securities of Seller consist of 1,052.6 Class A Units, all of which are issued and outstanding, and which are owned, beneficially and of record, by the Seller Members as set forth in Section 2.2(a) of the Disclosure Schedule.

(b) The authorized capital stock of the Company consists of (i) 10,000 shares of Company Common Stock, of which 10,000 shares are issued and outstanding, all of which are owned, of record and beneficially, by Seller, free and clear of all Liens, and none of which are Restricted Stock, and (ii) no shares of preferred stock. The Company has not reserved any shares of Company Common Stock for issuance pursuant to any stock option plan and no Company Stock Option, Restricted Stock or other compensatory Security or Company Warrant has been granted, promised or issued to any Person.

(c) All of the outstanding Securities of Seller and the Company (i) are duly authorized, validly issued, fully paid and non-assessable, (ii) have been issued in compliance with the Charter Documents, all financing documents of the issuer thereof and all applicable Laws, including federal securities laws and any applicable state securities or "blue sky" laws, and (iii) are not subject to preemptive rights created by statute, the Charter Documents, or any agreement to which the issuer thereof is a party or by which it is bound.

(d) Neither Seller nor the Company has made any distributions or paid any dividends since the date of its inception. No dividends will be due or payable with respect to any shares of Company Capital Stock prior to or in connection with the Closing.

(e) Except as set forth above, (i) there are no other Securities of Seller or the Company authorized, issued or outstanding; (ii) there are no options, warrants, calls, preemptive rights, Indebtedness having general voting rights or debt convertible into securities having such rights ("Voting Debt"), convertible securities, or subscriptions or other rights, agreements, arrangements or commitments of any character, written or oral, to which Seller or the Company is a party or by which Seller or the Company is bound, relating to issued or unissued Securities of Seller or the Company, obligating Seller or the Company to issue, transfer, sell, or cause to be issued, transferred, or sold, any Securities or Voting Debt of, or other equity interest in, Seller or the Company or securities convertible into or exchangeable for such equity interests, or obligating Seller or the Company to make any payment linked to the value of the Company Capital Stock or the sale price of the Company, or obligating Seller or the Company to grant, extend, accelerate the vesting of, change the price of, otherwise amend or enter into any such option, warrant, call, subscription, or other right, agreement, arrangement or commitment; and (iii) there are no outstanding contractual obligations of Seller or the Company to repurchase, redeem or otherwise acquire any Securities of such Person. There are no outstanding or authorized stock appreciation, phantom stock, profit participation, or other similar rights with respect to Seller or the Company.

(f) There are no (i) voting trusts, proxies, or other agreements or understandings with respect to the voting securities of Seller or the Company or (ii) agreements to which Seller or the Company is a party relating to the registration, sale or transfer (including agreements relating to rights of first refusal, co-sale rights or "drag along" rights) of any Securities of Seller or the Company. All such agreements and understandings will terminate at or prior to the Closing.

Section 2.3 Authority(b) . Each of Seller and the Company has all requisite corporate power and authority to execute and deliver this Agreement and any Ancillary Agreements to which it is a party and to consummate the transactions contemplated hereby and thereby. The execution, delivery and performance of this Agreement and any Ancillary Agreements to which Seller or the Company is a party and the consummation of the transactions contemplated hereby and thereby have been duly and validly authorized by all necessary corporate or limited liability company action on the part of each of Seller and the Company, as applicable, and no further corporate or limited liability company action is necessary on

the part of either Seller or the Company to authorize this Agreement or any Ancillary Agreement to which it is a party or to consummate the transactions contemplated hereby or thereby. This Agreement and each of the Ancillary Agreements to which Seller or the Company is a party have been duly executed and delivered by each of Seller and the Company, as applicable, and, assuming the due authorization, execution and delivery by the other parties hereto and thereto, constitute valid and binding obligations of each of Seller and the Company, as applicable, enforceable against each of Seller and the Company in accordance with their terms, subject to the Bankruptcy and Equity Exception.

Section 2.4 No Conflict; Consents.

(a) No consent, notice, waiver, approval, order or authorization of, or registration, declaration or filing with any Governmental Entity is required by, or with respect to, Seller or the Company in connection with the execution and delivery of this Agreement and any Ancillary Agreement to which Seller or the Company is a party or the consummation of the other transactions contemplated hereby and thereby.

(b) The execution and delivery by Seller and the Company of this Agreement and any Ancillary Agreement to which Seller or the Company is a party, and the consummation of the transactions contemplated hereby and thereby, will not conflict with or result in any violation of or default under (with or without notice or lapse of time, or both) or give rise to a right of termination, cancellation, modification or acceleration of any obligation or loss of any benefit under, or result in the creation of any Lien under (any such event, a "Conflict"): (i) any provision of the Charter Documents, (ii) any Material Contract or (iii) any Law applicable to Seller or the Company or any of their respective material properties or assets (whether tangible or intangible); except in the case of clauses (ii) and (iii) above, for such Conflicts that would not adversely affect the Company in any material respect. Section 2.4(b) of the Disclosure Schedule sets forth all necessary consents, waivers and approvals of parties to any Material Contracts required thereunder in connection with the Acquisition or the other transactions contemplated hereby, or for any such Material Contract to remain in full force and effect without limitation, modification or alteration after the Closing.

Section 2.5 "Size of Person" Threshold(c) .

(a) The Ultimate Parent Entity, as defined in 16 CFR § 801.1(a)(3), of the Seller and the Company, together with all entities which it controls directly or indirectly, collectively do not meet the "size of person" threshold under the Hart-Scott-Rodino Antitrust Improvements Act (the "HSR Act"), and the rules and regulations promulgated thereunder.

(b) This representation and warranty is made solely for the purpose of determining the applicability of the HSR Act to the transactions contemplated by this Agreement. No breach of this Section 2.5 shall have occurred unless, after the Closing, (i) the Federal Trade Commission or Department of Justice determines that the transactions contemplated by this Agreement were reportable under the HSR Act or (ii) the Federal Trade Commission or Department of Justice asserts that the transactions contemplated by this Agreement may be reportable under the HSR Act and enters into a settlement with Purchaser or its Affiliates with respect thereto; provided, however, the foregoing shall not affect the right of any Indemnified Party to deliver a Notice of Claim prior to any such determination or settlement in the event of any inquiry by any such Governmental Entity during the survival period of representation and warranty set forth in this Section 2.5.

Section 2.6 Financial Statements.

(a) Seller has previously made available to Purchaser unaudited balance sheets as of December 31, 2018 and 2019 and June 30, 2020 (the "Interim Balance Sheet" and such date the "Interim Balance Sheet Date"), the related statements of profit and loss for the fiscal years ended 2018 and 2019 and the interim period ended on the Interim Balance Sheet Date, and a statement of cash and cash equivalents of Seller and the Company as of the Closing Date (collectively, the "Financial Statements"), in each case, for Seller and the Company individually and Seller and the Company on a consolidated basis. The Financial Statements are true and correct in all material respects, and fairly present in all material respects the financial position of Seller and the Company as of such dates and its and their results of operations for such fiscal periods.

(b) Neither Seller nor the Company has received any written material complaint, allegation, assertion or claim regarding the accounting or auditing practices, procedures, methodologies or methods of Seller or the Company or of such Person's internal controls over financial reporting, including any complaint, allegation, assertion or claim that Seller or the Company has engaged in questionable accounting or auditing practices.

(c) Neither Seller nor the Company has any outstanding Indebtedness.

(d) Since December 31, 2019, neither Seller nor the Company has (i) suffered any Company Material Adverse Effect; (ii) authorized for issuance, sale, pledge, disposition or encumbrance, or issued, sold, accelerated, pledged, disposed of or encumbered any Securities of, or ownership interest in, Seller or the Company, or amended any of the terms of any such Securities or agreements relating thereto; (iii) assumed, guaranteed, endorsed or otherwise become liable in writing for the obligations of any third party; (iv) made any loans, advances or capital contributions to, or investments in, any third party; (v) mortgaged or pledged any of its material properties or assets, tangible or intangible, or created or suffered to exist any Lien, other than Permitted Liens, thereupon; (vi) canceled any material debts or waived, released or relinquish any material contract rights or other rights of substantial value other than in the ordinary course of business, consistent with past practices; (vii) sold, transferred, or otherwise disposed of any real property or material tangible personal property, other than in the ordinary course of business consistent with past practices; (viii) paid, prepaid, discharged or satisfied any material claims, Liabilities, Indebtedness, other than the payment, discharge or satisfaction of Liabilities in the ordinary course of business, consistent with past practices; or (ix) made any change with respect to accounting policies or procedures in effect as of Seller's and the Company's fiscal year ended December 31, 2019.

(e) Seller is not insolvent, nor will it be rendered insolvent by the Acquisition or the consummation of the transactions contemplated hereby, taken as a whole. As used in this Section 2.6, "insolvent" means the debts and other probable Liabilities of a Person exceed the sum of the present fair saleable value of the assets of such Person. Immediately before and after the Closing: (i) Seller was or will be able to pay its Liabilities as they become due in the usual course of its business; and (ii) Seller had or will have assets (calculated at fair market value) that exceed its Liabilities.

Section 2.7 Absence of Undisclosed Liabilities. Neither Seller nor the Company has any Liabilities, except for (a) Liabilities shown on the Interim Balance Sheet, (b) Acquisition Expenses set forth in Section 2.7 of the Disclosure Schedule (the "Acquisition Expenses Schedule"), (c) Liabilities that have arisen since the Interim Balance Sheet Date in the ordinary course of business consistent with past practice, and (d) written contractual liabilities incurred pursuant to Material Contracts in the ordinary course of business of the Company consistent with past practice that are not required by GAAP to be reflected on a balance sheet and, in the case of clauses (c) and (d), none of which arises out of or relates to any breach of contract, tort, infringement or violation of Law and which do not exceed $25,000 in the aggregate.

Section 2.8 Litigation. There is no action, suit, claim, litigation, arbitration, proceeding, or investigation pending before any Governmental Entity or, to the Knowledge of Seller, threatened in which Seller, the Company or any of the other Affiliated Companies is a party, including any actions pending or threatened involving the current or prior employment of any of such Persons' employees or consultants, their use in connection with the business of such Person of any Intellectual Property allegedly proprietary to any of their current or former employers, or their obligations under any agreements with current or former employers. None of Seller, the Company or any of the other Affiliated Companies is a party or subject to the provisions of any judgment, order or decree of any Governmental Entity. There is no action, suit, claim, litigation, arbitration, proceeding or investigation which Seller or the Company presently intends to initiate. To the Knowledge of Seller, there are no occurrences, facts, or circumstances in existence on the date hereof which would reasonably be expected to give rise to any claim against Seller, the Company or any of the other Affiliated Companies which would reasonably be expected to result in a material Liability. No Person to which Seller, the Company or any of the other Affiliated Companies owes any obligation of indemnification or defense, for the violation of the rights of any third party or the violation of any Law, has made any written or, to the Knowledge of Seller, oral claim for such indemnification.

Section 2.9 Compliance with Laws.

(a) Each consent, license, permit, grant or other authorization (i) pursuant to which Seller or the Company currently operates or holds any interest in any of its properties, or (ii) which is required under applicable Law for the operation of the business of Seller or the Company as currently conducted or proposed to be conducted or the holding of any such interest, except for those the lack of which would not be material to Seller or the Company, has been issued or granted to Seller or the Company, as applicable, and is in full force and effect.

(b) Each of Seller and the Company is in material compliance with, and has not violated in any material respect, any applicable Law that affects the business, properties or assets of Seller or the Company and no notice, charge, claim or action has been received by either Seller or the Company or, to the Knowledge of Seller, has been filed, commenced or threatened against either Seller or the Company alleging any such violation.

(c) Neither Seller nor the Company nor, to the Knowledge of Seller, any manager, director, officer, agent, distributor, employee or other person acting on behalf of or in the name of Seller or the Company: (i) is, or is owned or controlled by, a Person subject to the sanctions administered by the Office of Foreign Assets Control of the U.S. Department of the Treasury or included on any list of restricted entities, Persons or organizations published by the government of the United States of America including the List of Specially Designated Nationals and Blocked Persons, Denied Persons List, Entities List, Debarred Parties List, Excluded Parties List and Terrorism Exclusion List, or any similar applicable Law (any such Person, a "Restricted Party") or (ii) has engaged in any unlicensed transaction with any Restricted Party or has otherwise been in breach of any such sanctions, export controls, restrictions or any similar foreign, federal or state applicable Law. Seller and the Company and, to the Knowledge of Seller, each of their respective directors, officers, employees, agents and representatives acting on behalf of Seller and the Company are in compliance with, and have not violated, any Trade Law. Neither Seller nor the Company has received notice that it has been the subject of any investigation, complaint or claim of any violation of any Trade Law by any Governmental Entity.

(d) Each of Seller and the Company has obtained or completed all material permits, licenses, license exceptions, and other consents, notices, waivers, approvals, orders, authorizations, registrations, declarations, classifications and filings required in accordance with any Trade Law for the conduct of Seller and the Company's business including (x) the export, re-export, and import of products, services, software and technologies and (y) releases of technologies and software to foreign nationals

located in the United States and abroad, and any such permits, licenses and other authorizations that have been received within the past five (5) years (including any that are currently in effect and any pending license applications) have been disclosed and are described in Section 2.9(d) of the Disclosure Schedule; and each of Seller and the Company is and has been in material compliance with the terms of all licenses that have been received within the past five (5) years or are currently in effect.

(e) Neither Seller nor the Company manufactures, exports or otherwise trades in, or brokers defense articles, related technical data and defense services as defined in the International Traffic in Arms Regulations (22 C.F.R. § 120 *et seq.*) or is registered with the U.S. Department of State, Directorate of Defense Trade Controls pursuant to the International Traffic in Arms Regulations.

Section 2.10 Taxes

(a) Seller and the Company have timely filed with the appropriate Tax Authorities all Tax Returns required to be filed, and such Tax Returns are true, correct, and complete.

(b) Seller and the Company have paid all Taxes required to be paid (whether or not shown as due on any Tax Return), other than those (i) currently payable without penalty or interest, or (ii) being contested in good faith by appropriate proceedings properly instituted and diligently pursued, which in the case of both clauses (i) and (ii) are fully reserved for on the Interim Balance Sheet of the Company. All liabilities for unpaid Taxes attributable to the period commencing on the date following the date of the Interim Balance Sheet were incurred in the ordinary course of business and are consistent in type and amount with Taxes attributable to similar business activity conducted in prior periods.

(c) There are no Liens for Taxes upon any property or assets of Seller or the Company except for liens for real and personal property Taxes not yet due and payable.

(d) No Federal, state, local or foreign Audits are presently pending with regard to any Taxes or Tax Returns of Seller or the Company, and no such Audit is threatened in writing, and no deficiency or adjustment for any Taxes has been proposed, asserted, or assessed against Seller or the Company. No material adjustments have been asserted as a result of any Audit which have not been resolved and fully paid, and no issue has been raised by any Tax Authority in any Audit of Seller or the Company that, if raised with respect to any other period not so audited, could be reasonably expected to result in a proposed deficiency for any period not so audited. Neither Seller nor the Company has received any written notice of any claim made by a Tax Authority in a jurisdiction where such Person does not file a Tax Return that it is or may be subject to taxation by that jurisdiction.

(e) There are no outstanding requests, agreements, consents or waivers to extend the statutory period of limitations applicable to the assessment of any Taxes or deficiencies against Seller or the Company, and no power of attorney granted by Seller or the Company with respect to any Taxes or Tax Returns is currently in force.

(f) The Company (i) has never been a member of an affiliated group (within the meaning of Section 1504 of the Code) or an affiliated, combined, consolidated, unitary, or similar group for state, local or foreign Tax purposes, other than the group of which the Company is the common parent, and (ii) has any liability for or in respect of the Taxes of, or determined by reference to the Tax liability of, another Person (other than the Company) under Treasury Regulation Section 1.1502-6 (or any similar provision of Law).

(g) The Company is neither a party to, nor is bound by, nor has any obligation under, any Tax sharing agreement, Tax allocation agreement, Tax indemnification agreement, agreement where liability is determined by reference to the Tax liability of a third party, or any similar Contract (other than commercial agreements entered into in the ordinary course of business the primary subject of which is not Taxes).

(h) Neither the execution, delivery and performance of this Agreement nor the consummation of the transactions contemplated hereby will (either alone or in combination with another event) result in any payment (whether in cash or property or the vesting of property) to any "disqualified individual" (as such term is defined in Treasury Regulation Section 1.280G-1) that could reasonably be construed, individually or in combination with any other such payment, to constitute an "excess parachute payment" (as defined in Section 280G(b)(1) of the Code). Neither Seller or any of its Affiliates has any agreement or obligation to provide any Person any form of excise tax gross-up for Taxes which may be imposed upon such Person by Section 4999 of the Code.

(i) The Company has neither agreed nor is required to include in income any adjustment under either Section 481(a) of the Code (or an analogous provision of Law) by reason of a change in accounting method or otherwise which would have an effect on any taxable period following the Closing.

(j) The Company will not be required to include any item of income, or exclude any item of deduction, for a Post-Closing Tax Period as a result of (i) an installment sale transaction occurring during a Pre-Closing Tax Period governed by Section 453 of the Code (or any similar provision of state, local or foreign Law), (ii) a transaction occurring during a Pre-Closing Tax Period reported as an open transaction for any Tax purposes, (iii) the receipt of deferred revenue or prepaid amount received prior to the Closing, or (iv) election under Code Section 108(i) or Section 965 of the Code made on or prior to the Closing Date.

(k) Seller has previously made available to Purchaser complete and accurate copies of each of (i) all audit reports, letter rulings, technical advice memoranda and similar documents issued by a Tax Authority to Seller and/or the Company, (ii) the United States federal income Tax Returns, and those state, local and foreign income Tax Returns filed by Seller and the Company for taxable periods since their respective formations, and (iii) any closing agreements entered into by Seller or the Company with any Tax Authority.

(l) Each Benefit Plan that is a "nonqualified deferred compensation plan" as defined under Section 409A of the Code is exempt from, or if subject to, is, and has been since the inception of such plan, in operational and documentary compliance with Section 409A of the Code. There are no stock options or other rights to acquire equity of Seller or the Company that are subject to Section 409A of the Code. Neither Seller, nor any Affiliate of Seller has any agreement or obligation to provide any Person any form of income tax reimbursement or tax gross-up for Taxes which may be imposed upon such Person by Section 409A of the Code or any such similar state Taxes imposed for any failure to operate such nonqualified deferred compensation plan in accordance with Section 409A of the Code. In connection with this Agreement, any Ancillary Agreement as in effect at the Closing or the transactions contemplated hereby or thereby, there will not be any substitution for a payment of deferred compensation arising pursuant to an agreement or promise made by Seller or the Company prior to the Closing that was not disclosed to Purchaser prior to the Closing, within the meaning of Treasury Regulation Section 1.409A-3(f).

(m) The Company has duly and timely reported and withheld from employee salaries, or wages or other compensation (whether or not paid in cash) and other amounts paid to creditors, independent contractors and other third parties, and have paid over to the appropriate Governmental Entity all amounts required to be so withheld and paid over for all periods under all applicable Tax or other Laws.

(n) The Company is not and has not been, at any time, a "United States real property holding corporation" within the meaning of Section 897(c)(2) of the Code.

(o) The Company has never constituted either a "distributing corporation" or a "controlled corporation" in a distribution of stock intended to qualify for tax-free treatment under Section 355 of the Code.

(p) The Company has not engaged in a reportable transaction under Treasury Regulation Section 1.6011-4(b), including any transaction that is the same or substantially similar to one of the types of transactions that the IRS has determined to be a Tax avoidance transaction and identified by notice, regulation, or other form of published guidance as a listed transaction, as set forth in Treasury Regulation Section 1.6011-4(b)(2).

Section 2.11 Employee Benefits.

(a) Section 2.11(a) of the Disclosure Schedule contains a true, complete and correct list of each material plan, program, policy, practice, arrangement, agreement or understanding (whether formal or informal) providing for employment, compensation, incentive or deferred compensation, severance, relocation, retention or change of control compensation or benefits, termination pay, retirement pay, pension, profit sharing, performance awards, stock or stock-related awards, vacation, disability, death benefit, hospitalization, life or other benefits-related insurance, supplemental unemployment benefits, fringe benefits or other employee benefits, including each "employee benefit plan" as defined in Section 3(3) of ERISA, (i) which is sponsored, maintained or contributed to or required to be contributed to by Seller or the Company or by any trade or business, whether or not incorporated, that together with Seller or the Company would be deemed a "single employer" within the meaning of Section 4001(b)(1) ERISA, for the benefit of any current or former employee, director or consultant of Seller or the Company, or (ii) with respect to which Seller or the Company has any Liability (all the foregoing being herein referred to as "Benefit Plans"). For the avoidance of doubt, the following shall not constitute Benefit Plans: the Offer Letter, the At-Will Employment Agreement, the Consulting Agreement, each Restrictive Covenant Agreement, and any compensation or benefit plan, program, policy, practice, arrangement, agreement or understanding sponsored, maintained or contributed to or required to be contributed to by the University of Rochester, the University of Copenhagen, Purchaser or any of their respective Affiliates. Seller has made available to Purchaser a true and correct copy of all material documents related to the Benefit Plans, including a copy of each written Benefit Plan (including all amendments thereto) or a written description of any Benefit Plan that is not otherwise in writing.

(b) No Benefit Plans are subject to Title IV of ERISA. No event has occurred and there exists no condition or set of circumstances which are reasonably likely to occur in connection with which Seller or the Company would be subject to any material Liability (except Liability for benefits claims and funding obligations payable in the ordinary course), under ERISA, the Code or any other applicable Law.

(c) With respect to Benefit Plans, in the aggregate, there are no material funded benefit obligations for which contributions have not been made or properly accrued and there are no material unfunded benefit obligations which have not been accounted for by reserves, or otherwise properly footnoted in accordance with GAAP in the Financial Statements.

(d) Each of the Benefit Plans is and has been administered in all material respects in compliance with its terms and with applicable Laws, including, but not limited to, ERISA, the Consolidated Omnibus Budget Reconciliation Act of 1985, the Health Insurance Portability and Accountability Act of 1996, the Code and federal and state securities Laws.

(e) None of the Benefit Plans are intended to be a qualified plan within the meaning of Section 401(a) of the Code.

(f) No Benefit Plan provides for retiree health, medical or life insurance benefits other than (i) coverage mandated by applicable Laws, (ii) death or retirement benefits under any "employee pension plan" as defined in Section 3(2) of ERISA, or (iii) benefits the full cost of which is borne by the current or former employee (or beneficiary thereof).

(g) No Benefit Plan is a "multiemployer pension plan," as such term is defined in Section 3(37) of ERISA or a "multiple employer plan" as such term is defined in Section 413(c) of the Code.

(h) Each Benefit Plan can be terminated within a period of thirty (30) days, without payment of any additional compensation or amount or the additional vesting or acceleration of any benefits.

(i) No Benefit Plan is under actual or, to Seller's Knowledge, threatened investigation, audit or review by any Governmental Entity, or the subject of any material claim, lawsuit, arbitration or other proceeding (other than routine claims for benefits).

Section 2.12 Employment and Labor Matters.

(a) Seller and the Company are, and have at all times been, in compliance in all material respects with all applicable Laws respecting labor and employment, including Laws relating to employment practices, terms and conditions of employment, equal employment opportunity, discrimination, disability, fair labor standards, workers compensation, wrongful discharge, immigration, occupational safety and health, family and medical leave, wages and hours, overtime classification, paid time off, immigration, and employee terminations, in each case, with respect to any current or former employee (each, for purposes of this Section 2.12, an "Employee") or any current or former individual consultant, independent contractor, advisor or director (each, for purposes of this Section 2.12, an "Advisor") of, in each case, Seller or the Company and each: (i) is not liable for any arrears of material wages, severance pay or any material Taxes or penalty for failure to comply with any of the foregoing, and (ii) is not liable for any material payment to any trust or other fund governed by or maintained by or on behalf of any Governmental Entity, with respect to unemployment compensation benefits, social security or other benefits or obligations for such Persons (other than routine payments to be made in the normal course of business and consistent with past practice). There are no actions, suits, claims or administrative matters pending, or, to Seller's Knowledge, threatened against Seller, the Company, or any of their Employees or Advisors relating to any Benefit Plan. There are no pending or, to Seller's Knowledge, threatened claims or actions against Seller, the Company, or to Seller's Knowledge, any Seller or Company trustee, under any worker's compensation policy or long-term disability policy. Section 2.12(a) of the Disclosure Schedule lists all Liabilities of either Seller or the Company to any current Employee or Advisor under any Benefit Plan as in effect on the date hereof that would result from the termination by Seller, the Company, or Purchaser of such Person's employment or provision of services, a change of control of the Company, or a combination thereof.

(b) Section 2.12(b) of the Disclosure Schedule contains a complete and accurate list of all current Employees and shows with respect to each such Employee (i) the Employee's name, position held, principal place of employment, base salary and bonus opportunity and each Benefit Plan in which the Employee participates, (ii) the date of hire, (iii) vacation eligibility and accrued vacation for the current calendar year (including accrued vacation from prior years), (iv) visa status and the expiry date thereof, if applicable, and (v) accrued sick days for current calendar year. All Employees are exempt from the overtime requirements of the Fair Labor Standards Act. Neither Seller nor the Company has any former Employees.

(c) Section 2.12(c) of the Disclosure Schedule contains an accurate and complete list of all current Advisors, including (i) the name of and services provided by such Persons, (ii) the location at which such Persons have been or are providing services, (iii) the rate of all regular, bonus or any other compensation payable to such Persons, and (iv) the start and termination date of any Contract binding such Persons. Neither Seller nor the Company has any material Liability with respect to misclassification of any Person as an independent contractor rather than as an "employee", including any Person leased from another employer, or with respect to any Person currently or formerly classified as exempt from overtime wages. Section 2.12(c) of the Disclosure Schedule also contains a complete and accurate list of all former Advisors involved in the development of Company Intellectual Property and shows the name, dates of service and services provided by such Persons.

(d) The employment by the Company of any Employees that are faculty of the University of Rochester or the University of Copenhagen is and has at all times been in compliance in all material respects with all policies applicable to faculty of such Persons, including all conflict of interest and outside activity policies and any disclosure, consent or waiver requirements thereunder and no disclosures, consents or waivers under such policies are required in connection with the transactions contemplated by this Agreement, including entry into the Offer Letter and the Consulting Agreements.

Section 2.13 Material Contracts.

(a) Except as set forth in Section 2.13(a) of the Disclosure Schedule (organized by the appropriate paragraph and applicable subsection), neither Seller nor the Company is a party to:

(i) any Contract that (A) limits or restricts the ability of the Seller or the Company (or, after the Acquisition, Purchaser, the Company or any wholly-owned Subsidiary of Purchaser) to compete in any business or with any Person in any geographical area or otherwise restricts the operations or business of such Persons, (B) requires Seller or the Company (or, after the Acquisition, Purchaser, the Company or any of wholly-owned Subsidiary of Purchaser) to conduct any business on a "most favored nations basis" with any Person, or (C) provides for exclusivity or any similar requirement in favor of any Person;

(ii) any employment, independent contractor or consulting Contract with an employee, independent contractor, consultant, advisor, or salesperson;

(iii) any Contract (other than a Benefit Plan), any of the benefits of which will become payable, be increased or accelerated by the consummation of, or calculated on the basis of, any of the transactions contemplated by this Agreement;

(iv) any lease of personal property or other Contract affecting the ownership of, leasing of, or other interest in, any personal property and involving future payments in excess of $5,000 individually or $10,000 in the aggregate;

(v) any Contract relating to capital expenditures and involving future payments by Seller or the Company in excess of $5,000 individually or $10,000 in the aggregate;

(vi) any Contract relating to the disposition or acquisition of assets or any interest in any business enterprise outside the ordinary course of business, other than as expressly contemplated by this Agreement and the Ancillary Agreements and the transactions contemplated hereby and thereby;

(vii) any Contract relating to the incurrence of Indebtedness by Seller or the Company or any extension of credit by Seller or the Company to any Person;

(viii) any Contract that involves performance of services or delivery of goods or materials, including software (other than commercially available off the shelf software), by or to Seller or the Company of an amount or value in excess of $5,000 individually or $10,000 in the aggregate;

(ix) any Contracts with any Governmental Entity;

(x) any joint venture, partnership, strategic alliance or similar arrangement;

(xi) any Contract relating to the research, development, maintenance, manufacturing, distribution, supply, resale, marketing or co-promotion of, or collaboration with respect to, any Company Products or Company In-Development Products;

(xii) any power of attorney or surety or guarantee agreement or other similar undertaking with respect to contractual performance;

(xiii) any stand-alone nondisclosure, confidentiality or similar stand-alone agreement;

(xiv) any Contract which contains a non-solicit or no-hire provision that restricts Seller or the Company;

(xv) any Contract that provides for indemnification or defense by Seller or the Company of any other Person;

(xvi) any joint defense, common interest or similar agreement with any Person; or

(xvii) any other Contracts or restrictions that are material to the business, financial condition, working capital, assets, Liabilities, reserves or operations of the Company or any of its Subsidiaries.

(b) Each Contract required to be disclosed pursuant to Section 2.13, Section 2.14(e), Section 2.14(f), Section 2.14(m), Section 2.19 and Section 2.21 of the Disclosure Schedule is referred to herein as a "Material Contract" and collectively, the "Material Contracts".

(c) Each Material Contract to which Seller and/or the Company is a party or any of their respective properties or assets (whether tangible or intangible) are subject is a valid and binding agreement of each such Person, enforceable against each such Person in accordance with its terms, and is in full force and effect with respect to each such Person and, to the Seller's Knowledge, any other party thereto. Each of Seller and the Company is in compliance in all material respects with, has performed all material obligations required to have been performed to date by such Person under, and has not breached, violated or defaulted under, or received written notice that it has breached, violated or defaulted under, any of the terms or conditions of any Material Contract, nor, to the Knowledge of Seller, is any party obligated to Seller or the Company pursuant to any Material Contract in material breach, violation or default

thereunder, nor does Seller have Knowledge of any presently existing facts or circumstances that, with the lapse of time, giving of notice, or both would constitute a breach, violation or default by Seller, the Company, or any such other party that could reasonably be expected to result in a material Liability to the Company. None of Seller, the Company, or any other party thereto has given notice of any cancellation or termination of any Material Contract and to the Knowledge of Seller no event has occurred or failed to occur which would entitle any such Person to terminate any Material Contract.

Section 2.14 Intellectual Property.

(a) *Definitions*. For all purposes of this Agreement, the following terms shall have the following meanings:

"Company In-Development Products" means any and all potential new products, processes, assays and services that are not yet commercially available, marketed, distributed, supported, sold, or licensed out, by or on behalf of Seller or the Company but which are currently being developed by or on behalf of Seller or the Company.

"Company Intellectual Property" means any and all Intellectual Property that is or is purported to be (i) owned by Seller or the Company (whether owned singularly or jointly with a third party or parties) or (ii) licensed to Seller or the Company, in each case, as used in, held for use in, being developed for use in, or necessary for, the conduct of the business of Seller and the Company as currently conducted or as currently proposed to be conducted.

"Company Products" means any and all products, processes, assays and services that have been or are being made commercially available, marketed, distributed, supported, sold, or licensed out, by or on behalf of Seller or the Company since their respective formations.

"Company Registered Intellectual Property" shall mean any and all Registered Intellectual Property that is part of Company Intellectual Property.

"Company Technology" shall mean any and all Technology that is or is purported to be (i) owned by Seller or the Company (whether owned singularly or jointly with a third party or parties) or (ii) exclusively licensed to Seller or the Company.

"Infringement" or "Infringe," with respect to a given item or activity, shall mean that such item or activity directly or indirectly infringes, misappropriates, unlawfully dilutes, constitutes unauthorized use of, or otherwise violates Intellectual Property Rights of any Person.

"Intellectual Property" shall mean any and all Intellectual Property Rights and Technology.

"Intellectual Property Rights" shall mean any and all intellectual property, industrial property, and proprietary rights worldwide, whether registered or unregistered, including rights in and to (i) patents and other governmental grants for the protection of inventions or industrial designs, including any applications for any such patents or grants, whether already filed or in preparation ("Patents"), (ii) copyrights and Moral Rights (including analogous rights thereto), (iii) rights of publicity, (iv) trade secrets and know-how (including analogous rights thereto and whether or not reduced to practice), (v) trademarks, trade names, logos, service marks, designs, emblems, signs, insignia, slogans, other similar designations of source or origin and general intangibles of like nature, together with the goodwill of the Company or such Person's business symbolized by or associated with any of the foregoing ("Trademarks"), (vi) domain names, web addresses and other universal resource locator (URL) registrations, (vii) database rights, (viii) social media accounts, (ix) provisionals, substitutions, divisions, continuations, continuations- in-part, foreign counterparts, renewals, reissuances, re-examinations, extensions and supplementary protection certificates of any and all of the foregoing (as applicable), (x) registrations or applications for registration for any and all of the foregoing, and (xi) rights to sue for past, present, and future Infringement of any and all of the rights set forth above.

"Moral Rights" shall mean moral or equivalent rights in any Intellectual Property, including the right to the integrity of the work, the right to be associated with the work as its author by name or under a pseudonym and the right to remain anonymous.

"Registered Intellectual Property" shall mean any and all Intellectual Property that has been registered, filed, certified, granted or otherwise perfected or recorded with or by any Governmental Entity or quasi-public legal authority (including domain name registrars) and any applications for any of the foregoing.

"Unregistered Intellectual Property" shall mean any and all Intellectual Property that is part of the Company Intellectual Property and is not Company Registered Intellectual Property.

"Technology" shall mean any and all (i) schematics, models, algorithms and works of authorship including documentation and computer programs (including source code, executable code and architecture), (ii) inventions (whether or not patentable and whether or not reduced to practice), discoveries and improvements, (iii) proprietary information and confidential information, (iv) databases, data compilations, arrays and collections (including databases, compilations, arrays and collections of data, sequences, diagnostic, prognostic, identifying or phenotypic information, cells, biomolecules, compounds, tissues or other biologic materials), and customer and technical data, (v) methods, assays and processes, (vi) reagents, kits, components, devices, prototypes, systems, industrial and other designs and schematics, and (vii) tangible items related to, constituting, disclosing or embodying any or all of the foregoing, including any and all versions of any and all of the foregoing.

(b) *Intellectual Property.* Section 2.14(b)(i) of the Disclosure Schedule lists (A) all Patents, including patent applications, on which the Key Employee is listed as an inventor and all invention disclosures made by the Key Employee to any Person, including the University of Rochester and the University of Copenhagen, within two years prior to the date hereof, and (B) all Company Registered Intellectual Property and all material Unregistered Intellectual Property owned, used or held for use by Seller or the Company, setting forth in each case and to the extent applicable the jurisdictions in which such Company Registered Intellectual Property has been issued, or applications have been filed, the name of the owner, the application or registration number, the filing date, the date of registration and the expiration date of such Company Registered Intellectual Property. Seller has made available to Purchaser complete and accurate copies of all applications that are not publicly available related to each item included in the Company Registered Intellectual Property. Section 2.14(b)(ii) of the Disclosure Schedule lists all actions that must be taken by Seller, the Company or any Affiliated Company within ninety (90) days after the Closing Date with respect to any Company Registered Intellectual Property, including the payment of any registration, maintenance or renewal fees or the filing of any documents, applications or certificates for the purposes of filing, seeking protection for, maintaining, perfecting, preserving or renewing any such Company Registered Intellectual Property. To the Knowledge of Seller, Section 2.14(b)(iii) of the Disclosure Schedule lists all proceedings or actions before any court or tribunal or Government Entity (including the United States Patent and Trademark Office or equivalent authority anywhere in the world, but excluding pre-grant proceedings before the USPTO or equivalent authority for the purposes of determining patentability) in which claims are or were raised relating to the validity, enforceability, scope, ownership or Infringement of any of the Company Registered Intellectual Property. Except as described in Section 2.14(b)(i)(B) of the Disclosure Schedule, none of Seller, the Company or any Affiliated Company owns or purports to own, or is or purports to be an exclusive licensee of, any Registered Intellectual

Property. With respect to each item of Company Registered Intellectual Property, except as described in Section 2.14(b)(ii) of the Disclosure Schedule, (A) all necessary registration, maintenance and renewal fees have been paid, and all necessary documents and certificates have been filed with the relevant Patent, copyright, trademark or other authorities or registrars, as the case may be, for the purposes of registering, filing, certifying, maintaining or otherwise perfecting or recording such Company Registered Intellectual Property with or by any Governmental Entity or quasi-public legal authority, as applicable; (B) each such item is currently in compliance with applicable formal legal requirements (including payment of filing, examination and maintenance fees and proofs of use); and (C) each such item is not subject to any unpaid maintenance fees or taxes. To the Knowledge of Seller, there are no facts, information, or circumstances, including any information or facts that would constitute prior art, that would render any of the Company Registered Intellectual Property invalid or unenforceable, or would adversely affect any pending application for any Company Registered Intellectual Property. None of Seller or the Company or, to the Knowledge of Seller, any licensor or any Representatives of any such Person or any licensor have misrepresented, or knowingly failed to disclose, any facts or circumstances in any application for, or in connection with seeking registration, certification or grant of, any Company Registered Intellectual Property that would constitute fraud or a misrepresentation, based in each case on the rules of the applicable Governmental Entity or quasi-public legal authority, with respect to such Company Registered Intellectual Property or that would otherwise affect the enforceability of any Company Registered Intellectual Property.

(c) *Transferability of Intellectual Property*. Following the Closing, other than as limited by Purchaser's actions after the Closing Date, all Company Intellectual Property will be fully usable, transferable, alienable and licensable by Purchaser or the Company without restriction and without payment of any kind, or any obligation, to any third party.

(d) *Title to Intellectual Property*. The Company is the sole and exclusive owner or exclusive licensee, as applicable, (i) of each item of Company Intellectual Property (including all items listed in Section 2.14(b)(i) of the Disclosure Schedule) and (ii) of each Company Product and Company In-Development Product, free and clear of any Liens. None of Seller, any Affiliated Company or any other Affiliated Person has any right, title or interest in or to any Company Intellectual Property. The Company, directly or indirectly, has obtained all consents necessary or appropriate for the collection, storage and use of all human biological material incorporated or used in the Company Products, Company In-Development Products or Company Technology or in connection with the conduct of the business of Seller and the Company, including for the use of such materials or derivatives thereof in clinical and commercial applications. Neither the Seller nor the Company has received any notice from any third party challenging or threatening to challenge the right, title or interest of Seller, the Company, any Affiliated Company or any licensor or grantor, as the case may be, in, to or under any Company Intellectual Property, or the validity, enforceability, scope of coverage or claim construction, as applicable, of any Company Intellectual Property. All documents and instruments necessary to establish, perfect and maintain the rights of Seller, the Company and any Affiliated Company in any Company Registered Intellectual Property have been validly executed, delivered, filed and/or recorded in a timely manner with the appropriate Governmental Entity. To the Knowledge of Seller, all Intellectual Property Rights of the Company in the Company Intellectual Property are valid, subsisting and enforceable. The Company has the sole and exclusive right to bring a claim or suit against any third party Infringement of the Company Intellectual Property and to retain for itself any damages recovered in any such action. Neither Seller nor the Company has (x) granted any exclusive license with respect to any Company Intellectual Property to any other Person, or (y) carried out any act or failed to take any action that could cause any rights of such Person in any Company Intellectual Property to enter into the public domain.

(e) *Third Party Intellectual Property*. Section 2.14(e) of the Disclosure Schedule lists all Contracts under which a third party licenses or provides, or has licensed or provided, any Intellectual Property (including covenants not to sue, non-assertion provisions or releases or immunities from suit that are applicable to such Intellectual Property) to Seller, the Company or any Affiliated Company. Other than Intellectual Property licensed to the Company under the licenses set forth in Section 2.14(e) of the Disclosure Schedule, (i) to the Knowledge of the Seller, no third party Patent rights or (ii) other third party Intellectual Property (including, in each case, any Intellectual Property of the University of Rochester, the University of Copenhagen, any Affiliated Company or any other Affiliated Person) is used in, held for use in, or necessary for the conduct of the business of Seller and the Company as currently conducted or as currently proposed to be conducted, including the continued development of the Company In-Development Products. The University of Copenhagen does not have any right, title or interest in or to any Company Intellectual Property.

(f) *Licenses of Company Intellectual Property*. Copies of Seller's and the Company's standard form(s) of non-disclosure agreement (collectively, the "Standard Form Agreements"), are attached to Section 2.14(f)(i) of the Disclosure Schedule. Other than non-disclosure agreements that do not differ in any material respect from the Standard Form Agreements and that have been entered into in the ordinary course of business, Section 2.14(f)(ii) of the Disclosure Schedule lists all Contracts under which Seller, the Company or any Affiliated Company has granted, licensed, disclosed or provided any Company Intellectual Property to third parties, including any Contracts containing covenants not to sue, non-assertion provisions, or releases or immunities from suit with respect to Intellectual Property Rights included in the Company Intellectual Property.

(g) *No Infringement*. The operation of the business of Seller and the Company as it has been conducted since their respective formations**,** as currently conducted and as currently proposed to be conducted by Seller and the Company, (i) has not and does not (A) to the Knowledge of Seller, Infringe any Patent rights of any Person or (B) Infringe any other Intellectual Property Rights of any Person, and (ii) with respect to Intellectual Property Rights of any Person that exist or have been applied for as of the Closing Date, will not (A) to the Knowledge of Seller, Infringe any such Patent rights or (B) Infringe any other such Intellectual Property Rights when the operation of the business of the Company is conducted in substantially the same manner by Purchaser or its Affiliates following the Closing. Neither Seller nor the Company has received notice from any Person claiming that any part of the operation of the business of Seller and the Company as it has been conducted since their formation, as currently conducted and as proposed to be conducted by Seller and the Company, or any act, Company Product, Company In-Development Product, Company Technology or Company Intellectual Property Infringes any Intellectual Property Rights of any Person (nor does Seller have Knowledge of any basis for or threat of any of the foregoing). No Company Product, Company In-Development Product, Company Technology or Company Intellectual Property is subject to any proceeding or outstanding decree, order, judgment, agreement or stipulation that restricts in any manner the use, provision, transfer, assignment or licensing thereof by Seller or the Company or may affect the validity, registrability, use or enforceability of such Company Product, Company In-Development Product, Company Technology or Company Intellectual Property.

(h) *Third Party Rights*. No third party, including any Affiliated Company or other Affiliated Person, that has licensed (including by means of any covenant not to sue, non-assertion provision, or any release or immunity from suit) or provided to Seller, the Company or any Affiliated Company any Intellectual Property that is incorporated into or used in any Company Intellectual Property, any Company Technology, any Company Products, any Company In-Development Products, or any part of the operation of the business of Seller and the Company as it has been conducted since their respective formations, as currently conducted and as currently proposed to be conducted, has retained ownership of or any other rights to any Intellectual Property (including any improvements or derivative works) made or invented solely or jointly by Seller or the Company.

(i) *Restrictions on Business*. Neither this Agreement nor the transactions contemplated hereby will cause (i) the Company or, to the Knowledge of Seller, Purchaser or any of its Affiliates to lose any right to, or grant to any third party any right or additional right to or with respect to, any Intellectual Property (including Company Intellectual Property) owned by, or licensed to, any such Person or (ii) the Company or, to the Knowledge of Seller, Purchaser or any of its Affiliates to be obligated to pay any royalties or other fees or consideration with respect to Intellectual Property of any third party that (A) is included in any of the Company Products, Company In-Development Products or Company Intellectual Property, or (B) is used in the conduct of the business of Seller and the Company, which, in the case of clause (A) or (B), would be in excess of those payable by Seller and the Company in the absence of this Agreement or the transactions contemplated hereby.

(j) *No Third Party Infringement*. To the Knowledge of Seller, no Person has Infringed any Intellectual Property Rights included in the Company Intellectual Property or any Intellectual Property Rights in or to the Company Technology.

(k) *Proprietary Information Agreements*. Copies of Seller's and the Company's standard form of proprietary information, confidentiality and assignment agreement for employees (the "Employee Proprietary Information Agreement") and Seller's and the Company's standard form of consulting agreement and advisory agreement containing proprietary information, confidentiality and assignment provisions for consultants, independent contractors and advisors (the "Consultant Proprietary Information Agreement") are attached to Section 2.14(k)(i) and Section 2.14(k)(ii), respectively, of the Disclosure Schedule. Each (A) current and former officer and employee of Seller or the Company, (B) current and former consultant, independent contractor and advisor of Seller or the Company, and (C) other individual who is or has been involved in the creation, invention or development of Intellectual Property or Company Products for or on behalf of Seller or the Company (each of (A) through (C), a "Contributor"), has executed and delivered (and to Seller's Knowledge is and always has been in compliance with) an agreement in the form of the Employee Proprietary Information Agreement or Consultant Proprietary Information Agreement, as applicable, that has been duly countersigned by Seller or the Company, that does not deviate from such applicable standard form in any material respect, that contains no exceptions or exclusions from the scope of coverage of such applicable form, and that applies during the entire duration of such Contributor's employment with or period of service to Seller or the Company, and each such executed agreement has been made available to Purchaser. No Contributor has claimed or alleged that any such Employee Proprietary Information Agreement or Consultant Proprietary Information Agreement is invalid or unenforceable and neither Seller nor the Company has any reason to believe any such claim or allegation will be forthcoming. Without limiting the foregoing, except as described in Section 2.14(e) or Section 2.14(k)(iii) of the Disclosure Schedule, no Contributor owns or has any right, including any right to assert any Moral Rights, to any of the Company Products, Company In-Development Products or Company Intellectual Property, nor has any Contributor made to Seller or the Company or threatened any assertions with respect to any alleged ownership, interest or rights with respect to any of the Company Products, Company In-Development Products or Company Intellectual Property. To the Knowledge of Seller, no Contributor is, or has been at any time during employment with or period of service to Seller or the Company, subject to any Contract with any other Person which requires or has required such Contributor to assign, license or grant any right, title or interest in or to any Company Intellectual Property to any Person other than Seller or the Company.

(l) *Protection of Confidential Information*. Each of Seller and the Company has taken commercially reasonable and customary steps to protect the confidentiality of all confidential information and trade secrets of Seller and the Company and of all confidential information and trade secrets of any third party that has provided any confidential information to Seller or the Company.

(m) *Government Funds and Contracts*.

(i) No funding, facilities or resources, including any grants, incentives, benefits, qualifications or subsidies, of any (A) Governmental Entity, (B) university, college or other educational institution, (C) multi-national, bi-national or international governmental or quasi-governmental organization or (D) governmental or non-profit research center (collectively, "Government Grants") have been granted to Seller or the Company or otherwise used in the development of any Company Products, Company In-Development Products, Company Intellectual Property or Company Technology.

(ii) Seller and the Company (A) do not have any obligation whatsoever with respect to royalties or other payments relating to, arising out of or in connection with any Government Grants and (B) are not in violation of the terms, conditions or requirements of any Government Grants.

(iii) No Governmental Entity has any license or rights, including any rights of assignment or grant-back, to any Company Products, Company In-Development Products, Company Intellectual Property or Company Technology.

(n) *IP Assignment.* None of Seller, the Company or any Affiliated Company has (i) assigned or transferred any Intellectual Property Rights, including any Company Intellectual Property, or any Company Technology to any Person (including any customer or potential customer), including pursuant to any Contract, purchase order, "work made for hire" or other arrangement, or (ii) customized any Company Product for any Person in a manner that would materially limit or impair Seller's or the Company's exclusive ownership of the related Intellectual Property Rights.

Section 2.15 Regulatory Compliance.

(a) All submissions made to Regulatory Authorities by Seller and the Company with respect to any Company Products or Company In-Development Products have complied with all applicable Laws in all material respects. Neither Seller nor the Company has received any written notice or communication, or, to the Knowledge of Seller, any other notice or communication, from any Regulatory Authority asserting any violation of, or failure to comply with, any Laws applicable to the research, development, manufacture, use, sale or investigation of any Company Products or Company In-Development Products, including any violation of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. § 301 et seq.) (the "FDCA"), the Controlled Substances Act, and any FDA Form 483, Warning Letter or any other adverse action or notice from the FDA or other applicable Regulatory Authorities. Neither Seller nor the Company is subject to any FDA consent decree or any similar order of a Regulatory Authority or Governmental Entity.

(b) All preclinical research, development and manufacturing activities conducted by or on behalf of Seller and the Company have been and are being conducted in material compliance with applicable requirements of, as applicable, the FDCA, Good Clinical Practice regulations, and all applicable Laws relating to protection of human subjects, including those contained in 21 CFR Parts 50 and 56, good laboratory practice requirements and standards of 21 C.F.R. part 58, and, in each case, any comparable state and other applicable Laws.

(c) None of Seller, the Company, any representative of Seller or the Company or, to the Knowledge of Seller, any of its licensees or assignees of Company Intellectual Property Rights has received any written notice that the FDA or any other Governmental Entity has initiated, or threatened to initiate, any action to recall or suspend the manufacture of any Company Product or Company In-Development Product.

(d) None of Seller, the Company or, to the Knowledge of Seller, any officers, key employees, or agents acting for Seller or the Company, has committed any act, made any statement or failed to make any statement that would reasonably be expected to provide a basis for the FDA to invoke its policy with respect to "Fraud, Untrue Statements of Material Facts, Bribery, and Illegal Gratuities" set forth in 56 Fed. Reg. 46191 (September 10, 1991) and any amendments thereto. Additionally, none of Seller, the Company, any of their officers or employees or, to the Knowledge of Seller, any of their agents has been convicted of any crime or engaged in any conduct that would reasonably be expected to result in (i) debarment under 21 U.S.C. Section 335a or any similar state or foreign applicable Law or (ii) exclusion under 42 U.S.C. Section 1320a-7 or any similar state or foreign applicable Law.

(e) All animal studies or other preclinical tests performed by or on behalf of Seller and the Company either (i) have been conducted, in all material respects, in accordance with applicable Good Laboratory Practice regulations as described in 21 C.F.R. Part 58 or comparable foreign applicable Laws or (ii) if not required to be conducted in accordance with Good Laboratory Practices, have employed the procedures and controls generally used by qualified experts in animal or preclinical study of products comparable to those being developed by Seller and the Company.

(f) Seller has made available to Purchaser accurate and complete copies of all written material correspondence, minutes of meetings or memoranda of meetings with a Regulatory Authority that concerns any Company Product or Company In-Development Product.

Section 2.16 Title to Personal Property; Encumbrances. The Company has good and valid title to or, in the case of leased assets, a valid leasehold interest in, all material personal property and tangible assets used in or necessary for the conduct of the business of the Company as currently conducted, free and clear of any Liens, except Permitted Liens. The facilities, machinery equipment and other tangible assets of the Company, taken as a whole, are in good operating condition and repair, reasonable wear and tear excepted.

Section 2.17 Real Property. The Company does not own and have never owned any real property. The Company has not entered into and is not bound by any lease, lease guaranty, sublease, agreement for the leasing, use or occupancy of, or otherwise granting a right in or relating to any real property.

Section 2.18 Environmental Matters.

(a) For all purposes of this Agreement, the following terms shall have the following respective meanings:

"Environmental Laws" shall mean any federal, state or local Laws (including common law) applicable to Seller or the Company that regulate the protection of the environment, exposure of any individual to Hazardous Materials, or that regulate the handling, use, manufacturing, processing, storage, treatment, transportation, discharge, release, emission, disposal, re-use or recycling of Hazardous Materials, including the federal Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. Section 9601, et seq., as amended, and the federal Resource Conservation and Recovery Act, 42 U.S.C. Section 6901, et seq., as amended.

"Hazardous Materials" shall mean any material, chemical, gas, compound, substance, mixture or by-product that is identified, defined, designated, listed, restricted or otherwise regulated under Environmental Laws as a "hazardous constituent," "hazardous substance," "hazardous material," "acutely hazardous material," "extremely hazardous material," "hazardous waste," "hazardous waste constituent," "acutely hazardous waste," "extremely hazardous waste," "infectious waste," "medical waste," "biomedical waste," "pollutant," "toxic pollutant," or "contaminant" or that is otherwise regulated under Environmental Law.

(b) Except as would otherwise have a Company Material Adverse Effect: (i) each of Seller and the Company has complied at all times with all applicable Environmental Laws, holds all environmental permits, licenses, franchises, variances, exemptions, orders and other governmental authorizations, consents and approvals necessary for the conduct of the business of Seller and the Company as currently conducted and as proposed to be conducted and is in compliance with respect thereto; (ii) none of the tangible property or assets (real, personal or mixed) currently owned, leased or operated by Seller or the Company (including soils, groundwater, surface water, buildings or other structures) are contaminated with any Hazardous Materials as a result of Seller's or the Company's use or occupation of such property or assets or, to the Knowledge of Seller, otherwise, in a manner that could result in Liability to, or a corrective action obligation on the part of, Seller or the Company; (iii) neither Seller nor the Company is subject to Liability for any Hazardous Materials disposal or contamination by Seller or the Company on any third party property; (iv) neither Seller nor the Company has received any written notice alleging that Seller or the Company may be in violation of or subject to Liability under any applicable Environmental Law; (v) neither Seller nor the Company is a party to, or named in, any order, decree, injunction or other agreement with any Governmental Entity relating to Liability of Seller or the Company under any Environmental Law or relating to Hazardous Materials; and (vi) Seller has made available to Purchaser copies of all written environmental reports, studies and sampling data in its possession relating to Seller or the Company or any of their property or assets (real, personal or mixed, tangible or intangible).

Section 2.19 Transactions with Affiliates.

(a) Definitions.

"Affiliated Company" means (i) Oscine Therapeutics IVS, Oscine Modeling IVS, Oscine Holdings IVS, and Oscine Therapeutics (U.S.) Inc. and (ii) any other Person (other than the Company) that is or was Controlled by or under common Control with Seller or any Person set forth in clause (i).

"Affiliated Person" means (i) any holder of Securities of Seller, (ii) any director, officer, employee or manager of Seller or the Company, (iii) any Person that Controls, is Controlled by, or is under common Control with Seller, or (iv) any member of the immediate family of any natural Person described in the preceding clauses (i), (ii) or (iii) and any Person that is Controlled by, or is under common Control with any such immediate family member.

"Control", means the possession, directly or indirectly, of the power to direct the management or policies of a Person, whether through ownership of voting securities or by contract or the ownership, directly or indirectly, of at least fifty percent (50%) of the voting securities or equivalent ownership interests of such Person; and the terms "Controlling" and "Controlled" have meanings that correspond to the foregoing.

(b) Neither Seller nor the Company has, in the ordinary course of business or otherwise, (i) purchased, leased or otherwise acquired any property or assets or obtained any services (other than services rendered in the ordinary course of business as director, officer, employee or manager of Seller or the Company) from, (ii) sold, leased or otherwise disposed of any property or assets or provided any services to, (iii) entered into or modified in any manner any material Contract (other than any employment agreement or offer letter set forth in Section 2.12(b) of the Disclosure Schedule) with, or (iv) borrowed any money from, or made or forgiven any loan or other advance to, any Affiliated Person.

(c) No person other than the Seller Members owns or has owned, beneficially or of record, any Securities of or rights to receive Securities of the entities set forth in clause (i) of the definition of "Affiliated Company". Seller, the Key Employee, the Key Consultant and each Affiliated Company has transferred to the Company, free and clear of all Liens, all right, title and interest in and to

all properties and assets, tangible and intangible, previously held by or owned by such Person that are used or held for use in or reasonably necessary for the business of the Company as currently conducted and currently proposed to be conducted. Each of the entities set forth in clause (i) of the definition of "Affiliated Company" is no longer in existence and all Liabilities thereof have been satisfied in full. After the Closing, neither Seller nor the Company shall have any liability for any Liabilities of any Affiliated Company.

(d) The (i) Contracts to which Seller or the Company are a party do not include any material obligation or commitment of Seller or the Company, on the one hand, to any Affiliated Person, on the other hand, (ii) assets of Seller and the Company do not include any material receivable or other obligation or commitment due from any Affiliated Person, and (iii) liabilities of Seller and the Company do not include any material payable or other obligation or commitment to any Affiliated Person.

(e) To the Knowledge of Seller, no Affiliated Person of Seller or the Company is a party to any Contract with any vendor or supplier of Seller or the Company.

Section 2.20 Unlawful Payments.

(a) None of Seller, the Company or, to the Knowledge of Seller, any manager, director, officer, agent, distributor, employee or other Person acting on behalf of or in the name of Seller or the Company with authority to do so has: (i) offered or used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expense relating to any political campaign or activity; (ii) offered or made a direct or indirect unlawful payment or conveyance of something of value to any foreign or domestic government official, employee or political candidate or established or maintained any unlawful or unrecorded funds; (iii) violated any provision of the U.S. Foreign Corrupt Practices Act of 1977 (the "FCPA") or any equivalent to the FCPA or concerning such unlawful payments or gifts in any jurisdiction; (iv) offered or given any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment or gift of money or anything of value to any foreign or domestic government official or employee of any Governmental Entity; (v) received any unlawful discounts or rebates in violation of any applicable Law relating to antitrust or competition; or (vi) breached or waived any applicable foreign, federal or state law regarding business conduct, or any code of ethics promulgated by an applicable industry representative organization or trade organization applicable to the business of Seller and the Company as currently conducted regarding business conduct.

Section 2.21 Brokers or Finders. No agent, broker, investment banker, financial advisor or other firm or Person is or will be entitled to any brokers' or finder's fee or any other commission or similar fee in connection with the origination, negotiation or execution of this Agreement or the consummation of the Acquisition or any of the other transactions contemplated by this Agreement or the Ancillary Agreements as a consequence of any action or inaction taken by the Company, Seller or any Seller Member.

Section 2.22 Books and Records. The minute books and stock records of Seller and the Company made available to Purchaser contain all (a) minutes of meetings of the managers and members of Seller and the board of directors and stockholders of the Company, (b) written statements of actions taken by the managers and members of Seller and the board of directors and stockholders of the Company without a meeting, and (c) records of the issuance, transfer and cancellation of all Securities of Seller and the Company, in each case since the date of formation of Seller and the date of incorporation of the Company. Such minute book and stock record book are true and complete.

Section 2.23 Review of Representations and Warranties; Complete Copies of Materials. Each of the managers of Seller and the directors and officers of the Company have reviewed the representations and warranties set forth in this Article II and the Disclosure Schedule. Seller has made available to Purchaser true and complete copies of (a) each document listed on the Disclosure Schedule, (b) each Material Contract and (c) each Contract to which an Affiliated Company is or was a party that constitute a Material Contract if entered into by Seller or the Company.

Section 2.24 Investor Representations.

(a) Seller is an "accredited investor" within the meaning of Rule 501 of Regulation D under the Securities Act. Seller is capable of protecting Seller's interests in connection with this Agreement, the Acquisition and the Acquisition Shares and bearing the economic risk of total loss of such investment.

(b) Seller is acquiring the Acquisition Shares for investment for Seller's own account, not as a nominee or agent, and not with a view to, or for resale in connection with, any distribution, whether directly or indirectly, thereof in violation of the Securities Act or applicable state securities laws. Seller understands that the Acquisition Shares have not been, and will not be registered under the Securities Act by reason of a specific exemption from the registration provisions of the Securities Act, the availability of which depends upon, among other things, the bona fide nature of the investment intent and the accuracy of Seller's representations as expressed herein.

(c) Seller understands that no public market now exists for the Acquisition Shares and that a public market for such securities may not develop in the future.

(d) Subject to Buyer's compliance with Section 1.7(e)(i), Seller has had an opportunity to ask questions about and obtain any additional information material to, in each case, such Seller's decision to approve this Agreement and the transactions contemplated hereby, including the Acquisition, and to execute this Agreement, and accept the Acquisition Shares, including an opportunity to discuss Purchaser's business, operations and financial condition with Purchaser's management and to review Purchaser's financial statements.

(e) Seller acknowledges and agrees that the Acquisition Shares are "restricted securities" under United Stated federal and state securities laws and must be held indefinitely unless they are subsequently registered under the Securities Act or an exemption from such registration is available. Seller has been advised or is aware of the provisions of Rule 144 promulgated under the Securities Act, which permits limited resale of shares purchased in a private placement subject to the satisfaction of certain conditions, which may include, among other things: the availability of certain current public information about Purchaser, the resale occurring following the required holding period under Rule 144 and the number of shares being sold during any three-month period not exceeding specified limitations.

(f) Seller acknowledges and agrees that each certificate or other document evidencing Acquisition Shares or issued in exchange for or upon transfer of Acquisition Shares shall be bear, in addition to any other legends required under applicable securities laws or agreements between Seller and Purchaser, legends in substantially the following form; provided that the second paragraph below shall not apply at any time that the shares of Purchaser Common Stock are publicly traded.

> THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AND HAVE BEEN ACQUIRED FOR INVESTMENT AND NOT WITH A VIEW TO, OR IN CONNECTION WITH, THE SALE OR DISTRIBUTION THEREOF. NO SUCH SALE OR DISTRIBUTION MAY BE EFFECTED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN OPINION OF COUNSEL IN A FORM SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT OF 1933.

THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO A RIGHT OF FIRST REFUSAL IN FAVOR OF THE COMPANY, AS PROVIDED IN THE BY-LAWS OF THE COMPANY.

ARTICLE III

REPRESENTATIONS AND WARRANTIES OF PURCHASER

Except as set forth in the disclosure schedule delivered to Seller pursuant to this Agreement, Purchaser represents and warrants to Seller as of the date hereof (except for such representations and warranties as are made only as of a specific date, which shall only be made as of such date) as set forth below.

Section 3.1 Organization. Purchaser is a corporation duly incorporated, validly existing and in good standing under the Laws of the jurisdiction of its incorporation. Purchaser has made available to Seller accurate and complete copies of Purchaser's certificate of incorporation and bylaws, the ROFR Agreement and the Voting Agreement, each as amended to date, each of which in full force and effect on the date hereof.

Section 3.2 Authorization. Purchaser has all requisite corporate power and authority (i) to execute and deliver this Agreement and (ii) to consummate the transactions contemplated hereby, excluding for purposes of clause (ii) of this representation any of the transactions contemplated by Section 1.7 or Section 1.8. The execution, delivery and performance of this Agreement and the consummation of the transactions contemplated hereby have been duly and validly authorized by all necessary corporate action on the part of Purchaser and no further corporate action is necessary on the part of Purchaser to authorize this Agreement or to consummate the transactions contemplated hereby, excluding for purposes of this representation consummation of any of the transactions contemplated by Section 1.7 or Section 1.8. This Agreement has been duly executed and delivered by Purchaser and, assuming the due authorization, execution and delivery by the other parties hereto and thereto, constitutes a valid and binding obligations of Purchaser enforceable against Purchaser in accordance with its terms, subject to the Bankruptcy and Equity Exception.

Section 3.3 No Conflict; Consents.

(a) Assuming the validity of the representations and warranties of Seller set forth in Section 2.5, no consent, notice, waiver, approval, order or authorization of, or registration, declaration or filing with any Governmental Entity is required by, or with respect to, Purchaser in connection with the execution and delivery of this Agreement or the consummation of the other transactions contemplated hereby (including the Acquisition), excluding for purposes of this Section 3.3(a) any of the transactions contemplated by Section 1.7 or Section 1.8.

(b) The execution and delivery by Purchaser of this Agreement, and the consummation of the transactions contemplated hereby, will not conflict with or result in any material violation of or default under (with or without notice or lapse of time, or both) or give rise to a right of termination or cancellation under: (i) any provision of Purchaser's certificate of incorporation and bylaws, the ROFR Agreement or the Voting Agreement, or (ii) any order of any Governmental Entity applicable to Purchaser or any of its material properties or assets, excluding for purposes of this Section 3.3(b) any of the transactions contemplated by Section 1.7 or Section 1.8.

Section 3.4 Litigation. There is no action, suit, claim, litigation, arbitration, proceeding pending or, to Purchaser's Knowledge, threatened against Purchaser that questions the validity of this Agreement or the Ancillary Agreements, or the right of Purchaser to enter into this Agreement or any Ancillary Agreement, or to consummate the transactions contemplated hereby or thereby.

Section 3.5 Issuance of Shares. Any Acquisition Shares, when issued by Purchaser in accordance with this Agreement, will have been duly authorized and will be validly issued, fully paid and non-assessable and, assuming the validity of the representations and warranties of Seller set forth in Section 2.24, exempt from registration in accordance with the registration provisions of the Securities Act.

Section 3.6 Brokers or Finders. No agent, broker, investment banker, financial advisor or other firm or Person is or will be entitled to any brokers' or finder's fee or any other commission or similar fee in connection with the origination, negotiation or execution of this Agreement or the consummation of the Acquisition or any of the other transactions contemplated by this Agreement or the Ancillary Agreements as a consequence of any action or inaction taken by Purchaser.

Section 3.7 Investment Purpose. Purchaser is acquiring the Outstanding Common Stock solely for its own account for investment purposes and not with a view to, or for offer or sale in connection with, any distribution thereof. Purchaser acknowledges that the shares of Outstanding Common Stock are not registered under the Securities Act or any state securities laws, and that the shares of Outstanding Common Stock may not be transferred or sold except pursuant to the registration provisions of the Securities Act or pursuant to an applicable exemption therefrom and subject to state securities laws and regulations, as applicable. Purchaser is able to bear the economic risk of holding the Outstanding Common Stock for an indefinite period (including total loss of its investment), and has sufficient knowledge and experience in financial and business matters so as to be capable of evaluating the merits and risk of its investment.

Section 3.8 No Other Representations. Purchaser acknowledges and agrees that (a) none of Seller, the Company or any other Person has made or is making any representation or warranty regarding the subject matter of this Agreement, except as expressly set forth in Article II of this Agreement and any Ancillary Agreements to which such Person is a party, and (b) Purchaser is not relying on any representations or warranties regarding the subject matter of this Agreement, except for the representations and warranties expressly set forth in this Article II of this Agreement, and for the representations and warranties of Seller, the Company and the Seller Members expressly set forth in the Ancillary Agreements; provided, however, that nothing in this Section 3.8 shall limit the rights of any Indemnified Party with respect to knowing and intentional misrepresentation or fraud by Seller or any Seller Member in connection with a representation or warranty expressly set forth in this Article II of this Agreement or pursuant to Section 6.1(a)(vi).

Section 3.9 Agreements with Key Employee and Key Consultant. Neither Purchaser nor any of its affiliates (within the meaning of 26 U.S.C. §1504, without regard to §1504(b)) as of immediately prior to the Closing has (a) entered into any Contract with (i) the Key Employee other than the Offer Letter, the At-Will Employment Agreement and the Restrictive Covenants Agreement or (ii) the Key Consultant other than the Consulting Agreement and the Restrictive Covenants Agreement or (b) made any commitment to provide any compensation or benefits to the Key Employee or the Key Consultant other than pursuant to the Offer Letter or the Consulting Agreement, as applicable.

ARTICLE IV

OTHER COVENANTS

Section 4.1 Post-Closing Covenants.

(a) Within ten (10) Business Days of the Closing Date, (i) Seller shall file a name change with the Delaware Secretary of State, changing Seller's name to a name that does not include the word "Oscine," any Company Trademarks (or any translation, transliteration, adaptation, derivation or combination thereof), or anything likely to cause confusion with the Company and shall update any state qualifications to do business as a foreign company to reflect such name change, and (ii) Seller and the Seller Members shall cease using the word "Oscine" or any Company Trademark (or any translation, transliteration, adaptation, or derivation or combination of the foregoing) to identify themselves or any Affiliate or in connection with the conduct of any business on or after the Closing. Notwithstanding the foregoing, after the closing of an Assignment Transaction pursuant to Section 1.8 hereof, the provisions of this Section 4.1 will be of no further force or effect and Seller shall be permitted to use the word "Oscine" or any Company Trademark listed in Section 2.14(b)(i)(B) of the Disclosure Schedule (or any translation, transliteration, adaptation, or derivation or combination of the foregoing) to identify itself or any Affiliate or in connection with the conduct of any business.

(b) From the Closing Date until the earlier of (x) payment of all Earn-Out Payments and (y) the end of the Earn-Out Period, Seller shall not, without Purchaser's consent: (i) issue or sell any Securities of Seller, (ii) redeem, purchase or otherwise acquire any outstanding Securities of Seller, (iii) effect any direct or indirect Transfer of any Securities of Seller or of the right to receive any portion of the Earn-Out Consideration, including by amendment of the Charter Documents of Seller or the terms of any Securities of Seller, or (iv) effect any acquisition, liquidation or dissolution of Seller.

(c) From the Closing Date until the earlier of (i) payment of all Earn-Out Payments and (ii) the end of the Earn-Out Period, no Seller Member shall, without Purchaser's consent, Transfer any Securities of Seller or any interest therein.

(d) The provisions of Section 4.1(b) and (c) shall not apply to (i) any Transfer by a Seller Member to any trust for the benefit of such Seller Member or the family of such Seller Member, provided that the trustee of the trust agrees to be bound in writing by the restrictions set forth herein, and provided further that any such transfer shall not involve a disposition for value and is otherwise in compliance with all applicable securities laws; (ii) any transaction between a Seller Member and Purchaser; and (iii) in the case of the University of Rochester, any Transfer to or among its Affiliates, provided that each transferee agrees to be bound in writing by the restrictions set forth herein, and provided further that any such transfer shall not involve a disposition for value and is otherwise in compliance with all applicable securities laws.

(e) Notwithstanding the provisions of Section of Section 4.1(b) and (c), from and after the tenth (10th) anniversary of the Closing Date, the Seller Members shall be entitled to sell all or a portion of their respective units of membership interest in Seller to one or more Permitted Transferees (as defined below), subject to compliance with the terms of this Section 4.1(e). "Permitted Transfer" means a transfer of units of membership interest in Seller by a Seller Member satisfying each of the following requirements: (i) Seller shall provide written notice of each proposed transfer pursuant to this Section 4.1(e) to Purchaser not less than thirty (30) calendar days prior to the effective date thereof, including the identity of the proposed transferee(s), the transfer consideration, the intended date of transfer and any other information Purchaser may reasonably request, (ii) each transferee in such transfer shall be limited to bona fide financial investors (excluding, for example, entities focused on monetization of litigation liabilities or

claims) and may not include any operating company, strategic investor or competitor of Purchaser; (iii) at the time of any proposed transfer, the transferring Seller Member and the proposed transferee shall have executed and delivered such documents, agreements, certifications, and representations as Purchaser may determine in good faith to be necessary or appropriate to satisfy all applicable securities Law requirements (including the exemption and disclosure provisions thereof), including representations and warranties equivalent to those set forth in Section 2.24; (iv) the proposed transferee shall have executed a joinder to this Agreement in form satisfactory to Purchaser agreeing to be bound to the terms hereof, including Section 1.7(e)(iv) and Article IV hereof, as a Seller Member; and (v) in no event shall the maximum number of Permitted Transferees exceed five. "Permitted Transferee" means a transferee of units of membership interest in a Permitted Transfer. On the effective date of the first Permitted Transfer and as a condition thereto, (x) Sections 1.7(b), (c) and (f) and Section 1.8 of this Agreement and any claim of Seller of breach or violation by Purchaser thereof or related thereto shall terminate and be of no further force and effect and (y) Seller shall deliver to Purchaser a release in form reasonably acceptable to Purchaser of any such claims, whether known or unknown. Any transfer that does not comply with all of the terms and provisions of this Section 4.1(e) shall be null and void.

(f) The Key Employee shall take each of the actions set forth on Schedule 4.1(f) hereto.

Section 4.2 Confidentiality; Public Disclosure. Any public announcement, press release or similar publicity regarding this Agreement and the transactions contemplated hereby, including the public disclosure thereof, will be issued, if at all, at such time and in such manner as Purchaser determines, with the prior consent of Seller, such consent not to be unreasonably conditioned, withheld or delayed. Seller and the Seller Members shall maintain the confidentiality of, and not disclose to any third party, without the consent of Purchaser, the existence and terms of this Agreement and the transactions contemplated hereby (including any claim or dispute arising out of or related to this Agreement, or the interpretation, making, performance, breach or termination hereof and the reasons therefor) or any other nonpublic, confidential or proprietary information concerning the transactions contemplated hereby or the Company except (i) to its or their respective legal, accounting and financial advisors that are bound by confidentiality restrictions, (ii) to the extent such information was previously publicly disclosed by Purchaser, (iii) to the extent such disclosure is required by applicable Law, in which case the party required to disclose such information shall promptly notify Purchaser of such disclosure and cooperate at Purchaser's expense with Purchaser to the extent practicable so as to seek to limit the information disclosed to the information required by applicable Law to be disclosed and will, to the extent practicable and at Purchaser's expense, seek to obtain a protective order over, or confidential treatment of, such information, and (iv) for disclosures in dispute resolution proceedings to the courts or arbitrators involved in such proceedings and to other Persons involved in such proceedings (e.g., attorneys and expert witnesses) that are bound by confidentiality obligations; provided, that such proceedings are brought in compliance with this Agreement, including Section 6.6 or Section 8.8, as applicable.

Section 4.3 Tax Matters.

(a) Purchaser shall prepare or cause to be prepared and file or cause to be filed all Tax Returns for the Company for any Pre-Closing Tax Period that are required to be filed after the Closing Date taking into account any applicable extensions. Such Tax Returns shall be prepared, subject to the requirements of applicable Law, in accordance with past practice of the Company and, in the case of the United States federal income tax return Form 1120, shall be subject to Seller's approval (which approval shall not be unreasonably withheld or delayed) and shall be delivered to Seller at least fifteen (15) calendar days prior to the due date (or if less than fifteen (15) days remain before filing is due, one third (⅓) of the days remaining between Closing and the filing due date to the extent feasible) for review and approval. Within five (5) Business Days following the delivery of such Tax Return to Seller, the Seller shall notify

Purchaser of any dispute of any item contained therein, which notice shall set forth in reasonable detail the basis for such dispute. If Seller fails to notify Purchaser of any dispute within such five (5) Business Day period, such Tax Return shall be deemed to be accepted by Seller. If Seller notifies Purchaser in writing of any objection regarding such Tax Return within the time periods set forth in this Section 4.3(a), Purchaser and Seller shall cooperate in good faith to resolve such dispute as promptly as possible. If Purchaser and Seller are unable to resolve the dispute within five (5) Business Days after receipt of such objection, Seller shall submit such disputed items to a nationally recognized accounting firm reasonably acceptable to both the Seller and Purchaser (for purposes of this Section 4.3, the "Independent Accountants") for resolution. The Independent Accountants shall, within forty-five (45) calendar days following its selection, deliver to Purchaser and Seller a written report setting forth its determination as to such disputed items (and only such disputed items), and its determinations will be conclusive and binding upon the parties thereto for the purposes hereof. If the Independent Accountants cannot resolve the dispute before the Tax Return that is the subject of a disagreement is due, such Tax Return shall be filed as prepared by Purchaser, subject to an amendment of the Tax Return upon resolution. The fees and disbursements of the Independent Accountants shall be apportioned equally (50/50) between Seller (on behalf of the Seller Members), on the one hand, and Purchaser, on the other hand.

(b) For purposes of this Agreement, in the case of any Taxes of the Company that are payable with respect to any Tax period beginning prior to the Closing Date and ending after the Closing Date (a "Straddle Period"), the portion of any such Taxes that relates to the Pre-Closing Tax Period shall: (i) in the case of real, personal and intangible property Taxes (and any other Taxes not based on or measured by income or receipts), equal the amount of such Tax for the entire period multiplied by a fraction, the numerator of which is the number of days in the portion of the Straddle Period ending at the end of the day that is the Closing Date and the denominator of which is the number of days in such Straddle Period; and (ii) in the case of all other Taxes, equal the amount due for such other Taxes as if the Company had performed an interim closing of the books as of the close of business on the Closing Date. For purposes of clause (ii) of the preceding sentence, any exemption, deduction, credit or other item (including the effect of any graduated rates of Tax) that is calculated on an annual basis shall be allocated to the portion of the Straddle Period ending on the Closing Date on a pro rata basis determined by multiplying the total amount of such item allocated to the Straddle Period times a fraction, the numerator of which is the number of days in the portion of the Straddle Period ending on the Closing Date and the denominator of which is the number of days in such Straddle Period.

(c) Purchaser shall be responsible for, and shall have sole discretion with respect to, all Tax Returns required to be filed by the Company with respect to any taxable period that begins after the Closing Date.

(d) Purchaser and Seller shall provide each other with such cooperation and assistance as may be reasonably requested by either of them in connection with any audit or other examination by any Tax Authority, or any judicial or administrative proceedings relating to liability for Taxes, until the seventh (7th) anniversary of the Closing Date, and each will retain and provide the other with any records or information which may be necessary for such Tax Return Audit, or examination, proceedings or determination. Notwithstanding the foregoing or any other provision herein to the contrary, in no event will Seller be entitled to review or otherwise have access to any Tax Return, or information related thereto, of Purchaser or its Affiliates (other than in respect of the Company for any Pre-Closing Tax Period).

(e) Purchaser shall notify Seller in writing within fifteen (15) calendar days from receipt of written notice by Purchaser or its Affiliates (including on or after the Closing Date, the Company) of any pending or threatened assessment or claim in any audit, litigation or other proceeding relating to any Tax Return or Taxes of the Company for any taxable period on or before the Closing Date

and any Straddle Period (a "Tax Contest"). Purchaser shall have the right to control any such Tax Contests, including the settlement or other disposition thereof, provided, that (i) Seller shall have the right to participate, at its own expense, in any such Tax Contests that may give rise to an indemnification claim pursuant to Article VI, (ii) Purchaser shall consider in good faith any reasonable comments of Seller with respect to the conduct of such Tax Contests, (iii) Purchaser shall keep Seller reasonably informed of the status of such matter (including providing the Seller with copies of all material written correspondence with a taxing authority regarding such matter) and (iv) Purchaser shall have the right to settle, adjust or compromise any Tax Contest without the consent of the Seller; provided, however, that if Purchaser settles, adjusts or compromises any Tax Contest without the consent of the Seller, such action shall not be deemed conclusive of the existence of an indemnifiable claim or the amount of Damages for purposes of Article VI and no amounts shall be payable by the Seller Members pursuant to Article VI until a Notice of Claim is delivered pursuant to Section 6.6 and any portion of the Claimed Amount set forth therein is determined in accordance with the terms of Section 6.6 to constitute an Agreed Amount, Stipulated Amount and/or Award Amount, in which case any such amount shall be payable in accordance with Section 6.6. Failure to comply with this section shall not affect Purchaser's right to indemnification pursuant to Article VI except to the extent such failure actually prejudices Seller's rights with respect to such Tax Contest.

(f) Seller shall be entitled to all refunds of Taxes of the Company paid in respect of any Pre-Closing Tax Period, but only to the extent such refunds are actually received in cash or applied against cash Taxes actually payable. To the extent that any such amounts are received after the Closing by Purchaser or any of its Affiliates (including, after the Closing, the Company), Purchaser shall pay (or cause to be paid) to Seller such amounts, net of any reasonable out-of-pocket expenses incurred in obtaining such refund.

ARTICLE V

CLOSING DELIVERIES

Section 5.1 Deliveries by Seller. At or prior to the Closing, Seller shall deliver or cause to be delivered to Purchaser:

(a) Each third party notice, consent, or waiver and termination of agreement set forth on Schedule 5.1(a).

(b) (i) The Offer Letter and At-Will Employment Agreement executed by the Key Employee; (ii) Restrictive Covenants Agreements executed by each of the Key Employee and the Key Consultant; and (iii) the Consulting Agreement executed by the Key Consultant.

(c) A certificate of good standing of Seller and the Company from the Secretary of State of the State of Delaware and all other jurisdictions in which Seller or the Company is required to be qualified to do business as a foreign company.

(d) Resignation letters from all officers and directors of the Company, effective as of the Closing.

(e) A certificate, validly executed by a manager of Seller, certifying as to the resolutions of the managers and any resolutions of the members of Seller approving this Agreement, the Ancillary Agreements to which Seller or any of its Subsidiaries is or will be a party, and the transactions contemplated hereby and thereby.

(f) Certificates representing the Outstanding Common Stock, duly and validly endorsed in favor of Purchaser or accompanied by a separate stock power duly and validly executed by Seller and otherwise sufficient to vest in Purchaser good and marketable title to such shares.

(g) A "certificate of non-foreign status" in compliance with Treasury Regulation Sections 1.1445-2(b)(2), in substantially the form of Exhibit E hereto, executed by Seller.

(h) Certification, in form reasonably acceptable to Purchaser, that with respect to any Employee who would potentially be entitled to a "parachute payment" under Section 280G of the Code in connection with the transactions contemplated by this Agreement (i) such Employee executed a binding written waiver of any portion of such parachute payment as exceeds 2.99 times such Employee's "base amount" within the meaning of Section 280G(b)(3) of the Code (any such waived portion, the "Waived Payments") to the extent the Waived Payments are not subsequently approved pursuant to a stockholder vote approving the Waived Payments in accordance with the requirements of Section 280G(b)(5)(B) of the Code (for purposes of this section, the "Approval Requirements"), (ii) such a stockholder vote to approve the Waived Payments was held in the manner consistent with the Approval Requirements and (iii) (x) the requisite stockholders, in accordance with the Approval Requirements, approved the Waived Payments or (y) such stockholder approval was not obtained and, as a consequence, the Waived Payments will not be made.

Section 5.2 Deliveries by Purchaser. At or prior to the Closing, Purchaser shall deliver or cause to be delivered to Seller:

(a) (i) The Offer Letter and At-Will Employment Agreement with the Key Employee executed by Purchaser, (ii) the Restrictive Covenants Agreement with the Key Employee executed by Purchaser; (iii) the Consulting Agreement with the Key Consultant executed by Purchaser, and (iv) Restrictive Covenants Agreement with the Key Consultant executed by Purchaser.

(b) A certificate of good standing of Purchaser from the Secretary of State of the State of Delaware.

(c) A certificate, validly executed by the Secretary of Purchaser, certifying as to the requisite corporate resolutions, including resolutions of any stockholders, if required, of Purchaser approving this Agreement, the Ancillary Agreements to which Purchaser or any of its Subsidiaries is or will be a party, and the transactions contemplated hereby and thereby.

ARTICLE VI

INDEMNIFICATION

Section 6.1 Indemnification by the Seller Members.

(a) Subject to the other provisions of this Article VI, from and after the Closing, each Seller Member shall, severally but not jointly, indemnify, hold harmless and reimburse Purchaser and its Affiliates, including the Company, and any employee, director, officer, Affiliate, agent or representative of each of them (the "Indemnified Parties") for any demand, claim, payment, obligation, action or cause of action, assessment, loss, liability, damages, cost, interest, award, judgment, penalty or expense (including any and all third party claims and reasonable attorneys' fees and expenses, but excluding any punitive damages, except to the extent resulting from any third party claim) (collectively, "Damages") incurred or sustained by the Indemnified Parties, or any of them, arising from, relating to or in connection with, directly or indirectly:

(i) any inaccuracy in or breach of any of the representations or warranties of Seller in this Agreement;

(ii) any failure by Seller or any Seller Member to perform or comply with any covenant or agreement in this Agreement;

(iii) any claims regarding ownership or rights to acquire Securities of the Company or Seller or any right or interest in any Earn-Out Payment;

(iv) without duplication, all Indebtedness and Acquisition Expenses to the extent not previously paid;

(v) any Indemnified Taxes of Seller;

(vi) any fraud prior to the Closing by Seller or any Seller Member in connection with this Agreement, any Ancillary Agreement or the transactions contemplated hereby or thereby; or

(vii) the matter set forth in Schedule 6.1 hereto.

(b) For the purpose of determining the amount of Damages suffered (but not whether a breach occurred) by an Indemnified Party as a result of any breach of any representation or warranty of Seller or any Seller Member that is qualified by a materiality or a Company Material Adverse Effect qualifier or standard, such materiality or Company Material Adverse Effect qualifier or standard shall be disregarded.

(c) This Article VI provides for indemnification against all Damages incurred or sustained by one or more of the Indemnified Parties as a result of the matters set forth herein, whether such indemnification is (i) pursuant to a direct claim by any Indemnified Party or (ii) against Damages incurred or sustained as a result of a third party claim.

(d) For Tax purposes, any payment made pursuant to this Article VI shall be treated as an adjustment to the Purchase Price, unless otherwise required by applicable Law.

Section 6.2 Survival of Representations, Warranties and Covenants.

(a) Subject to Section 6.2(b), (i) the representations and warranties of Seller set forth in Section 2.14 (Intellectual Property) (collectively, the "Intellectual Property Reps") will survive until the date that is thirty (30) months after the Closing Date, except as set forth on Schedule 6.2(a)(i) hereto; (ii) (A) the representations and warranties of Seller set forth in Section 2.1 (Organization), Section 2.2 (Capitalization), Section 2.3 (Authority), Section 2.5 ("Size of Person" Threshold), Section 2.10 (Taxes), Section 2.21 (Brokers or Finders) and Section 2.24 (Investor Representations), including any bring-downs thereof on the date of issuance of any Acquisition Shares (collectively, together with the Affiliate Transaction Reps, the "Seller Fundamental Reps"), and (B) claims for indemnification of Damages based upon the breach of any covenant or obligation and the indemnifiable matters set forth in Section 6.1(a)(ii)-(a)(vi), will each survive until the expiration of the statute of limitations applicable to the subject matter of such representation or warranty or indemnifiable matter plus sixty (60) days (which, for clarity, in the case of (1) claims for indemnification of Damages pursuant to Section 6.1(a)(ii), may commence from the date of breach, (2) claims for indemnification of Damages pursuant to Section 6.1(a)(v) relating to Liability for Taxes arising in connection with payment of the Purchase Price, may commence from the date of such payment, and (3) in the case of claims with respect to a breach of the representations and

warranties of Seller set forth in Section 2.24 (Investor Representations) made on the date of issuance of any Acquisition Shares, may commence from such date of issuance); (iii) the representations and warranties of Seller set forth in Section 2.19 (Transactions with Affiliates) (the "Affiliate Transaction Reps") will survive until the seven (7) year anniversary of the Closing; (iv) the other representations and warranties of Seller set forth in Article II shall survive until the date that is fifteen (15) months after the Closing; and (v) claims for indemnification of Damages based upon the idemnifiable matters set forth in Section 6.1(a)(vii) will survive as set forth in Schedule 6.1(a)(vii); provided, however, that if a Notice of Claim (as defined in Section 6.6(a)) is delivered to Seller on or prior to the applicable expiration date of such representation or warranty or obligation to indemnify, then, notwithstanding anything to the contrary contained in this Section 6.2, such representation or warranty or obligation will not expire, but rather shall continue in full force and effect with respect to, and solely with respect to, the matters expressly set forth in such Notice of Claim until such time as such matters have been fully and finally resolved. Notwithstanding any other provision of this Agreement, to the extent the survival periods and termination dates applicable to the representations and warranties and indemnifiable matters set forth herein exceed any applicable statute of limitations, the survival periods and termination dates set forth herein shall supersede any statute of limitations applicable to such representations and warranties and indemnifiable matters.

(b) The representations and warranties set forth in Article III will survive until the six (6) month anniversary of the Closing.

(c) Notwithstanding anything to the contrary contained in Section 6.2(a) or Section 6.2(b), the limitations set forth therein will not apply in case of any knowing and intentional misrepresentation or fraud by Seller with respect to a representation or warranty expressly set forth in Article II of this Agreement or to the indemnifiable matters set forth in Section 6.1(a)(vi).

(d) All covenants and agreements set forth in this Agreement will survive the Closing in accordance with the terms thereof.

Section 6.3 Indemnification Basket. The provisions for indemnity contained in Section 6.1(a)(i) shall become effective only in the event that the aggregate amount of all Damages for which the Seller Members are liable under this Article VI exceeds seventy five thousand dollars ($75,000) (the "Indemnification Basket"), in which event, the Seller Members shall be responsible for the aggregate amount of such Damages in excess of the Indemnification Basket; provided, however, that claims for indemnification from and against Damages relating to (i) the Seller Fundamental Reps or (ii) any of the indemnifiable matters set forth in Section 6.1(a)(ii)-Section 6.1(a)(vii) shall not be subject to the Indemnification Basket.

Section 6.4 Limitations on Indemnity.

(a) The aggregate liability of each Seller Member for claims of indemnification from and against Damages pursuant to Section 6.1 will not exceed such Seller Member's pro rata share (based upon such Seller Member's Pro Rata Percentage) of: (i) with respect to Damages arising from or relating to any inaccuracy in or breach of representations and warranties other than the Intellectual Property Reps and the Seller Fundamental Reps, the Holdback Amount; (ii) with respect to Damages arising from or relating to any inaccuracy in or breach of the Intellectual Property Reps, an amount equal to the Holdback Amount plus twenty percent (20%) of any Earn-Out Payment that becomes due and payable; and (iii) with respect to Damages arising from or relating to any inaccuracy in or breach of the Seller Fundamental Reps, any knowing and intentional misrepresentation or fraud by Seller with respect to a representation or warranty expressly set forth in Article II of this Agreement, or the indemnifiable matters set forth in in Section 6.1(a)(ii)-Section 6.1(a)(vii), the Purchase Price actually received by or realized and payable to Seller, except as set forth in Schedule 6.1(a)(vii). Notwithstanding anything to the contrary

herein, (i) no Seller Member shall be responsible for or liable under this Article VI for any breach of any investor representations pursuant to Section 1.7(e)(iv) by another Seller Member or any covenant set forth in Article IV made or committed solely by another Seller Member after the fifteen (15) month anniversary of the Closing Date, and (ii) the University of Rochester shall not be responsible for or liable under this Article VI for any Damages arising from any breach of any investor representations pursuant to Section 1.7(e)(iv) by another Seller Member or any covenant set forth in Article IV made or committed solely by another Seller Member in excess of the Holdback Amount.

(b) Claims by any Indemnified Party for indemnification from and against Damages shall be first satisfied by deduction of cash from the Holdback Amount in accordance with Section 6.6 and by setoff against the available portion of any Earn-Out Payment then payable pursuant to Section 1.7 in accordance with Section 6.6. To the extent that indemnifiable Damages exceed or may exceed the Holdback Amount and any Earn-Out Payment then payable pursuant to Section 1.7, they shall, subject to the limitations set forth in this Section 6.4 and Section 6.6, be recoverable in any manner permitted by applicable Law; provided, however, than Damages arising from or relating to any inaccuracy in or breach of the Intellectual Property Reps shall be satisfied solely in accordance with the first sentence of this clause (b), except in the case of any knowing and intentional misrepresentation or fraud by Seller with respect thereto, which may be recoverable in any manner permitted hereunder.

(c) The amount of any Damages for which indemnification is provided under this Article VI shall take account of and be reduced, to the extent necessary to prevent double recovery by an Indemnified Party, by (i) any indemnification or contribution payments actually recovered by such Indemnified Party from any third party, net of any expenses reasonably incurred in connection with the recovery of such amounts, and (ii) the amount of any insurance proceeds actually received by such Indemnified Party in respect thereof, net of any out-of-pocket expenses reasonably incurred in connection with the recovery of such amounts, in each case only to the extent that such amounts are recovered as a result of and reasonably related to the facts and circumstances giving rise to such Damages (each source identified in clauses (i) and (ii), a "Collateral Source"). In the event that any Damages become payable to an Indemnified Party pursuant to this Article VI or otherwise, such Damages shall become immediately due and payable, regardless of whether amounts payable from a Collateral Source, if applicable, have been determined. Notwithstanding the foregoing, no Indemnified Party shall have any obligation to pursue any Collateral Source with respect to any Damages or indemnification pursuant to this Article VI.

(d) No Indemnified Party shall have any right to indemnification pursuant to Section 6.1(a)(i) or Section 6.1(a)(v) in respect of Taxes of the Company to the extent such claim arises out of or is attributable to Purchaser or its Affiliates (including, after the Closing, the Company) having, after the Closing: (A) filed an amended income Tax Return of the Company with respect to a Pre-Closing Tax Period for which an income Tax Return was filed prior to the Closing, or (B) made, changed or revoked a Tax election with retroactive effect to a Pre-Closing Tax Period, except, in either case, as reasonably required to cause the Company's Tax Returns and/or Tax elections to comply with all applicable Laws.

(e) Seller and the Seller Members shall not have any right of contribution, indemnification or right of advancement from Purchaser or any of its Affiliates with respect to any Damages claimed by an Indemnified Party.

Section 6.5 Defense of Third Party Claims(a) . In the event of the assertion or commencement by any Person of any claim or Proceeding with respect to which an Indemnified Party may be entitled to indemnification pursuant to this Article VI, such Indemnified Party shall have the right, at its election, to proceed with the defense of such claim or Proceeding on its own. If such Indemnified Party so proceeds with the defense of any such claim or Proceeding:

(a) subject to the other provisions of this Article VI, all expenses (including attorney's fees) relating to the defense of such claim or Proceeding (and all amounts due pursuant to any settlement, adjustment or compromise with respect to such claim or Proceeding) shall be borne and paid exclusively by the Seller Members;

(b) Seller and the Seller Members shall make available to the Indemnified Party any documents and materials in their possession or control that may be necessary to the defense of such claim or Proceeding;

(c) the Indemnified Party shall consult with Seller regarding, and Seller will be entitled to participate in the defense of, any such claim or Proceeding on behalf of the Seller Members at the sole cost and expense of the Seller (on behalf of the Seller Members) (but not to appear of record or communicate with the Person asserting any such claim or Proceeding or its Representatives), and to receive, upon request copies of all pleadings, notices and settlement offers related thereto; and

(d) the Indemnified Party shall have the right to settle, adjust or compromise such claim or Proceeding without the consent of the Seller; provided, however, that if the Indemnified Party settles, adjusts or compromises any claim or Proceeding without the consent of the Seller, such action shall not be deemed conclusive of the existence of an indemnifiable claim or the amount of Damages for purposes of this Article VI and the Seller Members' obligation to indemnify any Indemnified Party in connection with such claim or Proceeding shall be subject to the last sentence of this Section 6.5(d).

An Indemnified Party will give the Seller notice after it has been served in connection with the commencement of any such claim or Proceeding against any Indemnified Party; provided, however, that any failure on the part of any Indemnified Party to so notify the Seller will not limit any of the obligations of Seller or the Seller Members, or any of the rights of any Indemnified Party, under this Article VI, except to the extent such failure materially prejudices the defense of such Proceeding. If an Indemnified Party does not elect to proceed with the defense of any such Proceeding, the Seller may proceed with the defense of such Proceeding with counsel reasonably satisfactory to the Indemnified Party or Indemnified Parties; provided, however, that the Seller may not settle or compromise any such Proceeding without the prior written consent of the Indemnified Party or Indemnified Parties, unless such settlement (x) is limited to monetary damages that are fully indemnified and paid to Purchaser and does not provide for injunctive or other non-monetary relief affecting any Indemnified Party, (y) does not include any finding or admission of violation of Law or the rights of any Person by any Indemnified Party or affect any other claim that may be made against any Indemnified Party, and (z) includes an unconditional release of each Indemnified Party from all liabilities in connection with such Proceeding. No amounts shall be payable by the Seller Members pursuant to this Section 6.5 until a Notice of Claim is delivered pursuant to Section 6.6 and any portion of the Claimed Amount set forth therein is determined in accordance with the terms of Section 6.6 to constitute an Agreed Amount, Stipulated Amount and/or Award Amount, in which case any such amount shall be payable in accordance with Section 6.6.

(e) The above provisions of this Section 6.5 shall not apply to any Third Party Claim that is a Tax Contest (which, for the avoidance of doubt, shall be governed by Section 4.3(e)).

Section 6.6 Claim Procedures. Any claim for indemnification pursuant to this Article VI will be brought and resolved exclusively in accordance with this Section 6.6.

(a) *Notice of Claims for Indemnification*. If any Indemnified Party has incurred or suffered or believes that it may incur or suffer, Damages for which it is or may be entitled to be held harmless, indemnified, compensated or reimbursed under this Article VI, such Indemnified Party may deliver a notice of claim (a "Notice of Claim") to Seller. Each Notice of Claim shall: (i) state that such

Indemnified Party believes that such Indemnified Party is or may be entitled to indemnification, compensation or reimbursement under Article VI of the Agreement; (ii) contain a brief description of the circumstances supporting such Indemnified Party's belief that such Indemnified Party is so entitled to indemnification; and (iii) if practicable, contain a non-binding, preliminary, good faith estimate of the aggregate dollar amount of actual and potential Damages that have arisen and may arise as a result of such circumstances (the aggregate amount of such estimate, as it may be modified in good faith by such Indemnified Party from time to time, being referred to as the "Claimed Amount").

(b) *Objecting to Claims for Indemnification*. During the thirty (30) day period commencing upon delivery by an Indemnified Party to Seller of a Notice of Claim (the "Dispute Period"), Seller may deliver to the Indemnified Party who delivered the Notice of Claim a written response (the "Response Notice") in which Seller: (i) agrees that the full Claimed Amount is owed to the Indemnified Party; (ii) agrees that part, but not all, of the Claimed Amount (the "Agreed Amount") is owed to the Indemnified Party; or (iii) indicates that no part of the Claimed Amount is owed to the Indemnified Party. If the Response Notice is delivered in accordance with clause (ii) or (iii) of the preceding sentence, the Response Notice shall also contain a brief description of the facts and circumstances supporting Seller's claim that only a portion or no part of the Claimed Amount is owed to the Indemnified Party, as the case may be. Any part of the Claimed Amount that is not agreed to be owed to the Indemnified Party pursuant to the Response Notice (or the entire Claimed Amount, if Seller asserts in the Response Notice that no part of the Claimed Amount is owed to the Indemnified Party) is referred to herein as the "Contested Amount" (it being understood that the Contested Amount shall be modified from time to time to reflect any good faith modifications by the Indemnified Party to the Claimed Amount). If a Response Notice is not received by the Indemnified Party prior to the expiration of the Dispute Period, then Seller shall be conclusively deemed to have agreed that the full Claimed Amount is owed to the Indemnified Party.

(c) *Payment of Uncontested Amounts*.

(i) If Seller delivers a Response Notice to the Indemnified Party agreeing that the full Claimed Amount is owed to the Indemnified Party or Seller does not deliver a Response Notice during the Dispute Period, then: (A) the lesser of the Then Remaining Holdback Amount (as defined below) and the entire Claimed Amount shall be deducted from the Holdback Amount; and (B) if the Then Remaining Holdback Amount is less than the Claimed Amount, the Seller Members shall, within ten (10) Business Days following the earlier of the delivery of such Response Notice or the expiration of the Dispute Period, pay the amount of such shortfall to Purchaser. The "Then Remaining Holdback Amount" shall mean the amount by which the Holdback Amount exceeds the sum of all amounts previously deemed or determined to be due and owing to any Indemnified Party pursuant to this Article VI.

(ii) If Seller delivers a Response Notice to the Indemnified Party during the Dispute Period agreeing that less than the full Claimed Amount is owed to the Indemnified Party, then: (A) the lesser of the Then Remaining Holdback Amount and the entire Agreed Amount shall be deducted from the Holdback Amount; and (B) if the Then Remaining Holdback Amount is less than the Agreed Amount, the Seller Members shall, within ten (10) Business Days following the delivery of such Response Notice, pay the amount of such shortfall to Purchaser, subject to the limitations set forth in Section 6.4.

(d) *Resolution of Contested Amounts*.

(i) If Seller delivers a Response Notice to the Indemnified Party during the Dispute Period indicating that there is a Contested Amount, Seller and the Indemnified Party shall attempt in good faith to resolve the dispute related to the Contested Amount. If the Indemnified Party and Seller resolve such dispute, then their resolution of such dispute shall be binding on Seller, the Seller

Member and such Indemnified Party and a settlement agreement stipulating the amount owed to the Indemnified Party (the "Stipulated Amount") shall be signed by the Indemnified Party and Seller. Upon execution of a settlement agreement in favor an Indemnified Party, (A) the lesser of the Then Remaining Holdback Amount and the entire Stipulated Amount shall be deducted from the Holdback Amount; and (B) if the Then Remaining Holdback Amount is less than the Stipulated Amount, the Seller Members shall, within ten (10) Business Days following the execution of such settlement agreement, or such shorter period of time as may be set forth in the settlement agreement, pay the amount of such shortfall to Purchaser, subject to the limitations set forth in Section 6.4.

(ii) If Seller and the Indemnified Party are unable to resolve the dispute relating to any Contested Amount during the thirty (30)-day period commencing upon the delivery of the Response Notice to the Indemnified Party, then either the Indemnified Party or Seller may submit the claim described in the Notice of Claim to arbitration to be settled by binding arbitration in New York, New York or San Francisco, California in accordance with the JAMS Comprehensive Arbitration Rules and Procedures then in effect. Arbitration will be conducted by one arbitrator, mutually selected by the Indemnified Party and Seller; provided, however, that if the Indemnified Party and Seller fail to mutually select an arbitrator within fifteen (15) days after such dispute is submitted to arbitration, then the arbitrator shall be selected by JAMS in accordance with its Comprehensive Arbitration Rules and Procedures then in effect. The parties agree to use commercially reasonable efforts to cause the arbitration hearing to be conducted within seventy-five (75) days after the appointment of the arbitrator, and to use commercially reasonable efforts to cause the decision of the arbitrator to be furnished within fifteen (15) days after the conclusion of the arbitration hearing. The arbitrator's authority shall be confined to deciding: (a) whether the Indemnified Party is entitled to recover the Contested Amount (or a portion thereof), and the portion of the Contested Amount the Indemnified Party is entitled to recover; and (b) the non-prevailing party in the arbitration. The final decision of the arbitrator shall include the dollar amount of the award to the Indemnified Party, if any (the "Award Amount"), shall be furnished to Seller and the Indemnified Party in writing and shall constitute a conclusive determination of the issue(s) in question, binding upon Seller and the Indemnified Party. The non-prevailing party in any such arbitration shall pay the reasonable expenses (including attorneys' fees) of the prevailing party, and the fees and expenses associated with the arbitration (including the arbitrators' fees and expenses). If an Indemnified Party is found to be the prevailing party in any arbitration, the amount of the fees and expenses of such Indemnified Party payable by the non-prevailing party pursuant to the immediately preceding sentence shall be added to the Award Amount. The non-prevailing party shall be determined solely by the arbitrator. Upon determination of an Award Amount in accordance with this Section 6.6(d): (A) the lesser of the Then Remaining Holdback Amount and the entire Award Amount shall be deducted from the Holdback Amount; and (B) if the Then Remaining Holdback Amount is less than the Award Amount, the Seller Members shall, within ten (10) Business Days following the delivery of the final decision of the arbitrator (or such shorter period as may be set forth in such final decision), pay the amount of such shortfall to Purchaser, subject to the limitations set forth in Section 6.4.

(e) *Holdback Release*.

(i) No later than the Holdback Release Date, Purchaser shall reasonably and in good faith determine the aggregate amount, as of the Holdback Release Date, of any Claimed Amounts and Contested Amounts associated with all claims contained in Notices of Claim that have not been finally resolved and paid prior to such date (the "Unresolved Claims") and shall release the amount, if any, by which the Then Remaining Holdback Amount exceeds the aggregate amount of Unresolved Claims (the "Holdback Release Amount") from the Holdback Amount and pay such amount to Seller in accordance with Section 1.2(b); provided, however, that if at such time there are any Unresolved Claims for which known or potential Damages cannot yet reasonably be estimated, the Holdback Release Amount shall be zero dollars ($0.00). The portion of the Then Remaining Holdback Amount retained by Purchaser pursuant to this Section 6.6(e)(i) is referred to as the "Retained Amount".

(ii) Following the Holdback Release Date, within ten (10) Business Days after the final resolution of all Unresolved Claims and the delivery to all Indemnified Parties of all amounts to be delivered to such Persons with respect to all Unresolved Claims from the Retained Amount, if any, Purchaser shall release the amount, if any, by which the Retained Amount exceeds the aggregate of all amounts delivered to Indemnified Parties following the Holdback Release Date (the "Remaining Retained Amount") from the Holdback Amount and pay such amount to Seller in accordance with Section 1.2(b); provided, however, that if the Remaining Retained Amount is less than the amount to be delivered to the Indemnified Parties with respect to such Unresolved Claim, then the Seller Members shall, within ten (10) Business Days following the resolution of such Unresolved Claims, pay the amount of such shortfall to Purchaser, subject to the limitations set forth in Section 6.4.

(f) *Set-Off and Payment of Claimed Amounts*. All payments by the Seller Members described in this Section 6.6(f) shall be subject to the limitations on indemnity set forth in Article VI.

(i) Purchaser shall have the right to set off and apply against any Earn-Out Payment an amount up to the amount by which all Claimed Amounts specified in any Notice of Claim delivered by Purchaser hereunder prior to the date of the Earn-Out Payment against which such set off is applied exceed the Then-Remaining Holdback Amount if, (x) such amount has not otherwise been paid to Purchaser by the Seller Members and (y) such amount continues to be owed to or recoverable by any Indemnified Party pursuant to this Article VI (the "Offset Amount"). Notwithstanding the foregoing, Purchaser shall first reduce the Claimed Amounts by any portion thereof recovered from any Collateral Source before calculating the Offset Amount in accordance with this Section 6.6(f)(i).

(ii) In the event Purchaser exercises its set off rights pursuant to this Section 6.6(f) and withholds an Offset Amount from any Earn-Out Payment, Purchaser shall notify Seller thereof in writing (the "Offset Notification") no later than the day that such Earn-Out Payment is due. The Offset Notification shall set forth in reasonable detail the basis for Purchaser exercising its set off rights pursuant to this Section 6.6(f). Upon the final resolution of all claims for indemnification with respect to which an Offset Notification is delivered in accordance with the provisions of this Article VI, Purchaser shall cause Seller to be paid the amount, if any, by which the Offset Amount exceeds the amount of Damages to which Purchaser has been deemed or determined to be entitled in connection with such resolution pursuant to this Article VI.

Section 6.7 Exclusive Remedy. The parties agree that after the Closing, this Article VI will constitute the sole remedy of any Indemnified Party for recovery of Damages incurred or sustained by the Indemnified Parties pursuant to this Agreement. Purchaser and Seller agree to the matter specifically set forth on Schedule 6.7. Notwithstanding anything herein to the contrary, nothing in this Article VI shall (a) limit or in any way restrict the representations, warranties and covenants of (i) the Assignee under Section 1.8 of this Agreement, (ii) Seller or any Seller Member under Article IV of this Agreement, or (iii) Purchaser, Seller or any Seller Member under any Ancillary Agreement, or (b) limit the rights or remedies of Purchaser or any other Indemnified Party with respect to equitable remedies for non-monetary damages, including specific performance, injunctive and other equitable relief.

Section 6.8 Authority of Seller. The Seller Members authorize, designate and appoint Seller to act as the sole and exclusive agent, attorney-in-fact and representative of each of the Seller Members to, and Seller is hereby authorized and directed to, take such actions and exercise such rights, power and authority as are authorized, delegated and granted to Seller under this Article VI, including

pursuant to Section 6.6, and to exercise such rights, power and authority as are incidental to the foregoing. Any such actions taken, exercises of rights, power or authority, and decision or determination made by Seller consistent therewith shall be absolutely and irrevocably binding on each of the Seller Members as if such Person personally had taken such action, exercised such rights, power or authority or made such decision or determination in such Person's individual capacity.

Section 6.9 No Double Recovery. Notwithstanding anything to the contrary herein, no party shall be entitled to indemnification for Damages under any provision of this Agreement for any amount to the extent such party has previously been indemnified for Damages for such amount under any other provision of this Agreement.

ARTICLE VII

DEFINITIONS AND INTERPRETATION

Section 7.1 Definitions. For all purposes of this Agreement, except as otherwise expressly provided or unless the context clearly requires otherwise:

"Acquisition" has the meaning set forth in the recitals hereto.

"Acquisition Expenses" has the meaning set forth in Section 8.2 hereof.

"Acquisition Expenses Schedule" has the meaning set forth in Section 2.7 hereof.

"Acquisition Shares" has the meaning set forth in Section 1.7(e) hereof.

"Additional Assets" has the meaning set forth in Section 1.8(c)(ii) hereof.

"Affiliate" has the meaning set forth in Rule 12b-2 of the Exchange Act.

"Affiliate Transaction Reps" has the meaning set forth in Section 6.2(a) hereof.

"Affiliated Company" has the meaning set forth in Section 2.19(a) hereof.

"Affiliated Person" has the meaning set forth in Section 2.19(a) hereof.

"Agreed Amount" has the meaning set forth in Section 6.6(b) hereof.

"Agreement" or "this Agreement" means this Stock Purchase Agreement, together with the Exhibits and Schedules hereto.

"Ancillary Agreements" means the Offer Letter, the At-Will Employment Agreement, the Consulting Agreement, the Restrictive Covenants Agreements, and any certificate or other transaction document required to be delivered by Seller or any Seller Member hereunder.

"Approved Labeling" has the meaning set forth in Section 1.7(a) hereof.

"Assigned Assets" has the meaning set forth in Section 1.8(b) hereof.

"Assignee" has the meaning set forth in Section 1.8(a) hereof.

"Assignor" has the meaning set forth in Section 1.8(a) hereof.

"Assignment Election" has the meaning set forth in Section 1.8(a) hereof.

"Assignment Transaction" has the meaning set forth in Section 1.8(a) hereof.

"Assumed Liabilities" has the meaning set forth in Section 1.8(b) hereof.

"At-Will Employment Agreement" has the meaning set forth in the recitals hereto.

"Audit" means any audit, assessment, or other examination relating to Taxes by any Tax Authority or any judicial or administrative proceedings relating to Taxes.

"Award Amount" has the meaning set forth in Section 6.6(d) hereof.

"Bankruptcy and Equity Exception" means (i) such enforcement may be subject to applicable bankruptcy, insolvency or other similar Laws, now or hereafter in effect, affecting creditors' rights generally, and (ii) the remedy of specific performance and injunctive and other forms of equitable relief may be subject to equitable defenses and to the discretion of the court before which any proceeding therefor may be brought.

"Bankruptcy Code" has the meaning set forth in Section 1.7(g)(vi) hereof.

"Base Purchase Price" has the meaning set forth in Section 1.2 hereof.

"Benefit Plans" has the meaning set forth in Section 2.11(a) hereof.

"BLA" has the meaning set forth in Section 1.7(a) hereof.

"Business Day" means any day other than Saturday, Sunday or any other day on which commercial banks in the United States are authorized or required by law to close.

"Bylaws" means the Bylaws of the Company.

"Certificates" means each certificate or certificates which immediately prior to the Closing represented Outstanding Common Stock.

"Charter Documents" has the meaning set forth in Section 2.1(a) hereof.

"Claimed Amount" has the meaning set forth in Section 6.6(a) hereof.

"Closing" has the meaning set forth in Section 1.4 hereof.

"Closing Consideration" has the meaning set forth in Section 1.2 hereof.

"Closing Date" has the meaning set forth in Section 1.4 hereof.

"Code" means the United States Internal Revenue Code of 1986, as amended.

"Collateral Source" has the meaning set forth in Section 6.4 hereof.

"Commercially Reasonable Efforts" has the meaning set forth in Section 1.7(a) hereof.

"Company" has the meaning set forth in the recitals.

"Company Capital Stock" means Common Stock or preferred stock of the Company.

"Company Common Stock" means the common stock of the Company, par value $0.0001 per share.

"Company In-Development Products" has the meaning set forth in Section 2.14(a).

"Company Intellectual Property" has the meaning set forth in Section 2.14(a).

"Company Material Adverse Effect" means any result, occurrence, fact, change, event or effect ("Change") that has, or could be expected to have, individually or in the aggregate, a material adverse effect on the business, capitalization, assets (whether tangible or intangible), Liabilities, results of operations or condition (financial or otherwise) of the Company and its Subsidiaries, taken as a whole; except to the extent that any such Change directly results from: (i) Changes in Law or generally accepted accounting principles or the interpretation or method of enforcement thereof; (ii) changes in general economic or political conditions or the financing or capital markets in general in the United States or any country or region in the world, or changes in currency exchange rates; (iii) national or international political or social conditions, including earthquakes or other natural disasters, pandemics, riots, civil unrest and any military conflicts or acts of terrorism anywhere in the world; and (iv) the consummation of the transactions contemplated by this Agreement; which, in the cases of each of the foregoing clauses (i), (ii) and (iii), does not have a materially disproportionate or unique impact on the Company.

"Company Pluripotent Stem Cell Technology" has the meaning set forth in Section 1.7(a) hereof.

"Company Products" has the meaning set forth in Section 2.14(a) hereof.

"Company Registered Intellectual Property" has the meaning set forth in Section 2.14(a) hereof.

"Company Stock Option" means a compensatory option to purchase shares of Company Common Stock, whether vested or unvested.

"Company Technology" has the meaning set forth in Section 2.14(a) hereof.

"Company Warrants" means a warrant to purchase Company Capital Stock, whether vested or unvested.

"Conflict" has the meaning set forth in Section 2.4(b) hereof.

"Consultant Proprietary Information Agreement" means has the meaning set forth in Section 2.14(k).

"Consulting Agreement" has the meaning set forth in the recitals hereto.

"Contested Amount" has the meaning set forth in Section 6.6(b) hereof.

"Contract" means any mortgage, indenture, lease, contract, covenant, plan, insurance policy or other agreement, instrument, arrangement, obligation, understanding or commitment, permit, concession, franchise or license, whether oral or written and including any amendment or modification made thereto.

"Contributor" means has the meaning set forth in Section 2.14(k).

"Control" has the meaning set forth in Section 2.19(a) hereof.

"Damages" has the meaning set forth in Section 6.1 hereof.

"Danish Approval Milestone" has the meaning set forth in Section 1.7(d) hereof.

"Danish Approval Milestone Payment" has the meaning set forth in Section 1.7(d) hereof.

"Definitive Agreements" has the meaning set forth in Section 1.8(b) hereof.

"Development Progress Meeting" has the meaning set forth in Section 1.7(c) hereof.

"Distinct Indication" has the meaning set forth in Section 1.7(a) hereof.

"Distinct Jurisdiction" has the meaning set forth in Section 1.7(a) hereof.

"Disclosure Schedule" has the meaning set forth in Article II.

"Dispute Period" has the meaning set forth in Section 6.6(b) hereof.

"Earn-Out Payment" has the meaning set forth in Section 1.7(a) hereof.

"Earn-Out Period" has the meaning set forth in Section 1.7(a).

"Employee Proprietary Information Agreement" has the meaning set forth in Section 2.14(k).

"Environmental Laws" has the meaning set forth in Section 2.18(a) hereof.

"ERISA" means the Employee Retirement Income Security Act of 1974, as amended.

"ESCs" has the meaning set forth in Section 1.7(a) hereof.

"Exchange Act" means the Securities Exchange Act of 1934, as amended.

"FCPA" has the meaning set forth in Section 2.20(a) hereof.

"FDA" means the United States Food and Drug Administration or any successor agency thereto.

"FDCA" has the meaning set forth in Section 2.15 hereof.

"Financial Statements" has the meaning set forth in Section 2.6(a) hereof.

"First Approval Milestone" has the meaning set forth in Section 1.7(d) hereof.

"First Approval Milestone Payment" has the meaning set forth in Section 1.7(d) hereof.

"First Primary Approval Milestone" has the meaning set forth in Section 1.7(d) hereof.

"First Primary Approval Milestone Payment" has the meaning set forth in Section 1.7(d) hereof.

"fraud" means common law fraud under Delaware law, and must include the element of scienter and a specific intent to deceive, but specifically excluding in all events any constructive fraud, fraud by negligence, fraud by innocent misrepresentation or other type of equitable fraud if such other type of equitable fraud does not include the element of scienter and a specific intent to deceive.

"GAAP" means United States generally accepted accounting principles.

"Government Grants" has the meaning set forth in Section 2.14(m) hereof.

"Governmental Entity" means any United States federal, state or local or any foreign government, or political subdivision thereof, including the Securities and Exchange Commission, the Defense Security Service, or CFIUS, or any multinational organization or authority, or any other authority, agency, commission or entity entitled to exercise any executive, legislative, judicial, regulatory, administrative or taxing authority or power, any court or tribunal (or any department, bureau or division thereof), any stock exchange or self-regulatory agency such as FINRA, the NYSE, or NASDAQ, or any mediator, arbitrator or arbitral body.

"GPCs" has the meaning set forth in Section 1.7(a) hereof.

"Hadasit Supply Agreement" has the meaning set forth in Section 1.8(b) hereof.

"Hazardous Materials" has the meaning set forth in Section 2.18(a) hereof.

"Holdback Amount" has the meaning set forth in Section 1.3 hereof.

"Holdback Release Amount" has the meaning set forth in Section 6.6(e) hereof.

"Holdback Release Date" has the meaning set forth in Section 1.3 hereof.

"HSR Act" has the meaning set forth in Section 2.5 hereof.

"Indebtedness" means (i) all indebtedness, whether or not contingent, for borrowed money or for the deferred purchase price of property or services (including but not limited to amounts referred to by Seller or the Company as equipment debt, AR debt, and "growth capital" debt); (ii) any other indebtedness that is evidenced by a note, bond, debenture or similar instrument; (iii) all obligations arising out of any financial hedging, swap or similar arrangements; (iv) all obligations as lessee that would be required to be capitalized in accordance with GAAP, (v) all obligations in connection with any letter of credit, banker's acceptance, guarantee, surety, performance or appeal bond, or similar credit transaction, (vi) all liabilities secured by any lien, pledge, charge, mortgage or security interest on any property, and (vii) all guarantee obligations, in each case including the principal amount thereof, any accrued interest thereon and any prepayment or other premiums, or termination or other fees with respect thereto.

"Indemnification Basket" has the meaning set forth in Section 6.3 hereof.

"Indemnified Parties" has the meaning set forth in Section 6.1.

"Indemnified Taxes" means (i) any Liability for Taxes of the Company, or for which the Company becomes liable, in each case, for any Pre-Closing Tax Periods (or portions thereof); (ii) any Liability for Taxes arising in connection with payment of the Purchase Price, including the Earn-Out Payments and any Transfer Taxes (other than the Transfer Taxes for which Purchaser is responsible pursuant to Section 1.6); and (iii) any Taxes of Seller or any Seller Member.

"Indication" has the meaning set forth in Section 1.7(a) hereof.

"Infringement" or "Infringe" has the meaning set forth in Section 2.14(a).

"Intellectual Property" has the meaning set forth in Section 2.14(a) hereof.

"Intellectual Property Reps" has the meaning set forth in Section 6.2 hereof.

"Intellectual Property Rights" has the meaning set forth in Section 2.14(a) hereof.

"Interim Balance Sheet" has the meaning set forth in Section 2.6(a) hereof.

"Interim Balance Sheet Date" has the meaning set forth in Section 2.6(a) hereof.

"iPSCs" has the meaning set forth in Section 1.7(a) hereof.

"IRS" means the United States Internal Revenue Service.

"Key Consultant" has the meaning set forth in the recitals.

"Key Employee" has the meaning set forth in the recitals.

"Knowledge" with respect to an entity means the actual knowledge of the officers of such entity together with such information as would reasonably be expected to be known by any individual having the professional duties and responsibilities of such person after reasonable inquiry.

"Law" means any law, statute, rule, ordinance, regulation, judgment, order, injunction or decree of any United States federal, state, local or foreign government or agency thereof, including securities or "blue sky" laws.

"Liabilities" means with respect to any Person, all debts, liabilities, commitments, losses, deficiencies, duties, charges, damages, costs, fees, expenses and obligations of any kind (whether asserted or unasserted, known or unknown, absolute or contingent, accrued, due or to become due, secured or unsecured, liquidated, matured or otherwise), including, but not limited to, accounts payable, royalties payable, and other reserves, accrued bonuses, accrued vacation, employee expense obligations, deferred revenue and all other liabilities of such Person or any of its Subsidiaries, regardless of whether such liabilities are required to be reflected on a balance sheet in accordance with GAAP, including, with respect to the Company, Indebtedness, Acquisition Expenses and Taxes.

"Licensed Data" has the meaning set forth in Section 1.8(b) hereof.

"Licensed Field" has the meaning set forth in Section 1.8(b) hereof.

"Lien" means any lien, pledge, charge, claim, mortgage, security interest, defect in title, preemptive right, vesting limitation, right of first offer or refusal, community or marital property interest, transfer restriction of any kind or other encumbrance of any sort.

"Material Contract" has the meaning set forth in Section 2.13(b) hereof.

"Milestone" has the meaning set forth in Section 1.7(a) hereof.

"Moral Rights" has the meaning set forth in Section 2.14(a) hereof.

"NDA" has the meaning set forth in Section 1.7(a) hereof.

"Negotiation Election" has the meaning set forth in Section 1.8(a) hereof.

"Negotiation Notice" has the meaning set forth in Section 1.7(f) hereof.

"Negotiation Period" has the meaning set forth in Section 1.8(c) hereof.

"Notice of Breach" has the meaning set forth in Section 1.7(f) hereof.

"Notice of Claim" has the meaning set forth in Section 6.6(a) hereof.

"Notification Date" has the meaning set forth in Section 1.7(e) hereof.

"Offer Letter" has the meaning in the recitals hereto.

"Offset Amount" has the meaning set forth in Section 6.6(f) hereof.

"Offset Notification" has the meaning set forth in Section 6.6(f) hereof.

"Outstanding Common Stock" means each share of Company Common Stock issued and outstanding immediately prior to the Closing.

"Patents" has the meaning set forth in Section 2.14(a) hereof.

"Permitted Liens" means any (a) cashiers', landlords', mechanics', materialmens', carriers', workmens', repairmens', contractors', processors', maritime, consignees', warehousemens' and other like Liens arising or incurred in the ordinary course of business and for amounts which are not yet due and payable, (b) Liens arising under worker's compensation, unemployment insurance, social security, retirement and similar legislation, (c) Liens for real and personal property Taxes not yet due and payable, and (d) Liens arising solely by action of Purchaser.

"Permitted Transfer" has the meaning set forth in Section 4.1(e) hereof.

"Permitted Transferee" has the meaning set forth in Section 4.1(e) hereof.

"Person" means a natural person, partnership, corporation, limited liability company, business trust, joint stock company, trust, unincorporated association, joint venture, Governmental Entity or other entity or organization.

"Phase II Clinical Trial" has the meaning set forth in Section 1.7(a) hereof.

"Phase II Milestone" has the meaning set forth in Section 1.7(d) hereof.

"Phase II Milestone Payment" has the meaning set forth in Section 1.7(d) hereof.

"Post-Closing Tax Period" means any taxable period (or portion thereof) that ends after the Closing Date.

"Pre-Closing Tax Period" means any taxable period (or portion thereof) ending on the Closing Date or ending prior to the Closing Date, including the portion of any Straddle Period ending on the Closing Date.

"Primary Approval Milestones" has the meaning set forth in Section 1.7(d) hereof.

"Primary Approval Milestone Payments" has the meaning set forth in Section 1.7(d) hereof.

"Pro Rata Percentage" means, with respect to each Seller Member, the percentage set forth opposite such Seller Member's name on Schedule 7.1 hereto.

"Proceeding" means any action, suit, litigation, arbitration, proceeding (including any civil, criminal, administrative, investigative or appellate proceeding and any informal proceeding), prosecution, contest, hearing, inquiry, inquest, audit, examination or investigation commenced, brought, conducted or heard by or before, or otherwise involving, any Governmental Entity.

"Product" has the meaning set forth in Section 1.7(a) hereof.

"Program Assets" has the meaning set forth in Section 1.8(c) hereof.

"Program License" has the meaning set forth in Section 1.8(c) hereof.

"Purchase Price" has the meaning set forth in Section 1.2 hereof.

"Purchaser" has the meaning set forth in the preamble hereto.

"Purchaser Common Stock" means shares of common stock, $0.0001 par value per share, of Purchaser.

"Registered Intellectual Property" has the meaning set forth in Section 2.14(a) hereof.

"Regulatory Approval" has the meaning set forth in Section 1.7(a) hereof.

"Regulatory Authority" means any federal, national, or multinational governmental health regulatory agency or authority within a regulatory jurisdiction, with the authority to grant approvals, licenses, registrations or authorizations necessary for the development, manufacture, use, and sale of a pharmaceutical product.

"Remaining Retained Amount" has the meaning set forth in Section 6.6(e) hereof.

"Representatives" means a Person's managers, directors, officers, employees, agents or advisors, including investment bankers, attorneys and accountants.

"Required Consents" has the meaning set forth in Section 1.8(b) hereof.

"Response Notice" has the meaning set forth in Section 6.6(b) hereof.

"Restricted Party" has the meaning set forth in Section 2.9(c).

"Restricted Stock" means any shares of Company Common Stock subject to forfeiture, redemption and/or repurchase pursuant to a restricted stock or similar compensatory agreement or arrangement.

"Restrictive Covenants Agreement" has the meaning set forth in the recitals hereto.

"Retained Amount" has the meaning set forth in Section 6.6(e) hereof.

"Retained Liabilities" has the meaning set forth in Section 1.8(b) hereof.

"Revised Spending Requirements" has the meaning set forth in Section 1.7(f) hereof.

"Rochester License" means the Exclusive Patent License Agreement, dated as of October 1, 2018, originally by and among the University of Rochester, Seller and the Company, as amended on November 15, 2018, as amended and restated effective as of the Closing Date and as may be amended from time to time thereafter.

"Rochester SRA" means the Master Sponsored Research Agreement, dated as of October 1, 2018, originally by and among the University of Rochester, Seller and the Company, as amended effective as of the Closing Date and as may be amended from time to time thereafter.

"ROFR Agreement" has the meaning set forth in Section 1.7(e) hereof.

"Second Primary Approval Milestone" has the meaning set forth in Section 1.7(d) hereof.

"Second Primary Approval Milestone Payment" has the meaning set forth in Section 1.7(d) hereof.

"Security" or "Securities" means any common stock, preferred stock, convertible notes, options, warrants, or any other securities convertible into, exercisable for, or subscriptions or rights to acquire, any such securities.

"Securities Act" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

"Seller" has the meaning set forth in the preamble hereto.

"Seller Fundamental Reps" has the meaning set forth in Section 6.2(a) hereof.

"Sellers" has the meaning set forth in the preamble hereto.

"Seller Members" means each of the members of Seller as of the date hereof and, after the Closing, shall include any Person who becomes a member of Seller in accordance with Section 4.1(d) or (e).

"Specified Liabilities" has the meaning set forth in Section 1.8(b) hereof.

"Spending Requirements" has the meaning set forth in Section 1.7(f) hereof.

"Standard Form Agreements" has the meaning set forth in Section 2.14(f) hereof.

"Stipulated Amount" has the meaning set forth in Section 6.6(d) hereof.

"Straddle Period" has the meaning set forth in Section 4.3 hereof.

"Subsequent Approval Milestone" has the meaning set forth in Section 1.7(d) hereof.

"Subsequent Approval Milestone Payment" has the meaning set forth in Section 1.7(d) hereof.

"Subsidiary" means, with respect to any Person, any corporation or other organization, whether incorporated or unincorporated, of which (i) at least a majority of the securities or other interests having by their terms ordinary voting power to elect a majority of the Board of Directors or others performing similar functions with respect to such corporation or other organization is directly or indirectly owned or controlled by such party or by any one or more of its Subsidiaries, or by such party and one or more of its Subsidiaries or (ii) such party or any other Subsidiary of such party is a general partner (excluding any such partnership where such party or any Subsidiary of such party does not have a majority of the voting interest in such partnership).

"Tax" or "Taxes" means (i) any and all net income, corporate, capital gains, capital acquisitions, inheritance, gift, alternative minimum, add-on minimum, gross income, gross receipts, sales, use, ad valorem, transfer, franchise, profits, license, withholding, estimated, payroll, employment, excise, severance, stamp, occupation, premium, property, environmental or windfall profit tax, custom duty or other tax, governmental fee or other like assessment or charge whatsoever, together with any interest and any penalty, addition to tax or additional amount imposed by any Tax Authority, (ii) any liability for the payment of any amounts of the type described in clause (i) of this sentence as a result of being a member of an affiliated, consolidated, combined, unitary or aggregate group during any taxable period, and (iii) any liability for the payment of any amounts of the type described in clause (i) or (ii) of this sentence as a result of being a transferee of or successor to any Person or as a result of any obligation to indemnify (or otherwise assume or succeed to the liability of) any other Person.

"Tax Authority" means the Internal Revenue Service and any other domestic or foreign Governmental Entity responsible for the assessment, determination, collection, imposition or administration of any Taxes.

"Tax Contest" has the meaning set forth in Section 4.3(e) hereof.

"Tax Returns" mean all federal, state, local, and foreign tax returns, declarations, statements, reports, schedules, forms, claims for refund, and information returns and any amendments thereto.

"Technology" has the meaning set forth in Section 2.14(a) hereof.

"Then Remaining Holdback Amount" has the meaning set forth in Section 6.6(c) hereof.

"Termination Decision" has the meaning set forth in Section 1.8(a) hereof.

"Trade Law" means all applicable Laws relating to the sale, marketing, promotion, export, re-export, and transfer of goods, software, and technology administered by an agency of the U.S. government, or by a non-U.S. government (except to the extent inconsistent with U.S. law) including: the Arms Export Control Act (22 U.S.C. § 2751 *et seq.*); the International Traffic in Arms Regulations (22 C.F.R. § 120 *et seq.*); the Export Administration Act of 1979, as amended (50 U.S.C. App. §§ 2401-2420); the Export Administration Regulations (15 C.F.R. § 730 *et. seq.*); the International Emergency Economic Powers Act (50 U.S.C. §§ 1701-1706); the Foreign Trade Regulations (15 C.F.R. Part 30); regulations and

restrictions administered by the U.S. Department of the Treasury, Office of Foreign Assets Control (31 C.F.R. Part 500 *et seq*.); Executive Orders of the President of the United States regarding restrictions on trade with designated countries and persons; the anti-boycott regulations administered by the U.S. Department of Commerce (15 C.F.R. Part 760); the anti-boycott provisions administered by the U.S. Department of the Treasury (26 U.S.C. § 999 and related Treasury Guidelines); the U.S. Foreign Corrupt Practices Act (15 U.S.C. § 78dd-1, *et seq*.) and applicable Laws governing imports and customs.

"Trademarks" has the meaning set forth in Section 2.14(a) hereof.

"Transfer" means any assignment, distribution, sale, offer to sell, gift, pledge, mortgage, hypothecation, encumbrance, disposition of or any other like transfer or encumbrance.

"Transfer Taxes" has the meaning set forth in Section 1.6 hereof.

"Unregistered Intellectual Property" has the meaning set forth in Section 2.14(a) hereof.

"Unresolved Claims" has the meaning set forth in Section 6.6(e) hereof.

"Voting Agreement" has the meaning set forth in Section 1.7(e) hereof.

"Voting Debt" has the meaning set forth in Section 2.2(e) hereof.

"VWAP" means, with respect to any trading day, the daily volume-weighted average trading price per share of the common stock of the Company for such day on the principal trading market for such common stock, as reported by Bloomberg US L.P. (or successor thereto) using its "Volume at Price" functions (based on a trading day from 9:30:00 a.m. (New York City time) to 4:00:01 p.m. (New York City time)).

Section 7.2 Interpretation.

(a) When a reference is made in this Agreement to a section or article, such reference shall be to a section or article of this Agreement unless otherwise clearly indicated to the contrary.

(b) Whenever the words "include", "includes" or "including" are used in this Agreement they shall be deemed to be followed by the words "without limitation."

(c) The words "hereof", "herein" and "herewith" and words of similar import shall, unless otherwise stated, be construed to refer to this Agreement as a whole and not to any particular provision of this Agreement, and article, section, paragraph, exhibit and schedule references are to the articles, sections, paragraphs, exhibits and schedules of this Agreement unless otherwise specified.

(d) The plural of any defined term shall have a meaning correlative to such defined term, and words denoting any gender shall include all genders. Where a word or phrase is defined herein, each of its other grammatical forms shall have a corresponding meaning.

(e) A reference to any party to this Agreement or any other agreement or document shall include such party's successors and permitted assigns.

(f) A reference to any legislation or to any provision of any legislation shall include any modification or re-enactment thereof, any legislative provision substituted therefor and all regulations and statutory instruments issued thereunder or pursuant thereto.

(g) Only such documents and information as have been made available to Purchaser in the electronic data room of Seller to which Purchaser was provided access at least two (2) Business Days prior to the date hereof shall be considered to have been "made available" or "provided" to Purchaser for purposes of this Agreement.

(h) The parties have participated jointly in the negotiation and drafting of this Agreement. In the event an ambiguity or question of intent or interpretation arises, this Agreement shall be construed as if drafted jointly by the parties, and no presumption or burden of proof shall arise favoring or disfavoring any party by virtue of the authorship of any provisions of this Agreement.

ARTICLE VIII

MISCELLANEOUS

Section 8.1 Release.

(a) To the fullest extent permitted by applicable Law, Seller and each Seller Member (for purposes of this section, each a "Releasor"), upon the Closing, shall be deemed to have, and hereby does, full, unconditionally and irrevocably release and forever discharge the Company, Purchaser, and their Affiliates, along with their respective predecessors, successors and assigns, as well as each of their respective directors, officers, managers, members, employees and shareholders (for purposes of this section, the "Released Persons"), from any and all claims, counterclaims, charges, complaints, liens, demands, suits, causes of action, obligations, damages, demands, losses and Liabilities, costs and expenses, of every kind and nature whatsoever, past, present or future, at law or in equity, both known and unknown, asserted or unasserted, contingent or otherwise (collectively, for purposes of this section, "Claims"), which the Releasor had, now has or may claim against the Released Persons, in each case arising out of, in connection with, or relating to any act, omission or event which occurred on or before the Closing Date, including, without limitation: (i) with respect to the Releasor's status as a holder of Securities of the Company or Seller, including any and all issuances by Seller or the Company of debt, equity and/or other Securities, the Releasor's right to acquire any Securities of Seller or the Company, and any rights of acceleration of exercisability or vesting, whether or not contingent on the occurrence of any event on or after the Closing, in favor of any Security of the Company; (ii) any claims of breach of contract (express or implied), breach of fiduciary duty, misrepresentation, fraud, breach of covenant of good faith and fair dealing, wrongful termination, loss of future earnings, slander, infliction of emotional distress, disability, defamation, violation of federal, state or local labor, equal opportunity or employment discrimination Laws, violation of federal and state securities Laws and other violations of Law, whether in the United States or elsewhere and (iii) in the case of the University of Rochester, any Claims arising out of, in connection with, or relating to (x) any omission or event which occurred on or before the Closing Date in connection with the Rochester License or the Rochester SRA or (y) for any issuances of Securities pursuant to Section 8.1 of the Rochester License, all of which have been satisfied by the payment terms and provisions of this Agreement; provided, however, that the release set forth herein shall not include (and the term "Claims" does not include) (A) the rights of any Releasor pursuant to this Agreement and the Ancillary Agreements, including Seller's right to receive the Purchase Price pursuant to the terms of this Agreement; (B) the right to wages or consulting fees earned by the Releasor with respect to services rendered to the Company during the pay period immediately preceding the Closing but unpaid as of the Closing; (C) claims under the Age Discrimination in Employment Act or Older Workers' Benefits Protection Act; or (D) any other claims that may not be released under this release in accordance with applicable Law.

(b) The terms and provisions of Section 8.1(a) are specific terms of the Acquisition, and the approval and adoption of this Agreement, the Ancillary Agreements and the transactions contemplated hereby and thereby by Seller and the Seller Members pursuant to the execution and delivery of this Agreement shall constitute approval by such Persons, as specific terms of the Acquisition, and the irrevocable agreement of such Persons to be bound by such terms and provisions.

Section 8.2 Fees and Expenses. Except as specifically provided in this Agreement, all fees, costs and expenses incurred or accelerated in connection with the process of selling the Company or otherwise relating to the negotiation, preparation, or execution of this Agreement and the Ancillary Agreements and the consummation of the transactions contemplated hereby incurred by Seller or the Company (including on behalf of the Seller Members) (including both paid and unpaid amounts, whether or not invoiced or payable as of the Closing), including (a) all fees, costs and expenses of legal counsel to Seller or the Company or their respective managers or boards of directors or accounting, financial and other professional advisors in connection with the transactions contemplated by this Agreement, including all brokers', finders' or similar fees, (b) all liquidation or prepayment premiums on Indebtedness of Seller or the Company or other fees or expenses associated with obtaining the release and termination of any Liens and termination of any Benefit Plans, (c) any fees and expenses (other than legal expenses) associated with obtaining necessary or appropriate consents or waivers of any Governmental Entity or third parties, (d) any bonus, change in control, severance or similar payment or benefit made or required to be made as a result of the transactions contemplated by this Agreement, together with the employer portion of any Tax attributable to such payments or benefits, and (e) any Transfer Taxes (other than the Transfer Taxes, if any, for which Purchaser is responsible pursuant to Section 1.6) (collectively, the "Acquisition Expenses"), shall be invoiced prior to the Closing and set forth on the Acquisition Expenses Schedule. For purposes of the foregoing definition of Acquisition Expenses, any Acquisition Expenses unpaid as of the date of the Acquisition Expenses Schedule to the extent not reflected thereon, or incurred thereafter, will nonetheless be deemed to be Acquisition Expenses. All fees, costs and expenses incurred by Purchaser or its Affiliates in connection with this Agreement and the consummation of the Acquisition or any of the other transactions contemplated hereby shall be paid by Purchaser or its Affiliates.

Section 8.3 Amendment. This Agreement may not be amended except by an instrument in writing signed by or on behalf of Purchaser and Seller and, in the case of Article IV, Article VI or Section 8.1 hereof, the Seller Members.

Section 8.4 Notices. All notices and other communications hereunder shall be in writing and shall be deemed given and received (a) when delivered personally, (b) if sent by electronic mail, upon confirmation of receipt, including by automatic delivery confirmation, or (c) when delivered by express courier or registered or certified mail (return receipt requested) to the parties at the following addresses (or at such other address for a party as shall be specified by like notice):

(a) if to Seller, to

Oscine Holdings, LLC
1034 Sunset Trail
Webster, NY 14580
Attention: Dr. Steven A. Goldman, M.D., Ph.D.
email: Steven_Goldman@URMC.Rochester.edu

with a copy (which shall not constitute notice) to

Christina Trojel-Hansen
1525 9th Ave Apt 3310
Seattle, WE 98101
Christina.trojel@gmail.com
CTrojel@archventure.com

and

(b) if to Purchaser, to

Sana Biotechnology, Inc.
188 E. Blaine Street, Suite 400
Seattle, Washington 98102
Attention: General Counsel
email: legal_notices@sana.com

with a copy (which shall not constitute notice) to

Woodside Counsel, PC
203 Redwood Shores Parkway, Suite 610
Redwood Shores, California 94065
Attention: Gregory Smith
email: Gregory@woodsidecounsel.com

(c) if to a Seller Member, to the address set forth on such Seller Member's signature page hereto.

Section 8.5 Descriptive Headings. The descriptive headings herein are inserted for convenience only and are not intended to be part of or to affect the meaning or interpretation of this Agreement.

Section 8.6 Counterparts. This Agreement may be executed in two or more counterparts, all of which shall be considered one and the same agreement and shall become effective when two or more counterparts have been signed by each of the parties and delivered to the other parties, it being understood that all parties need not sign the same counterpart. Counterparts may be delivered via electronic mail (including .pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, *e.g.*, www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

Section 8.7 Entire Agreement; Assignment. This Agreement (including the Exhibits and Schedules attached hereto) together with the Ancillary Agreements (a) constitutes the entire agreement and supersedes all prior agreements and understandings, both written and oral, among the parties with respect to the subject matter hereof, any provisions of such agreements which are inconsistent with the transactions contemplated by this Agreement being waived hereby; and (b) shall not be assigned by operation of law or otherwise except that Purchaser may assign, in its sole discretion, any or all of its rights, interests and obligations hereunder to any direct or indirect wholly owned Subsidiary of Purchaser, provided that Purchaser remains ultimately responsible for the payment of all Earn-Out Payments if and when they become due.

Section 8.8 Governing Law; Waiver of Jury Trial; Dispute Resolution. This Agreement shall be governed and construed in accordance with the laws of the State of Delaware without regard to any applicable principles of conflicts of law. EACH PARTY HERETO ACKNOWLEDGES AND AGREES THAT ANY CONTROVERSY THAT MAY ARISE UNDER THIS AGREEMENT IS LIKELY TO INVOLVE COMPLICATED AND DIFFICULT ISSUES, AND THEREFORE EACH SUCH PARTY HEREBY IRREVOCABLY AND UNCONDITIONALLY WAIVES ANY RIGHT SUCH PARTY MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY LITIGATION DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS AGREEMENT, OR THE

TRANSACTIONS CONTEMPLATED BY THIS AGREEMENT. EACH PARTY HERETO CERTIFIES AND ACKNOWLEDGES THAT (A) NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PARTY HERETO HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY HERETO WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER, (B) EACH PARTY HERETO UNDERSTANDS AND HAS CONSIDERED THE IMPLICATIONS OF THIS WAIVER, (C) EACH PARTY HERETO MAKES THIS WAIVER VOLUNTARILY AND (D) EACH PARTY HERETO HAS BEEN INDUCED TO ENTER INTO THIS AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION. Except as set forth in Section 4.3 and Section 6.6(d), if the parties hereto are unable to resolve any dispute arising under or relating to this Agreement during the thirty (30) calendar day period commencing upon the delivery of a notice of such dispute to any of the parties hereto, then any such party may submit the dispute to arbitration to be settled by binding arbitration in New York, New York or San Francisco, California in accordance with the JAMS Comprehensive Arbitration Rules and Procedures then in effect. Arbitration will be conducted by one arbitrator, mutually selected by the parties; provided, however, that if the parties fail to mutually select an arbitrator within fifteen (15) days after such dispute is submitted to arbitration, then the arbitrator shall be selected by JAMS in accordance with its Comprehensive Arbitration Rules and Procedures then in effect. The parties agree to use commercially reasonable efforts to cause the arbitration hearing to be conducted within seventy-five (75) days after the appointment of the arbitrator, and to use commercially reasonable efforts to cause the decision of the arbitrator to be furnished within fifteen (15) days after the conclusion of the arbitration hearing. The final decision of the arbitrator shall be furnished to the parties in writing and shall constitute a conclusive determination of the issue(s) in question, binding upon the parties.

Section 8.9 Specific Performance. The parties acknowledge and agree that: (a) Purchaser would be damaged irreparably in the event any of the provisions of Article IV of this Agreement is not performed in accordance with its specific terms or is otherwise breached and (b) Seller would be damaged irreparably in the event any of the provisions of Section 1.8(b) of this Agreement is not performed in accordance with its specific terms or is otherwise breached. Accordingly, in addition to any other remedy to which such party may be entitled pursuant hereto, (i) Purchaser shall be entitled to an injunction or injunctions to prevent or remedy a breach of Article IV of this Agreement by any other party or to enforce specifically Article IV of this Agreement, and (ii) Seller shall be entitled to an injunction or injunctions to prevent or remedy a breach of Section 1.8(b) of this Agreement by Purchaser or to enforce specifically Section 1.8(b) of this Agreement, in each case without any requirement to post a bond.

Section 8.10 Parties in Interest. This Agreement shall be binding upon and inure solely to the benefit of each party hereto, and nothing in this Agreement, express or implied, is intended to or shall confer upon any other Person or Persons any rights, benefits or remedies of any nature whatsoever under or by reason of this Agreement.

Section 8.11 Legal Representation. Each of the parties to this Agreement further agrees to permit any privilege attaching as a result of the services provided by Morrison & Foerster LLP as counsel to Seller or any Seller Member (including with respect to information related to the Company) and the Company in connection with the transactions contemplated by this Agreement and the other Ancillary Agreements to survive the Closing and to remain in effect, and such privilege shall continue to be controlled solely by Seller following the Closing. In addition, all privileged client files and records in the possession of Morrison & Foerster LLP and all privileged files and records in possession of the Company related to the negotiation of the transactions contemplated by this Agreement and the other Ancillary Agreements shall be the sole and exclusive property of (and be solely controlled by) Seller, and neither Purchaser nor the Company shall retain any copies of such records or have any access thereto.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be signed by their respective officers thereunto duly authorized as of the date first written above.

PURCHASER:

SANA BIOTECHNOLOGY, INC.

By: /s/ Steven D. Harr, M.D.
Name: Steven D. Harr, M.D.
Title: President and Chief Executive Officer

SELLER:

OSCINE HOLDINGS, LLC

By: /s/ Dr. Steven A. Goldman, M.D., Ph.D.
Name: Dr. Steven A. Goldman, M.D., Ph.D.
Title: Manager

By: /s/ Christina Trojel Hansen, Ph.D.
Name: Christina Trojel-Hansen, Ph.D.
Title: Manager

SELLER MEMBERS:

/s/ Dr. Steven A. Goldman, M.D., Ph.D.
Dr. Steven A. Goldman, M.D., Ph.D.

/s/ Christina Trojel Hansen, Ph.D.
Christina Trojel-Hansen, Ph.D.

UNIVERSITY OF ROCHESTER

By: /s/ Douglas W. Phillips
Name: Douglas W. Phillips
Title: Senior Vice President and CIO

Exhibit 3.1(a)

AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
SANA BIOTECHNOLOGY, INC.

(Pursuant to Sections 242 and 245 of the
General Corporation Law of the State of Delaware)

Sana Biotechnology, Inc., a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the "**General Corporation Law**"),

DOES HEREBY CERTIFY:

1. That the name of this corporation is Sana Biotechnology, Inc., and that this corporation was originally incorporated pursuant to the General Corporation Law on July 13, 2018 under the name FD Therapeutics, Inc.

2. That the Board of Directors duly adopted resolutions proposing to amend and restate the Certificate of Incorporation of this corporation, declaring said amendment and restatement to be advisable and in the best interests of this corporation and its stockholders, and authorizing the appropriate officers of this corporation to solicit the consent of the stockholders therefor, which resolution setting forth the proposed amendment and restatement is as follows:

RESOLVED, that the Certificate of Incorporation of this corporation be amended and restated in its entirety to read as follows:

FIRST: The name of this corporation is Sana Biotechnology, Inc. (the "**Corporation**").

SECOND: The address of the registered office of the Corporation in the State of Delaware is 251 Little Falls Drive, Wilmington, County of New Castle 19808. The name of its registered agent at such address is Corporation Service Company.

THIRD: The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law.

FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 700,000,000 shares of Common Stock, $0.0001 par value per share ("**Common Stock**") and (ii) 536,979,777 shares of Preferred Stock, $0.0001 par value per share ("**Preferred Stock**").

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A. COMMON STOCK

1. General. The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein.

2. Voting. The holders of the Common Stock are entitled to one vote for each share of Common Stock held at all meetings of stockholders (and written actions in lieu of meetings); provided, however, that, except as otherwise required by law, holders of Common Stock, as such, shall not be entitled to vote on any amendment to the Certificate of Incorporation that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together with the holders of one or more other such series, to vote thereon pursuant to the Certificate of Incorporation or pursuant to the General Corporation Law. There shall be no cumulative voting. The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of one or more series of Preferred Stock that may be required by the terms of the Certificate of Incorporation) the affirmative vote of the holders of shares of capital stock of the Corporation representing a majority of the votes represented by all outstanding shares of capital stock of the Corporation entitled to vote, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law.

B. PREFERRED STOCK

45,850,000 shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series A-1 Preferred Stock**," 380,902,071 shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series A-2 Preferred Stock**" and 110,227,706 shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series B Preferred Stock**," each with the following rights, preferences, powers, privileges and restrictions, qualifications and limitations. Unless otherwise indicated, references to "sections" or "subsections" in this Part B of this Article Fourth refer to sections and subsections of Part B of this Article Fourth.

1. Dividends.

1.1 Treatment of Preferred Stock. The holders of shares of Preferred Stock shall be entitled to receive, on a *pari passu* basis, dividends equal to 6% of the applicable Original Issue Price (as defined below) per annum, payable in cash or in kind at the election of the Board of Directors, out of any assets at the time legally available therefor, when, as and if declared by the Board of Directors, prior and in preference to the Common Stock. No dividends other than those payable solely in Common Stock shall be paid on any Common Stock unless and until (i) the aforementioned dividend is paid on each outstanding share of Preferred Stock, and (ii) a dividend is paid with respect to all outstanding shares of Preferred Stock in an amount equal to or greater than the aggregate amount of dividends which would be payable to the holder of Preferred Stock if, immediately prior to the record date set for such dividend payment on Common Stock, such share of Preferred Stock had been converted into Common Stock at the then-effective conversion rate. The Board of Directors is under no obligation to declare dividends, no rights shall accrue to the holders of Preferred Stock if dividends are not declared, and any dividends on the Preferred Stock shall be noncumulative. As used in this Certificate of Incorporation, "**Original Issue Price**" shall mean (i) $1.00 for each outstanding share of Series A-1 Preferred Stock and Series A-2 Preferred Stock, and (ii) $4.00 for each outstanding share of Series B Preferred Stock (in each case as adjusted for stock splits, combinations, reorganizations and the like with respect to the each applicable series of Preferred Stock).

1.2 Treatment of Common Stock. If, after dividends in the full preferential amounts specified in Section 1.1 for the Preferred Stock have been paid or declared and set apart in any calendar year of the Corporation, the Board of Directors shall declare additional dividends out of funds legally available therefor in that calendar year, then such additional dividends shall be declared pro rata on the Common Stock and the Preferred Stock on a *pari passu* basis according to the number of shares of Common Stock held by such holders, where each holder of shares of Preferred Stock is to be treated for this purpose as holding the greatest whole number of shares of Common Stock then issuable upon conversion of all shares of Preferred Stock held by such holder pursuant to Sections 4 and 5 hereof. The Corporation shall make no Distribution (as defined below) to the holders of shares of Common Stock except in accordance with (i) Section 1.1 and this Section 1.2 or (ii) Section 2.

1.3 Distribution. "**Distribution**" means the transfer of cash, property or securities without consideration, whether by way of dividend or otherwise, or the purchase of shares of the Corporation (other than in connection with (i) the repurchase of shares of Common Stock issued to or held by employees, consultants, officers or directors at a price not greater than the amount paid by such persons for such shares upon termination of their employment or services pursuant to agreements providing for the right of said repurchase or (ii) upon exercise of a right of first refusal approved by the Board of Directors) for cash or property.

2. Liquidation, Dissolution or Winding Up; Certain Mergers, Consolidations and Asset Sales.

2.1 Preferential Payments to Holders of Preferred Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the holders of shares of Preferred Stock then outstanding, on a *pari passu* basis, shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders before any payment shall be made to the holders of Common Stock by reason of their ownership thereof, an amount per share equal to the greater of (i) the applicable Original Issue Price, plus any dividends declared but unpaid thereon or (ii) such amount per share as would have been payable had all shares of the applicable series of Preferred Stock been converted into Common Stock pursuant to Section 4 immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event (the amount payable pursuant to this sentence is hereinafter referred to as the "**Liquidation Amount**"). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Preferred Stock the full amount to which they shall be entitled under this Subsection 2.1, the holders of shares of Preferred Stock shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.2 Payments to Holders of Common Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, after the payment of all preferential amounts required to be paid to the holders of shares of Preferred Stock, the remaining assets of the Corporation available for distribution to its stockholders shall be distributed among the holders of shares of Common Stock, pro rata based on the number of shares held by each such holder.

2.3 Deemed Liquidation Events.

2.3.1 Definition. Each of the following events shall be considered a "**Deemed Liquidation Event**" unless (x) prior to the issuance of shares of Series B Preferred Stock, the holders of at least 70% of the outstanding Series A-1 Preferred Stock and Series A-2 Preferred Stock, voting together as a single class on an as-converted basis, or (y) following the issuance of shares of Series B Preferred Stock, the holders of at least 61% of the outstanding Preferred Stock, voting together as a single class on an as-converted basis (as applicable, either (x) or (y), the "**Requisite Holders**"), which must include, in this instance, the holders of at least a majority of the Series B Preferred Stock then held by the Series B Large Investors (as defined in the Series A-2/B Preferred Stock Purchase Agreement dated as of February 13, 2019, as the same may be amended from time to time (the "**Purchase Agreement**")), elect otherwise by written notice sent to the Corporation at least 15 days prior to the effective date of any such event:

(a) a merger or consolidation in which

(i) the Corporation is a constituent party or

(ii) a subsidiary of the Corporation is a constituent party and the Corporation issues shares of its capital stock pursuant to such merger or consolidation,

except any such merger or consolidation involving the Corporation or a subsidiary in which the shares of capital stock of the Corporation outstanding immediately prior to such merger or consolidation continue to represent, or are converted into or exchanged for shares of capital stock that represent, immediately following such merger or consolidation, at least a majority, by voting power, of the capital stock of (1) the surviving or resulting corporation; or (2) if the surviving or resulting corporation is a wholly owned subsidiary of another corporation immediately following such merger or consolidation, the parent corporation of such surviving or resulting corporation; or

(b) the sale, lease, transfer, exclusive license (other than an exclusive license in a field of use not central to the Company's business plan, as determined in good faith by the Board of Directors, including at least three of the Preferred Directors (as defined herein)) or other disposition, in a single transaction or series of related transactions, by the Corporation or any subsidiary of the Corporation of all or substantially all the assets of the Corporation and its subsidiaries taken as a whole, or the sale or disposition (whether by merger, consolidation or otherwise) of one or more subsidiaries of the Corporation if substantially all of the assets of the Corporation and its subsidiaries taken as a whole are held by such subsidiary or subsidiaries, except where such sale, lease, transfer, exclusive license or other disposition is to a wholly owned subsidiary of the Corporation.

2.3.2 Effecting a Deemed Liquidation Event.

(a) The Corporation shall not have the power to effect a Deemed Liquidation Event referred to in Subsection 2.3.1(a)(i) unless the agreement or plan of merger or consolidation for such transaction (the "**Merger Agreement**") provides that the consideration payable to the stockholders of the Corporation shall be allocated among the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2.

(b) In the event of a Deemed Liquidation Event referred to in Subsection 2.3.1(a)(ii) or 2.3.1(b), if the Corporation does not effect a dissolution of the Corporation under the General Corporation Law within ninety (90) days after such Deemed Liquidation Event, then (i) the Corporation shall send a written notice to each holder of Preferred Stock (the "**Redemption Notice**") no later than the ninetieth (90th) day after the Deemed Liquidation Event advising such holders of their right (and the requirements to be met to secure such right) pursuant to the terms of the following clause; (ii) to require the redemption of such shares of Preferred Stock, and (iii) if the Requisite Holders so request in a written instrument delivered to the Corporation not later than one hundred twenty (120) days after such Deemed Liquidation Event, the Corporation shall use the consideration received by the Corporation for such Deemed Liquidation Event (net of any retained liabilities associated with the assets sold or technology licensed, as determined in good faith by the Board of Directors of the Corporation)**,** together with any other assets of the Corporation available for distribution to its stockholders, all to the extent permitted by Delaware law governing distributions to stockholders (the "**Available Proceeds**"), on the one hundred fiftieth (150th) day after such Deemed Liquidation Event, to redeem all outstanding shares of Preferred Stock at a price per share equal to the applicable Liquidation Amount. Notwithstanding the foregoing, in the event of a redemption pursuant to the preceding sentence, if the Available Proceeds are not sufficient to redeem all outstanding shares of Preferred Stock, the Corporation shall ratably redeem each holder's shares of Preferred Stock to the fullest extent of such Available Proceeds based on the respective amounts which would otherwise be payable in respect of the shares to be redeemed if the Available Proceeds were sufficient to redeem such shares, and shall redeem the remaining shares as soon as it may lawfully do so under Delaware law governing distributions to stockholders.

(i) Each Redemption Notice shall state: (1) the number of shares of Preferred Stock held by the holder that the Corporation shall redeem; (2) the date of redemption (the "**Redemption Date**") and the amount to be paid to such holder; and (3) for holders of shares in certificated form, that the holder is to surrender to the Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of Preferred Stock to be redeemed.

(ii) On or before the Redemption Date, each holder of shares of Preferred Stock to be redeemed shall surrender the certificate or certificates representing such shares (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation, in the manner and at the place designated in the Redemption Notice, and thereupon the Available Proceeds for such shares shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof.

Prior to the distribution or redemption provided for in this Subsection 2.3.2(b), the Corporation shall not expend or dissipate the consideration received for such Deemed Liquidation Event, except to discharge expenses incurred in connection with such Deemed Liquidation Event or in the ordinary course of business.

2.3.3 Amount Deemed Paid or Distributed. The amount deemed paid or distributed to the holders of capital stock of the Corporation upon any such merger, consolidation, sale, transfer, exclusive license, other disposition or redemption shall be the cash or the value of the property, rights or securities paid or distributed to such holders pursuant to such Deemed Liquidation Event. The value of such property, rights or securities shall be determined in good faith by the Board of Directors of the Corporation, including at least three of the Preferred Directors.

2.3.4 Allocation of Escrow and Contingent Consideration. In the event of a Deemed Liquidation Event pursuant to Subsection 2.3.1(a)(i), if any portion of the consideration payable to the stockholders of the Corporation is payable only upon satisfaction of contingencies (the "**Additional Consideration**"), the Merger Agreement shall provide that (a) the portion of such consideration that is not Additional Consideration (such portion, the "**Initial Consideration**") shall be allocated among the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2 as if the Initial Consideration were the only consideration payable in connection with such Deemed Liquidation Event; and (b) any Additional Consideration which becomes payable to the stockholders of the Corporation upon satisfaction of such contingencies shall be allocated among the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2 after taking into account the previous payment of the Initial Consideration as part of the same transaction. For the purposes of this Subsection 2.3.4, consideration placed into escrow or retained as holdback to be available for satisfaction of indemnification or similar obligations in connection with such Deemed Liquidation Event shall be deemed to be Additional Consideration.

3. Voting.

3.1 General. On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written consent of stockholders in lieu of meeting), each holder of outstanding shares of Preferred Stock shall be entitled to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of Preferred Stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law or by the other provisions of the Certificate of Incorporation, holders of Preferred Stock shall vote together with the holders of Common Stock as a single class.

3.2 Election of Directors. The Requisite Holders shall be entitled to elect five (5) directors of the Corporation (the "**Preferred Directors**") and the holders of record of the shares of Common Stock, exclusively and as a separate class, shall be entitled to elect one (1) director of the Corporation. Any director elected as provided in the preceding sentence may be removed without cause by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders. If the holders of shares of Preferred Stock or Common Stock, as the case may be, fail to elect a sufficient number of directors to fill all directorships for which they are entitled to

elect directors, voting exclusively and as a separate class, pursuant to the first sentence of this Subsection 3.2, then any directorship not so filled shall remain vacant until such time as the holders of the Preferred Stock or Common Stock, as the case may be, elect a person to fill such directorship by vote or written consent in lieu of a meeting; and no such directorship may be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect a person to fill such directorship, voting exclusively and as a separate class. The holders of record of the shares of Common Stock and of any other class or series of voting stock (including the Preferred Stock), exclusively and voting together as a single class and on an as-converted basis, shall be entitled to elect the balance of the total number of directors of the Corporation. At any meeting held for the purpose of electing a director, the presence in person or by proxy of the holders of a majority of the outstanding shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director. Except as otherwise provided in this Subsection 3.2, a vacancy in any directorship filled by the holders of any class or series shall be filled only by vote or written consent in lieu of a meeting of the holders of such class or series or by any remaining director or directors elected by the holders of such class or series pursuant to this Subsection 3.2. The rights of the holders of the Preferred Stock and the rights of the holders of the Common Stock under the first sentence of this Subsection 3.2 shall terminate on the first date following the Series A-2 Original Issue Date (as defined below) on which there are less than 10,000,000 shares of Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination, or other similar recapitalization with respect to the Preferred Stock) issued and outstanding.

3.3 Preferred Stock Protective Provisions. At any time when any shares of Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Preferred Stock) are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or the Certificate of Incorporation) the written consent or affirmative vote of the Requisite Holders (which, following the issuance of Series B Preferred Stock must include the holders of at least a majority of the Series B Preferred Stock then held by the Series B Large Investors), given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect:

3.3.1 liquidate, dissolve or wind-up the business and affairs of the Corporation, effect any merger or consolidation or any other Deemed Liquidation Event, or consent to any of the foregoing;

3.3.2 amend, waive, alter or repeal any provision of the Certificate of Incorporation or Bylaws of the Corporation;

3.3.3 other than as contemplated by the Agreement and Plan of Merger by and among the Company, Sana Biotechnology IV, Inc., Cobalt Biomedicine, Inc., and VentureLabs VI, Inc., dated as of December 20, 2018, as amended (the "**Cobalt Merger Agreement**"), create, or authorize the creation of (by reclassification or otherwise), or issue or obligate itself to issue shares of any additional class or series of capital stock unless the same ranks junior to each series of Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption, or increase the authorized number of shares of Preferred Stock or any series thereof or increase the authorized number of shares of any additional class or series of capital stock unless the same ranks junior to each series of Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption;

3.3.4 (i) reclassify, alter or amend any existing security of the Corporation that is *pari passu* with any series of Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to any series of Preferred Stock in respect of any such right, preference, or privilege or (ii) reclassify, alter or amend any existing security of the Corporation that is junior to any series of Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to or *pari passu* with any series of Preferred Stock in respect of any such right, preference or privilege; or

3.3.5 purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than (i) redemptions of or dividends or distributions on the Preferred Stock as expressly authorized herein, (ii) dividends or other distributions payable on the Common Stock solely in the form of additional shares of Common Stock, and (iii) repurchases of stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service at the lower of the original purchase price or the then-current fair market value thereof.

3.3.6 create, or hold capital stock in, any subsidiary that is not wholly owned (either directly or through one or more other subsidiaries) by the Corporation, or permit any subsidiary to create, or authorize the creation of, or issue or obligate itself to issue, any shares of any class or series of capital stock, or sell, transfer or otherwise dispose of any capital stock of any direct or indirect subsidiary of the Corporation, or permit any direct or indirect subsidiary to sell, lease, transfer, exclusively license or otherwise dispose (in a single transaction or series of related transactions) of all or substantially all of the assets of such subsidiary;

3.3.7 increase or decrease the authorized number of directors constituting the Board of Directors;

3.3.8 create, or authorize the creation of, or issue, or authorize the issuance of any debt security or create any lien or security interest (except for purchase money liens or statutory liens of landlords, mechanics, materialmen, workmen, warehousemen and other similar persons arising or incurred in the ordinary course of business) or incur other indebtedness for borrowed money, or permit any subsidiary to take any such action with respect to any debt security lien, security interest or other indebtedness for borrowed money, if the aggregate indebtedness of the Corporation and its subsidiaries for borrowed money following such action would exceed $25,000,000, unless such debt security has received the prior approval of the Board of Directors, including the approval of at least three of the Preferred Directors; or

3.3.9 enter into an agreement to do any of the foregoing.

3.4 Series A Preferred Stock Protective Provisions. At any time when shares of Series A-1 Preferred Stock or Series A-2 Preferred Stock (collectively, the "**Series A Preferred Stock**") are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, amend, alter or repeal any provision of the Certificate of Incorporation or Bylaws of the Corporation in a manner that adversely affects the powers, preferences or rights of the Series A Preferred Stock without (in addition to any other vote required by law or the Certificate of Incorporation) the written consent or affirmative vote of the holders of a majority of the then outstanding shares of Series A Preferred Stock, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect (acknowledging, for purposes of clarity, that the creation or issuance of a senior class or series of security shall not be deemed to adversely affect the powers, preferences or rights of the Series A Preferred Stock).

3.5 Series B Preferred Stock Protective Provisions. At any time when shares of Series B Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, amend, alter or repeal any provision of the Certificate of Incorporation or Bylaws of the Corporation in a manner that adversely affects the powers, preferences or rights of the Series B Preferred Stock without (in addition to any other vote required by law or the Certificate of Incorporation) the written consent or affirmative vote of (i) at any time when shares of Series B Preferred Stock are outstanding, the holders of a majority of the then outstanding shares of Series B Preferred Stock, which must include the holders of at least a majority of the Series B Preferred Stock then held by the Series B Large Investors, or (ii) at any time prior to the issuance of shares of Series B Preferred Stock, the Series B Large Investors representing at least a majority of the Series B Preferred Stock that all Series B Large Investors have committed to purchase pursuant to the Purchase Agreement, in either case given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio*, and of no force or effect (acknowledging, for purposes of clarity, that the creation or issuance of a senior class or series of security shall not be deemed to adversely affect the powers, preferences or rights of the Series B Preferred Stock).

4. Optional Conversion.

The holders of the Preferred Stock shall have conversion rights as follows (the "**Conversion Rights**"):

4.1 Right to Convert.

4.1.1 Conversion Ratio. Each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of Common Stock as is determined by dividing the applicable Original Issue Price by the applicable Conversion Price (as defined below) in effect at the time of conversion. The "**Conversion Price**" shall initially be equal to the applicable Original Issue Price. Such initial Conversion Price, and the rate at which shares of Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.1.2 Termination of Conversion Rights. In the event of a liquidation, dissolution or winding up of the Corporation or a Deemed Liquidation Event, the Conversion Rights shall terminate at the close of business on the last full day preceding the date fixed for the payment of any such amounts distributable on such event to the holders of Preferred Stock.

4.2 Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of the Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of a share of Common Stock as determined in good faith by the Board of Directors of the Corporation. Whether or not fractional shares would be issuable upon such conversion shall be determined on the basis of the total number of shares of Preferred Stock the holder is at the time converting into Common Stock and the aggregate number of shares of Common Stock issuable upon such conversion.

4.3 Mechanics of Conversion.

4.3.1 Notice of Conversion. In order for a holder of Preferred Stock to voluntarily convert shares of Preferred Stock into shares of Common Stock, such holder shall (a) provide written notice to the Corporation's transfer agent at the office of the transfer agent for the applicable series of Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent) that such holder elects to convert all or any number of such holder's shares of Preferred Stock and, if applicable, any event on which such conversion is contingent and (b), if such holder's shares are certificated, surrender the certificate or certificates for such shares of Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate), at the office of the transfer agent for the applicable series of Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent). Such notice shall state such holder's name or the names of the nominees in which such holder wishes the shares of Common Stock to be issued. If required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or his, her or its attorney duly authorized in writing. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such notice and, if applicable, certificates (or lost certificate affidavit and agreement) shall be the time of conversion (the "**Conversion Time**"), and the shares of Common Stock issuable upon conversion of the specified shares shall be deemed to be outstanding of record as of such date. The Corporation shall, as soon as practicable after the Conversion Time (i) issue and deliver to such holder of Preferred Stock, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions hereof and a certificate for the number (if any) of the shares of Preferred Stock represented by the surrendered certificate that were not converted into Common Stock, (ii) pay in cash such amount as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and (iii) pay all declared but unpaid dividends on the shares of Preferred Stock converted.

4.3.2 Reservation of Shares. The Corporation shall at all times when the Preferred Stock shall be outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of the Preferred Stock, such number of its duly authorized shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to the Certificate of Incorporation. Before taking any action which would cause an adjustment reducing any Conversion Price below the then par value of the shares of Common Stock issuable upon conversion of the corresponding series of Preferred Stock, the Corporation will take any corporate action which may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and non-assessable shares of Common Stock at such adjusted Conversion Price.

4.3.3 Effect of Conversion. All shares of Preferred Stock which shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except only the right of the holders thereof to receive shares of Common Stock in exchange therefor, to receive payment in lieu of any fraction of a share otherwise issuable upon such conversion as provided in Subsection 4.2 and to receive payment of any dividends declared but unpaid thereon. Any shares of Preferred Stock so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Preferred Stock (and each applicable corresponding series thereof) accordingly.

4.3.4 No Further Adjustment. Upon any such conversion, no adjustment to the applicable Conversion Price shall be made for any declared but unpaid dividends on the Preferred Stock surrendered for conversion or on the Common Stock delivered upon conversion.

4.3.5 Taxes. The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of Common Stock upon conversion of shares of Preferred Stock pursuant to this Section 4. The Corporation shall not, however, be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of shares of Common Stock in a name other than that in which the shares of Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

4.4 Adjustments to Conversion Price for Diluting Issues.

4.4.1 Special Definitions. For purposes of this Article Fourth, the following definitions shall apply:

(a) "**Option**" shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(b) "**Series A-2 Original Issue Date**" shall mean the date on which the first share of Series A-2 Preferred Stock was issued.

(c) "**Convertible Securities**" shall mean any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock, but excluding Options.

(d) "**Additional Shares of Common Stock**" shall mean all shares of Common Stock issued (or, pursuant to Subsection 4.4.3 below, deemed to be issued) by the Corporation after the Series A-2 Original Issue Date, other than (1) the following shares of Common Stock and (2) shares of Common Stock deemed issued pursuant to the following Options and Convertible Securities (clauses (1) and (2), collectively, "**Exempted Securities**"):

(i) shares of Common Stock, Options or Convertible Securities issued as a dividend or distribution on Preferred Stock;

(ii) shares of Common Stock, Options or Convertible Securities issued by reason of a dividend, stock split, split-up or other distribution on shares of Common Stock for which an adjustment to any Conversion Price is made pursuant to Subsection 4.5, 4.6, 4.7 or 4.8;

(iii) shares of Common Stock or Options issued to employees or directors of, or consultants or advisors to, the Corporation or any of its subsidiaries pursuant to a plan, agreement or arrangement approved by the Board of Directors, including at least three of the Preferred Directors;

(iv) shares of Common Stock or Convertible Securities actually issued upon the exercise of Options or shares of Common Stock actually issued upon the conversion or exchange of Convertible Securities, in each case provided such issuance is pursuant to the terms of such Option or Convertible Security;

(v) shares of Common Stock, Options or Convertible Securities issued to banks, equipment lessors or other financial institutions, or to real property lessors, pursuant to a debt financing, equipment leasing or real property leasing transaction approved by the Board of Directors, including at least three of the Preferred Directors;

(vi) shares of Common Stock, Options or Convertible Securities issued pursuant to the acquisition of another corporation by the Corporation by merger, purchase of substantially all of the assets or other reorganization or to a joint venture agreement, provided that such issuances are approved by the Board of Directors, including at least three of the Preferred Directors; or

(vii) shares of Common Stock, Options or Convertible Securities issued in connection with sponsored research, collaboration, technology license, development, marketing or other similar agreements or strategic partnerships approved by the Board of Directors, including at least three of the Preferred Directors;

(viii) shares of Common Stock or Series A-2 Preferred Stock issued pursuant to the Cobalt Merger Agreement; or

(ix) shares of Common Stock issued in an underwritten public offering of the Corporation's Common Stock pursuant to a registration statement under the Securities Act of 1933, as amended.

4.4.2 No Adjustment of Conversion Price. No adjustment in any Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the Requisite Holders agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock. Notwithstanding the foregoing, in the event that the issuance or deemed issuance of Additional Shares of Common Stock is at a price per share that is less than the Series B Original Issue Price but greater than the Series A-2 Original Issue Price, any waiver to the adjustment of the Series B Conversion Price in connection with such issuance or deemed issuance shall require the prior written consent of the Requisite Holders which must include, in this instance, the holders of at least a majority of the Series B Preferred Stock then held by the Series B Large Investors.

4.4.3 Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Series A-2 Original Issue Date shall issue any Options or Convertible Securities (excluding Options or Convertible Securities which are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any conditions to exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to any Conversion Price pursuant to the terms of Subsection 4.4.4, are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any such Option or Convertible Security or (2) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the applicable Conversion Price computed upon the original issue of such Option or Convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such Conversion Price as would have obtained had such revised terms been in effect upon the original date of issuance of such Option or Convertible Security. Notwithstanding the foregoing, no readjustment pursuant to this clause (b) shall have the effect of increasing the applicable Conversion Price to an amount which exceeds the lower of (i) the applicable Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (ii) the applicable Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible Security (excluding Options or Convertible Securities which are themselves Exempted Securities), the issuance of which did not result in an adjustment to any Conversion Price pursuant to the terms of Subsection 4.4.4 (either because the consideration per share (determined pursuant to Subsection 4.4.5) of the Additional Shares of Common Stock subject thereto was equal to or greater than each Conversion Price then in effect, or because such Option or Convertible Security was issued before the Series A-2 Original Issue Date), are revised after the Series A-2 Original Issue Date as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or Convertible Security or (2) any decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or Convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in Subsection 4.4.3(a)) shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) which resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to any Conversion Price pursuant to the terms of Subsection 4.4.4, the applicable Conversion Price shall be readjusted to such Conversion Price as would have obtained had such Option or Convertible Security (or portion thereof) never been issued.

(e) If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to any Conversion Price provided for in this Subsection 4.4.3 shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) of this Subsection 4.4.3). If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, cannot be calculated at all at the time such Option or Convertible Security is issued or amended, any adjustment to any Conversion Price that would result under the terms of this Subsection 4.4.3 at the time of such issuance or amendment shall instead be effected at the time such number of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to the applicable Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

4.4.4 Adjustment of Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Series A-2 Original Issue Date issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Subsection 4.4.3), without consideration or for a consideration per share less than any Conversion Price in effect immediately prior to such issue (for a series of Preferred Stock with shares then-outstanding), then the applicable Conversion Price shall be reduced, concurrently with such issue, to a price (calculated to the nearest one-hundredth of a cent) determined in accordance with the following formula:

$$CP_2 = CP_1 * (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(a) "CP_2" shall mean the Conversion Price in effect immediately after such issue of Additional Shares of Common Stock

(b) "CP_1" shall mean the Conversion Price in effect immediately prior to such issue of Additional Shares of Common Stock;

(c) “A” shall mean the number of shares of Common Stock outstanding immediately prior to such issue of Additional Shares of Common Stock (treating for this purpose as outstanding all shares of Common Stock issuable upon exercise of Options outstanding immediately prior to such issue or upon conversion or exchange of Convertible Securities (including the Preferred Stock) outstanding (assuming exercise of any outstanding Options therefor) immediately prior to such issue);

(d) “B” shall mean the number of shares of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued at a price per share equal to CP_1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP_1); and

(e) “C” shall mean the number of such Additional Shares of Common Stock issued in such transaction.

4.4.5 Determination of Consideration. For purposes of this Subsection 4.4, the consideration received by the Corporation for the issue of any Additional Shares of Common Stock shall be computed as follows:

(a) Cash and Property: Such consideration shall:

(i) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest;

(ii) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board of Directors of the Corporation; and

(iii) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board of Directors of the Corporation.

(b) Options and Convertible Securities. The consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to Subsection 4.4.3, relating to Options and Convertible Securities, shall be determined by dividing:

(i) The total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities, by

(ii) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities.

4.4.6 Multiple Closing Dates. In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to any Conversion Price pursuant to the terms of Subsection 4.4.4, and such issuance dates occur within a period of no more than ninety (90) days from the first such issuance to the final such issuance, then, upon the final such issuance, the applicable Conversion Price shall be readjusted to give effect to all such issuances as if they occurred on the date of the first such issuance (and without giving effect to any additional adjustments as a result of any such subsequent issuances within such period).

4.5 Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time after the Series A-2 Original Issue Date effect a subdivision of the outstanding Common Stock, each Conversion Price in effect immediately before that subdivision shall be proportionately decreased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Common Stock outstanding. If the Corporation shall at any time or from time to time after the Series A-2 Original Issue Date combine the outstanding shares of Common Stock, each Conversion Price in effect immediately before the combination shall be proportionately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of Common Stock outstanding. Any adjustment under this subsection shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.6 Adjustment for Certain Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series A-2 Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable on the Common Stock in additional shares of Common Stock, then and in each such event each Conversion Price in effect immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying each Conversion Price then in effect by a fraction:

(1) the numerator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date, and

(2) the denominator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of shares of Common Stock issuable in payment of such dividend or distribution.

Notwithstanding the foregoing (a) if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, each Conversion Price shall be recomputed accordingly as of the close of business on such record date and thereafter each Conversion Price shall be adjusted pursuant to this subsection as of the time of actual payment of such dividends or distributions; and (b) that no such adjustment shall be made if the holders of each series of Preferred Stock simultaneously receive a dividend or other distribution of shares of Common Stock in a number equal to the number of shares of Common Stock as they would have received if all outstanding shares of Preferred Stock had been converted into Common Stock on the date of such event.

4.7 Adjustments for Other Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series A-2 Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the Corporation (other than a distribution of shares of Common Stock in respect of outstanding shares of Common Stock) or in other property and the provisions of Section 1 do not apply to such dividend or distribution, then and in each such event the holders of Preferred Stock shall receive, simultaneously with the distribution to the holders of Common Stock, a dividend or other distribution of such securities or other property in an amount equal to the amount of such securities or other property as they would have received if all outstanding shares of Preferred Stock had been converted into Common Stock on the date of such event.

4.8 Adjustment for Merger or Reorganization, etc. Subject to the provisions of Subsection 2.3, if there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation in which the Common Stock (but not the Preferred Stock) is converted into or exchanged for securities, cash or other property (other than a transaction covered by Subsections 4.4, 4.6 or 4.7), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of Preferred

Stock shall thereafter be convertible in lieu of the Common Stock into which it was convertible prior to such event into the kind and amount of securities, cash or other property which a holder of the number of shares of Common Stock of the Corporation issuable upon conversion of one share of Preferred Stock immediately prior to such reorganization, recapitalization, reclassification, consolidation or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment (as determined in good faith by the Board of Directors of the Corporation) shall be made in the application of the provisions in this Section 4 with respect to the rights and interests thereafter of the holders of the Preferred Stock, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the Conversion Price) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of the Preferred Stock.

4.9 Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of any Conversion Price pursuant to this Section 4, the Corporation at its expense shall, as promptly as reasonably practicable but in any event not later than ten (10) days thereafter, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of Preferred Stock a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the Preferred Stock is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, as promptly as reasonably practicable after the written request at any time of any holder of Preferred Stock (but in any event not later than ten (10) days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (i) each Conversion Price then in effect, and (ii) the number of shares of Common Stock and the amount, if any, of other securities, cash or property which then would be received upon the conversion of Preferred Stock.

4.10 Notice of Record Date. In the event:

(a) the Corporation shall take a record of the holders of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of capital stock of any class or any other securities, or to receive any other security; or

(b) of any capital reorganization of the Corporation, any reclassification of the Common Stock of the Corporation, or any Deemed Liquidation Event; or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Corporation,

then, and in each such case, the Corporation will send or cause to be sent to the holders of the Preferred Stock a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the Preferred Stock) shall be entitled to exchange their shares of Common Stock (or such other capital stock or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to the Preferred Stock and the Common Stock. Such notice shall be sent at least ten (10) days prior to the record date or effective date for the event specified in such notice.

5. Mandatory Conversion.

5.1 Trigger Events. Upon either (a) the point in time immediately prior to the closing of the sale of shares of Common Stock in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, resulting in at least $75,000,000 of gross proceeds to the Corporation, provided, that, following the first issuance of shares of Series B Preferred Stock, the sale of such shares of Common Stock are at a price to the public of at least $4.00 per share (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Common Stock) (a "**Qualified IPO**") or (b) the date and time, or the occurrence of an event, specified by vote or written consent of the Requisite Holders; provided, that, following the first issuance of shares of Series B Preferred Stock, in the event that the price per share of the Common Stock immediately following the proposed conversion of Preferred Stock is less than the Series B Original Issue Price but greater than the Series A-2 Original Issue Price (for purposes of clarity (x) in the event that the conversion is in connection with an initial public offering, the price per share of Common Stock shall be deemed to be the initial offering price to the public, (y) in the event such conversion is in connection with a Deemed Liquidation Event, the price per share of Common Stock shall be deemed to be the consideration per share of Common Stock payable in such Deemed Liquidation Event, and (z) in any other event, the price per share of Common Stock shall be the fair market value as reasonably determined in good faith by the Board of Directors), the prior written consent of the holders of at least a majority of the Series B Preferred Stock then held by the Series B Large Investors shall be required in addition to the vote or written consent of the Requisite Holders (the time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as the "**Mandatory Conversion Time**"), then (i) all outstanding shares of Preferred Stock shall automatically be converted into shares of Common Stock, at the then effective conversion rate as calculated pursuant to Subsection 4.1.1. and (ii) such shares may not be reissued by the Corporation.

5.2 Procedural Requirements. All holders of record of shares of Preferred Stock shall be sent written notice of the Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of Preferred Stock pursuant to this Section 5. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of Preferred Stock in certificated form shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the Preferred Stock converted pursuant to Subsection 5.1, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the Mandatory

Conversion Time (notwithstanding the failure of the holder or holders thereof to surrender any certificates at or prior to such time), except only the rights of the holders thereof, upon surrender of any certificate or certificates of such holders (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the next sentence of this Subsection 5.2. As soon as practicable after the Mandatory Conversion Time and, if applicable, the surrender of any certificate or certificates (or lost certificate affidavit and agreement) for Preferred Stock, the Corporation shall (a) issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof and (b) pay cash as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and the payment of any declared but unpaid dividends on the shares of Preferred Stock converted. Such converted Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Preferred Stock and each series thereof accordingly.

5A. Special Mandatory Conversion.

5A.1. Trigger Event. In the event that a holder of Series A-2 Preferred Stock who is obligated to purchase shares of Series B Preferred Stock pursuant to the Purchase Agreement does not purchase in full its Series B Closing Allocation (as defined in the Purchase Agreement), but subject to the provisions of Section 1.2(d) of the Purchase Agreement, then each share of Preferred Stock held by such holder shall automatically, and without any further action on the part of such holder, be converted into shares of Common Stock at a 10:1 ratio (i.e. every 10 shares of Preferred Stock shall convert into one share of Common Stock), effective upon, subject to, and concurrently with, the consummation of the Series B Closing (as defined in the Purchase Agreement). Such conversion is referred to as a "**Special Mandatory Conversion**." For purposes of determining the number of shares of Series B Preferred Stock purchased by a holder at the Series B Closing, any Affiliate (as defined in the Purchase Agreement) or group of Affiliates of such holder shall be permitted to purchase up to all of such holder's Series B Closing Allocation on behalf of such holder (provided that no purchased shares or securities shall be attributed to more than one holder within any such group of Affiliates), and any purchases made by such Affiliate or group of Affiliates on behalf of such holder shall be deemed to have been made by such holder for purposes of this Section 5A.1.

5A.2. Procedural Requirements. Upon a Special Mandatory Conversion, each holder of shares of Preferred Stock converted pursuant to Subsection 5A.1 shall be sent written notice of such Special Mandatory Conversion and the place designated for mandatory conversion of all such shares of Preferred Stock pursuant to this Section 5A. Upon receipt of such notice, each holder of such shares of Preferred Stock in certificated form shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that any such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the

Preferred Stock converted pursuant to Subsection 5A.1, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the time of the Special Mandatory Conversion (notwithstanding the failure of the holder or holders thereof to surrender any certificates for such shares at or prior to such time), except only the rights of the holders thereof, upon surrender of any certificate or certificates of such holders therefor (or lost certificate affidavit and agreement), to receive the items provided for in the next sentence of this Subsection 5A.2. As soon as practicable after the Special Mandatory Conversion and, if applicable, the surrender of any certificate or certificates (or lost certificate affidavit and agreement) for Preferred Stock so converted, the Corporation shall (a) issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof and (b) pay cash as provided in Subsection 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and the payment of any declared but unpaid dividends on the shares of Preferred Stock converted. Such converted Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Preferred Stock and each applicable series accordingly.

6. Redemption. The Preferred Stock is not redeemable upon demand by the holders of the Preferred Stock except in accordance with Subsection 2.3.2(b).

7. Redeemed or Otherwise Acquired Shares. Any shares of Preferred Stock that are redeemed or otherwise acquired by the Corporation or any of its subsidiaries shall be automatically and immediately cancelled and retired and shall not be reissued, sold or transferred. Neither the Corporation nor any of its subsidiaries may exercise any voting or other rights granted to the holders of Preferred Stock following redemption.

8. Waiver. Any of the rights, powers, preferences and other terms of the Preferred Stock set forth herein may be waived on behalf of all holders of Preferred Stock by the affirmative written consent or vote of the Requisite Holders (which, following the issuance of Series B Preferred Stock must include the holders of at least a majority of the Series B Preferred Stock then held by the Series B Large Investors).

9. Notices. Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation, or given by electronic communication in compliance with the provisions of the General Corporation Law, and shall be deemed sent upon such mailing or electronic transmission.

FIFTH: Subject to any additional vote required by the Certificate of Incorporation or Bylaws, in furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, repeal, alter, amend and rescind any or all of the Bylaws of the Corporation.

SIXTH: Subject to any additional vote required by the Certificate of Incorporation, the number of directors of the Corporation shall be determined in the manner set forth in the Bylaws of the Corporation. Each director shall be entitled to one vote on each matter presented to the Board of Directors; provided, however, that, so long as the holders of Preferred Stock are entitled to elect a Preferred Director, the affirmative vote of the lesser of (i) three

Preferred Directors, or (ii) all then-serving Preferred Directors, shall be required for the authorization by the Board of Directors of any of the matters set forth in Section 5.4 of the Amended and Restated Investors' Rights Agreement, dated on or about the Series A-2 Original Issue Date, by and among the Corporation and the other parties thereto, as such agreement may be amended from time to time

SEVENTH: Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

EIGHTH: Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws of the Corporation may provide. The books of the Corporation may be kept outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

NINTH: To the fullest extent permitted by law, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the General Corporation Law or any other law of the State of Delaware is amended after approval by the stockholders of this Article Ninth to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law as so amended.

Any repeal or modification of the foregoing provisions of this Article Ninth by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of, or increase the liability of any director of the Corporation with respect to any acts or omissions of such director occurring prior to, such repeal or modification.

TENTH: To the fullest extent permitted by applicable law, the Corporation is authorized to provide indemnification of (and advancement of expenses to) directors, officers and agents of the Corporation (and any other persons to which General Corporation Law permits the Corporation to provide indemnification) through Bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise, in excess of the indemnification and advancement otherwise permitted by Section 145 of the General Corporation Law.

Any amendment, repeal or modification of the foregoing provisions of this Article Tenth shall not adversely affect any right or protection of any director, officer or other agent of the Corporation existing at the time of such amendment, repeal or modification.

ELEVENTH: The Corporation renounces, to the fullest extent permitted by law, any interest or expectancy of the Corporation in, or in being offered an opportunity to participate in, any Excluded Opportunity. An "**Excluded Opportunity**" is any matter, transaction or interest that is presented to, or acquired, created or developed by, or which otherwise comes into the possession of (i) any director of the Corporation who is not an employee of the Corporation or any of its subsidiaries, or (ii) any holder of Preferred Stock or any partner, member, director, stockholder, employee, affiliate or agent of any such holder, other than someone who is an employee of the Corporation or any of its subsidiaries (collectively, the persons referred to in clauses (i) and (ii) are "**Covered Persons**"), unless such matter, transaction or interest is presented

to, or acquired, created or developed by, or otherwise comes into the possession of, a Covered Person expressly and solely in such Covered Person's capacity as a director of the Corporation while such Covered Person is performing services in such capacity. Any repeal or modification of this Article Eleventh will only be prospective and will not affect the rights under this Article Eleventh in effect at the time of the occurrence of any actions or omissions to act giving rise to liability. Notwithstanding anything to the contrary contained elsewhere in this Amended and Restated Certificate of Incorporation, the affirmative vote of the Requisite Holders will be required to amend or repeal, or to adopt any provisions inconsistent with this Article Eleventh.

TWELFTH: Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery in the State of Delaware shall be the sole and exclusive forum for any stockholder (including a beneficial owner) to bring (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of fiduciary duty owed by any director, officer or other employee of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim against the Corporation, its directors, officers or employees arising pursuant to any provision of the Delaware General Corporation Law or the Corporation's certificate of incorporation or bylaws or (iv) any action asserting a claim against the Corporation, its directors, officers or employees governed by the internal affairs doctrine, except for, as to each of (i) through (iv) above, any claim as to which the Court of Chancery determines that there is an indispensable party not subject to the jurisdiction of the Court of Chancery (and the indispensable party does not consent to the personal jurisdiction of the Court of Chancery within ten days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery, or for which the Court of Chancery does not have subject matter jurisdiction. If any provision or provisions of this Article Twelfth shall be held to be invalid, illegal or unenforceable as applied to any person or entity or circumstance for any reason whatsoever, then, to the fullest extent permitted by law, the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Article Twelfth (including, without limitation, each portion of any sentence of this Article Twelfth containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) and the application of such provision to other persons or entities and circumstances shall not in any way be affected or impaired thereby.

THIRTEENTH: For purposes of Section 500 of the California Corporations Code (to the extent applicable), in connection with any repurchase of shares of Common Stock permitted under this Certificate of Incorporation from employees, officers, directors or consultants of the Corporation in connection with a termination of employment or services pursuant to agreements or arrangements approved by the Board of Directors (in addition to any other consent required under this Certificate of Incorporation), such repurchase may be made without regard to any "preferential dividends arrears amount" or "preferential rights amount" (as those terms are defined in Section 500 of the California Corporations Code). Accordingly, for purposes of making any calculation under California Corporations Code Section 500 in connection with such repurchase, the amount of any "preferential dividends arrears amount" or "preferential rights amount" (as those terms are defined therein) shall be deemed to be zero (0).

* * *

3. That the foregoing amendment and restatement was approved by the holders of the requisite number of shares of this corporation in accordance with Section 228 of the General Corporation Law.

4. That this Amended and Restated Certificate of Incorporation, which restates and integrates and further amends the provisions of this Corporation's Certificate of Incorporation, has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law.

IN WITNESS WHEREOF, this Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on this 13th day of February, 2019.

By: /s/ Steven D. Harr, M.D.
Name: Steven D. Harr, M.D.
Title: Chief Executive Officer

Exhibit 3.1(b)

CERTIFICATE OF AMENDMENT
TO THE
AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
SANA BIOTECHNOLOGY, INC.

Sana Biotechnology, Inc. (the "**Company**"), a corporation organized and existing under and by virtue of the Delaware General Corporation Law, hereby certifies as follows:

1. The name of the Company is Sana Biotechnology, Inc., and that this corporation was originally incorporated pursuant to the Delaware General Corporation Law on July 13, 2018 under the name FD Therapeutics, Inc. An Amended and Restated Certificate of Incorporation of the Company was filed with the Secretary of State of Delaware on February 13, 2019.

2. This Certificate of Amendment to the Company's Amended and Restated Certificate of Incorporation has been duly adopted and approved by the Board of Directors of the Company, acting in accordance with the provisions of Sections 141 and 242 of the Delaware General Corporation Law, and the Company's stockholders have given their written consent in accordance with Section 228 of the Delaware General Corporation Law.

3. The first paragraph of Article FOURTH of the Amended and Restated Certificate of Incorporation is hereby amended to read in its entirety as follows:

   "**FOURTH**: The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 700,000,000 shares of Common Stock, $0.0001 par value per share (the "**Common Stock**") and (ii) 537,786,206 shares of Preferred Stock, $0.0001 par value per share (the "**Preferred Stock**")."

4. The first paragraph of Article FOURTH, Section B of the Amended and Restated Certificate of Incorporation is hereby amended to read in its entirety as follows:

   "45,850,000 shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series A-1 Preferred Stock**," 381,708,500 shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series A-2 Preferred Stock**" and 110,227,706 shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series B Preferred Stock**," each with the following rights, preferences, powers, privileges and restrictions, qualifications and limitations. Unless otherwise indicated, references to "sections" or "subsections" in this Part B of this Article Fourth refer to sections and subsections of Part B of this Article Fourth."

5. All other provisions of the Amended and Restated Certificate of Incorporation shall remain in full force and effect.

[Signature page follows]

IN WITNESS WHEREOF, this Certificate of Amendment to the Amended and Restated Certificate of Incorporation has been signed this 3rd day of October, 2019.

SANA BIOTECHNOLOGY, INC.

By: /s/ Steven Harr, M.D.
Name: Steven Harr, M.D.
Title: Chief Executive Officer

Exhibit 3.1(c)

CERTIFICATE OF AMENDMENT
TO THE
AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
SANA BIOTECHNOLOGY, INC.

Sana Biotechnology, Inc. (the "**Company**"), a corporation organized and existing under and by virtue of the Delaware General Corporation Law, hereby certifies as follows:

1. The name of the Company is Sana Biotechnology, Inc., and that this corporation was originally incorporated pursuant to the Delaware General Corporation Law on July 13, 2018 under the name FD Therapeutics, Inc. An Amended and Restated Certificate of Incorporation of the Company was filed with the Secretary of State of Delaware on February 13, 2019. An amendment to the Amended and Restated Certificate of Incorporation of the Company was filed with the Secretary of State of Delaware on October 3, 2019.

2. This Certificate of Amendment to the Company's Amended and Restated Certificate of Incorporation has been duly adopted and approved by the Board of Directors of the Company, acting in accordance with the provisions of Sections 141 and 242 of the Delaware General Corporation Law, and the Company's stockholders have given their written consent in accordance with Section 228 of the Delaware General Corporation Law.

3. The first paragraph of Article FOURTH of the Amended and Restated Certificate of Incorporation is hereby amended to read in its entirety as follows:

   "**FOURTH**: The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 706,000,000 shares of Common Stock, $0.0001 par value per share (the "**Common Stock**") and (ii) 537,786,206 shares of Preferred Stock, $0.0001 par value per share (the "**Preferred Stock**")."

4. All other provisions of the Amended and Restated Certificate of Incorporation shall remain in full force and effect.

[*Signature page follows*]

IN WITNESS WHEREOF, this Certificate of Amendment to the Amended and Restated Certificate of Incorporation has been signed this 9th day of November, 2020.

SANA BIOTECHNOLOGY, INC.

By: /s/ Steven Harr
Name: Steven Harr, M.D.
Title: Chief Executive Officer

Exhibit 3.1(d)

CERTIFICATE OF AMENDMENT
TO THE
AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
SANA BIOTECHNOLOGY, INC.

Sana Biotechnology, Inc. (the "**Company**"), a corporation organized and existing under and by virtue of the Delaware General Corporation Law, hereby certifies as follows:

1. The name of the Company is Sana Biotechnology, Inc., and that this corporation was originally incorporated pursuant to the Delaware General Corporation Law on July 13, 2018 under the name FD Therapeutics, Inc. An Amended and Restated Certificate of Incorporation of the Company was filed with the Secretary of State of Delaware on February 13, 2019. Amendments to the Amended and Restated Certificate of Incorporation of the Company were filed with the Secretary of State of Delaware on October 3, 2019 and November 9, 2020.

2. This Certificate of Amendment to the Company's Amended and Restated Certificate of Incorporation has been duly adopted and approved by the Board of Directors of the Company, acting in accordance with the provisions of Sections 141 and 242 of the Delaware General Corporation Law, and the Company's stockholders have given their written consent in accordance with Section 228 of the Delaware General Corporation Law.

3. The first paragraph of Article FOURTH of the Amended and Restated Certificate of Incorporation is hereby amended to read in its entirety as follows:

   "**FOURTH**: The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 707,000,000 shares of Common Stock, $0.0001 par value per share (the "**Common Stock**") and (ii) 537,786,206 shares of Preferred Stock, $0.0001 par value per share (the "**Preferred Stock**")."

4. All other provisions of the Amended and Restated Certificate of Incorporation shall remain in full force and effect.

[*Signature page follows*]

IN WITNESS WHEREOF, this Certificate of Amendment to the Amended and Restated Certificate of Incorporation has been signed this 4th day of December, 2020.

SANA BIOTECHNOLOGY, INC.

By: /s/ Steven Harr, M.D.
Name: Steven Harr, M.D.
Title: Chief Executive Officer

Exhibit 3.3

BYLAWS

OF

FD THERAPEUTICS, INC.

A Delaware Corporation

Effective July 13, 2018

TABLE OF CONTENTS

BYLAWS

OF

FD THERAPEUTICS, INC.

(hereinafter called the "Corporation")

ARTICLE I.
OFFICES

Section 1. Registered Office. The registered office of the Corporation shall be in the City of Wilmington, County of New Castle, State of Delaware.

Section 2. Other Offices. The Corporation may also have offices at such other places, both within and without the State of Delaware, as the Board of Directors of the Corporation (the "Board of Directors") may from time to time determine.

ARTICLE II.
MEETINGS OF STOCKHOLDERS

Section 1. Place of Meetings. Meetings of the stockholders for the election of directors or for any other purpose shall be held at such time and place, either within or without the State of Delaware, as shall be designated from time to time by the Board of Directors.

Section 2. Annual Meetings. The Annual Meeting of Stockholders for the election of directors shall be held on such date and at such time as shall be designated from time to time by the Board of Directors. Any other proper business may be transacted at the Annual Meeting of Stockholders.

Section 3. Special Meetings. Unless otherwise required by law or by the certificate of incorporation of the Corporation, as amended and restated from time to time (the "Certificate of Incorporation"). Special Meetings of Stockholders, for any purpose or purposes, may be called by either (a) the Chairman of the Board of Directors, if there be one, (b) the President, (c) any Vice President, if there be one, (d) the Secretary or (e) any Assistant Secretary, if there be one, and shall be called by any such officer at the request in writing of (i) the Board of Directors, (ii) a committee of the Board of Directors that has been duly designated by the Board of Directors and whose powers and authority include the power to call such meetings or (iii) stockholders owning a majority of the capital stock of the Corporation issued and outstanding and entitled to vote. Such request shall state the purpose or purposes of the proposed meeting. At a Special Meeting of Stockholders, only such business shall be conducted as shall be specified in the notice of meeting (or any supplement thereto).

Section 4. Notice. Whenever stockholders are required or permitted to take any action at a meeting, a written notice of the meeting shall be given which shall state the place, date and hour of the meeting, and, in the case of a Special Meeting, the purpose or purposes for which the meeting is called. Unless otherwise required by law, written notice of any meeting shall be given not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder entitled to notice of and to vote at such meeting.

Section 5. Adjournments. Any meeting of the stockholders may be adjourned from time to time to reconvene at the same or some other place, and notice need not be given of any such adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the Corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days, or if after the adjournment a new record date is fixed for the adjourned meeting, notice of the adjourned meeting in accordance with the requirements of Section 4 of this Article II shall be given to each stockholder of record entitled to notice of and to vote at the meeting.

Section 6. Quorum. Unless otherwise required by applicable law or the Certificate of Incorporation, the holders of a majority of the Corporation's capital stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business. A quorum, once established, shall not be broken by the withdrawal of enough votes to leave less than a quorum. If, however, such quorum shall not be present or represented at any meeting of the stockholders, the stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, in the manner provided in Section 5 of this Article II, until a quorum shall be present or represented.

Section 7. Voting. Unless otherwise required by law, the Certificate of Incorporation or these Bylaws, any question brought before any meeting of the stockholders, other than the election of directors, shall be decided by the vote of the holders of a majority of the total number of votes of the Corporation's capital stock represented at the meeting and entitled to vote on such question, voting as a single class. Unless otherwise provided in the Certificate of Incorporation, and subject to Section 11(a) of this Article II, each stockholder represented at a meeting of the stockholders shall be entitled to cast one (1) vote for each share of the capital stock entitled to vote thereat held by such stockholder. Such votes may be cast in person or by proxy as provided in Section 8 of this Article II. The Board of Directors, in its discretion, or the officer of the Corporation presiding at a meeting of the stockholders, in such officer's discretion, may require that any votes cast at such meeting shall be cast by written ballot.

Section 8. Proxies. Each stockholder entitled to vote at a meeting of the stockholders or to express consent or dissent to corporate action in writing without a meeting may authorize another person or persons to act for such stockholder as proxy, but no such proxy shall be voted upon after three (3) years from its date, unless such proxy provides for a longer period. Without limiting the manner in which a stockholder may authorize another person or persons to act for such stockholder as proxy, the following shall constitute a valid means by which a stockholder may grant such authority:

(i) A stockholder may execute a writing authorizing another person or persons to act for such stockholder as proxy. Execution may be accomplished by the stockholder or such stockholder's authorized officer, director, employee or agent signing such writing or causing such person's signature to be affixed to such writing by any reasonable means, including, but not limited to, by facsimile signature.

(ii) A stockholder may authorize another person or persons to act for such stockholder as proxy by transmitting or authorizing the transmission of a facsimile to the person who will be the holder of the proxy or to a proxy solicitation firm, proxy support service organization or like agent duly authorized by the person who will be the holder of the proxy to receive such facsimile, provided that any such facsimile must either set forth or be submitted with information from which it can be determined that the facsimile was authorized by the stockholder. If it is determined that such facsimiles are valid, the inspectors or, if there are no inspectors, such other persons making that determination shall specify the information on which they relied.

Any copy, facsimile telecommunication or other reliable reproduction of the writing authorizing another person or persons to act as proxy for a stockholder may be substituted or used in lieu of the original writing, facsimile for any and all purposes for which the original writing, facsimile could be used; provided, that such copy, facsimile telecommunication or other reproduction shall be a complete reproduction of the entire original writing or facsimile telecommunication.

Section 9. Consent of Stockholders in Lieu of Meeting. Unless otherwise provided in the Certificate of Incorporation, any action required or permitted to be taken at any Annual or Special Meeting of Stockholders of the Corporation may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and shall be delivered to the Corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of the stockholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. Every written consent shall bear the date of signature of each stockholder who signs the consent and no written consent shall be effective to take the corporate action referred to therein unless, within sixty (60) days of the earliest dated consent delivered in the manner required by this Section 9 to the Corporation, written consents signed by a sufficient number of holders to take action are delivered to the Corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of the stockholders are recorded. Any

copy, facsimile or other reliable reproduction of a consent in writing may be substituted or used in lieu of the original writing for any and all purposes for which the original writing could be used, provided that such copy, facsimile or other reproduction shall be a complete reproduction of the entire original writing. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing and who, if the action had been taken at a meeting, would have been entitled to notice of the meeting if the record date for such meeting had been the date that written consents signed by a sufficient number of holders to take the action were delivered to the Corporation as provided above in this Section 9.

Section 10. List of Stockholders Entitled to Vote. The officer of the Corporation who has charge of the stock ledger of the Corporation shall prepare and make, at least ten (10) days before every meeting of the stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten (10) days prior to the meeting (a) either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held or (b) during ordinary business hours, at the principal place of business of the Corporation. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present.

Section 11. Record Date.

(a) In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of the stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall not be more than sixty (60) nor less than ten (10) days before the date of such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of the stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of the stockholders shall apply to any adjournment of the meeting; provided, that the Board of Directors may fix a new record date for the adjourned meeting.

(b) In order that the Corporation may determine the stockholders entitled to consent to corporate action in writing without a meeting, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall not be more than ten (10) days after the date upon which the resolution fixing the record date is adopted by the Board of Directors. If no record date has been fixed by the Board of Directors, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is required by applicable law, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is

delivered to the Corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of the stockholders are recorded. Delivery made to the Corporation's registered office shall be by hand or by certified or registered mail, return receipt requested. If no record date has been fixed by the Board of Directors and prior action by the Board of Directors is required by applicable law, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the day on which the Board of Directors adopts the resolution taking such prior action.

Section 12. Stock Ledger. The stock ledger of the Corporation shall be the only evidence as to who are the stockholders entitled to examine the stock ledger, the list required by Section 10 of this Article II or the books of the Corporation, or to vote in person or by proxy at any meeting of the stockholders.

Section 13. Conduct of Meetings. The Board of Directors may adopt by resolution such rules and regulations for the conduct of any meeting of the stockholders as it shall deem appropriate. Except to the extent inconsistent with such rules and regulations as adopted by the Board of Directors, the chairman of any meeting of the stockholders shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board of Directors or prescribed by the chairman of the meeting, may include, without limitation, the following: (a) the establishment of an agenda or order of business for the meeting; (b) the determination of when the polls shall open and close for any given matter to be voted on at the meeting; (c) rules and procedures for maintaining order at the meeting and the safety of those present; (d) limitations on attendance at or participation in the meeting to stockholders of record of the Corporation, their duly authorized and constituted proxies or such other persons as the chairman of the meeting shall determine; (e) restrictions on entry to the meeting after the time fixed for the commencement thereof; and (f) limitations on the time allotted to questions or comments by participants.

ARTICLE III.
DIRECTORS

Section 1. Number and Election of Directors. The Board of Directors shall consist of not less than one nor more than fifteen members, the exact number of which shall initially be fixed by the Incorporator and thereafter from time to time by the Board of Directors. Except as provided in Section 2 of this Article III, directors shall be elected by a majority of the votes cast at each Annual Meeting of Stockholders and each director so elected shall hold office until the next Annual Meeting of Stockholders and until such director's successor is duly elected and qualified, or until such director's earlier death, resignation or removal. Directors need not be stockholders.

Section 2. Vacancies. Unless otherwise required by law or the Certificate of Incorporation, vacancies on the Board of Directors or any committee thereof arising through death, resignation, removal, an increase in the number of directors constituting the Board of Directors or such committee or otherwise may be filled only by a majority of the directors then in office, though less than a quorum, or by a sole remaining director. The directors so chosen shall, in the case of the Board of Directors, hold office until the next annual election and until their successors are duly elected and qualified, or until their earlier death, resignation or removal and, in the case of any committee of the Board of Directors, shall hold office until their successors are duly appointed by the Board of Directors or until their earlier death, resignation or removal.

Section 3. Duties and Powers. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors which may exercise all such powers of the Corporation and do all such lawful acts and things as are not by statute or by the Certificate of Incorporation or by these Bylaws required to be exercised or done by the stockholders.

Section 4. Meetings. The Board of Directors and any committee thereof may hold meetings, both regular and special, either within or without the State of Delaware. Regular meetings of the Board of Directors or any committee thereof may be held without notice at such time and at such place as may from time to time be determined by the Board of Directors or such committee, respectively. Special meetings of the Board of Directors may be called by the Chairman of the Board of Directors, if there be one, the President, or by any director. Special meetings of any committee of the Board of Directors may be called by the chairman of such committee, if there be one, the President, or any director serving on such committee. Notice thereof stating the place, date and hour of the meeting shall be given to each director (or, in the case of a committee, to each member of such committee) either by mail not less than forty-eight (48) hours before the date of the meeting, by telephone or facsimile on twenty-four (24) hours' notice, or on such shorter notice as the person or persons calling such meeting may deem necessary or appropriate in the circumstances.

Section 5. Organization. At each meeting of the Board of Directors or any committee thereof, the Chairman of the Board of Directors or the chairman of such committee, as the case may be, or, in his or her absence or if there be none, a director chosen by a majority of the directors present, shall act as chairman. Except as provided below, the Secretary of the Corporation shall act as secretary at each meeting of the Board of Directors and of each committee thereof. In case the Secretary shall be absent from any meeting of the Board of Directors or of any committee thereof, an Assistant Secretary shall perform the duties of secretary at such meeting; and in the absence from any such meeting of the Secretary and all the Assistant Secretaries, the chairman of the meeting may appoint any person to act as secretary of the meeting. Notwithstanding the foregoing, the members of each committee of the Board of Directors may appoint any person to act as secretary of any meeting of such committee and the Secretary or any Assistant Secretary of the Corporation may, but need not if such committee so elects, serve in such capacity.

Section 6. Resignations and Removals of Directors. Any director of the Corporation may resign from the Board of Directors or any committee thereof at any time, by giving notice in writing to the Chairman of the Board of Directors, if there be one, the President or the Secretary of the Corporation and, in the case of a committee, to the chairman of such committee, if there be one. Such resignation shall take effect at the time therein specified or, if no time is specified, immediately; and, unless otherwise specified in such notice, the acceptance of such resignation

shall not be necessary to make it effective. Except as otherwise required by applicable law, (a) any director or the entire Board of Directors may be removed from office at any time by the affirmative vote of the holders of at least a majority in voting power of the issued and outstanding capital stock of the Corporation entitled to vote in the election of directors, and (b) any director serving on a committee of the Board of Directors may be removed from such committee at any time by the Board of Directors.

Section 7. Quorum. Except as otherwise required by law or the Certificate of Incorporation, at all meetings of the Board of Directors or any committee thereof, a majority of the entire Board of Directors or a majority of the directors constituting such committee, as the case may be, shall constitute a quorum for the transaction of business and the act of a majority of the directors or committee members present at any meeting at which there is a quorum shall be the act of the Board of Directors or such committee, as applicable. If a quorum shall not be present at any meeting of the Board of Directors or any committee thereof, the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting of the time and place of the adjourned meeting, until a quorum shall be present.

Section 8. Actions of the Board by Written Consent. Unless otherwise provided in the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all the members of the Board of Directors or such committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board of Directors or such committee. Any copy, facsimile or other reliable reproduction of a consent in writing may be substituted or used in lieu of the original writing for any and all purposes for which the original writing could be used, provided that such copy, facsimile or other reproduction shall be a complete reproduction of the entire original writing.

Section 9. Meetings by Means of Conference Telephone. Unless otherwise provided in the Certificate of Incorporation or these Bylaws, members of the Board of Directors, or any committee thereof, may participate in a meeting of the Board of Directors or such committee by means of a conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting pursuant to this Section 9 shall constitute presence in person at such meeting.

Section 10. Committees. Unless otherwise required by the Certificate of Incorporation, (a) the Board of Directors may designate one or more committees, each committee to consist of one or more of the directors of the Corporation, (b) the Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of any such committee, and (c) in the absence or disqualification of a member of a committee, and in the absence of a designation by the Board of Directors of an alternate member to replace the absent or disqualified member, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another qualified member of the Board of Directors to act at the meeting in the place of any absent or disqualified member. Any committee, to the extent permitted by law and provided in the resolution establishing such committee, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation, and may authorize the seal of the

Corporation to be affixed to all papers which may require it. Each committee shall keep regular minutes and report to the Board of Directors when required. Notwithstanding anything to the contrary contained in this Article III, the resolution of the Board of Directors establishing any committee of the Board of Directors and/or the charter of any such committee may establish requirements or procedures relating to the governance and/or operation of such committee that are different from, or in addition to, those set forth in these Bylaws and, to the extent that there is any inconsistency between these Bylaws and any such resolution or charter, the terms of such resolution or charter shall be controlling.

Section 11. Compensation. The directors may be paid their expenses, if any, of attendance at each meeting of the Board of Directors and may be paid a fixed sum for attendance at each meeting of the Board of Directors or a stated salary for service as director, payable in cash or securities. No such payment shall preclude any director from serving the Corporation in any other capacity and receiving compensation therefor. Members of special or standing committees may be allowed like compensation for service as committee members.

Section 12. Interested Directors. No contract or transaction between the Corporation and one or more of its directors or officers, or between the Corporation and any other corporation, partnership, association or other organization in which one or more of its directors or officers are directors or officers or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board of Directors or committee thereof which authorizes the contract or transaction, or solely because any such director's or officer's vote is counted for such purpose if: (a) the material facts as to the director's or officer's relationship or interest and as to the contract or transaction are disclosed or are known to the Board of Directors or the committee, and the Board of Directors or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum; (b) the material facts as to the director's or officer's relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or (c) the contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board of Directors, a committee thereof or the stockholders. Common or interested directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee which authorizes the contract or transaction.

ARTICLE IV.
OFFICERS

Section 1. General. The officers of the Corporation shall be chosen by the Board of Directors and shall be a President, a Secretary and a Treasurer. Any one or more individuals may hold such offices. The Board of Directors, in its discretion, also may choose a Chairman of the Board of Directors (who must be a director) and one or more Vice Presidents, Assistant Secretaries, Assistant Treasurers and other officers. Any number of offices may be held by the same person, unless otherwise prohibited by law, the Certificate of Incorporation or these Bylaws. The officers of the Corporation need not be stockholders of the Corporation nor, except in the case of the Chairman of the Board of Directors, need such officers be directors of the Corporation.

Section 2. Election. The Board of Directors, at its first meeting held after each Annual Meeting of Stockholders (or action by written consent of stockholders in lieu of the Annual Meeting of Stockholders), shall elect the officers of the Corporation who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the Board of Directors; and each officer of the Corporation shall hold office until such officer's successor is elected and qualified, or until such officer's earlier death, resignation or removal. Any officer elected by the Board of Directors (including, without limitation, the Chairman of the Board of Directors) may be removed at any time by the Board of Directors. Except as provided in Section 4 of this Article IV with regard to the Chairman of the Board of Directors, any vacancy occurring in any office of the Corporation shall be filled by the Board of Directors. The salaries of all officers of the Corporation shall be fixed by the Board of Directors.

Section 3. Voting Securities Owned by the Corporation. Powers of attorney, proxies, waivers of notice of meeting, consents and other instruments relating to securities owned by the Corporation may be executed in the name of and on behalf of the Corporation by the President or any Vice President or any other officer authorized to do so by the Board of Directors and any such officer may, in the name of and on behalf of the Corporation, take all such action as any such officer may deem advisable to vote in person or by proxy at any meeting of security holders of any corporation in which the Corporation may own securities and at any such meeting shall possess and may exercise any and all rights and power incident to the ownership of such securities and which, as the owner thereof, the Corporation might have exercised and possessed if present. The Board of Directors may, by resolution, from time to time confer like powers upon any other person or persons.

Section 4. Chairman of the Board of Directors. The Chairman of the Board of Directors, if there be one, shall preside at all meetings of the stockholders and of the Board of Directors. The Chairman of the Board of Directors shall be designated by a majority of the Board of Directors and, except where by law the signature of the President is required, the Chairman of the Board of Directors shall possess the same power as the President to sign all contracts, certificates and other instruments of the Corporation which may be authorized by the Board of Directors. During the absence or disability of the President, the Chairman of the Board of Directors shall exercise all the powers and discharge all the duties of the President. The Chairman of the Board of Directors shall also perform such other duties and may exercise such other powers as may from time to time be assigned by these Bylaws or by the Board of Directors.

Section 5. President. The President shall, subject to the control of the Board of Directors and, if there be one, the Chairman of the Board of Directors, have general supervision of the business of the Corporation and shall see that all orders and resolutions of the Board of Directors are carried into effect. The President shall execute all bonds, mortgages, contracts and other instruments of the Corporation requiring a seal, under the seal of the Corporation, except where required or permitted by law to be otherwise signed and executed and except that the other officers of the Corporation may sign and execute documents when so authorized by these

Bylaws, the Board of Directors or the President. In the absence or disability of the Chairman of the Board of Directors, or if there be none, the President shall preside at all meetings of the stockholders and, provided the President is also a director, the Board of Directors. Unless the Board of Directors designates otherwise, the President shall be the Chief Executive Officer of the Corporation. The President shall also perform such other duties and may exercise such other powers as may from time to time be assigned to such officer by these Bylaws or by the Board of Directors.

Section 6. Vice Presidents. At the request of the President or in the President's absence or in the event of the President's inability or refusal to act (and if there be no Chairman of the Board of Directors), the Vice President, or the Vice Presidents if there is more than one (in the order designated by the Board of Directors), shall perform the duties of the President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the President. Each Vice President shall perform such other duties and have such other powers as the Board of Directors from time to time may prescribe. If there be no Chairman of the Board of Directors and no Vice President, the Board of Directors shall designate the officer of the Corporation who, in the absence of the President or in the event of the inability or refusal of the President to act, shall perform the duties of the President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the President.

Section 7. Secretary. The Secretary shall attend all meetings of the Board of Directors and all meetings of the stockholders and record all the proceedings thereat in a book or books to be kept for that purpose; the Secretary shall also perform like duties for committees of the Board of Directors when required. The Secretary shall give, or cause to be given, notice of all meetings of the stockholders and special meetings of the Board of Directors, and shall perform such other duties as may be prescribed by the Board of Directors, the Chairman of the Board of Directors or the President, under whose supervision the Secretary shall be. If the Secretary shall be unable or shall refuse to cause to be given notice of all meetings of the stockholders and special meetings of the Board of Directors, and if there be no Assistant Secretary, then either the Board of Directors or the President may choose another officer to cause such notice to be given. The Secretary shall have custody of the seal of the Corporation and the Secretary or any Assistant Secretary, if there be one, shall have authority to affix the same to any instrument requiring it and when so affixed, it may be attested by the signature of the Secretary or by the signature of any such Assistant Secretary. The Board of Directors may give general authority to any other officer to affix the seal of the Corporation and to attest to the affixing by such officer's signature. The Secretary shall see that all books, reports, statements, certificates and other documents and records required by law to be kept or filed are properly kept or filed, as the case may be.

Section 8. Treasurer. The Treasurer shall have the custody of the corporate funds and securities and shall keep full and accurate accounts of receipts and disbursements in books belonging to the Corporation and shall deposit all moneys and other valuable effects in the name and to the credit of the Corporation in such depositories as may be designated by the Board of Directors. The Treasurer shall disburse the funds of the Corporation as may be ordered by the Board of Directors, taking proper vouchers for such disbursements, and shall render to the President and the Board of Directors, at its regular meetings, or when the Board of Directors so requires, an account of all transactions as Treasurer and of the financial condition of the

Corporation. If required by the Board of Directors, the Treasurer shall give the Corporation a bond in such sum and with such surety or sureties as shall be satisfactory to the Board of Directors for the faithful performance of the duties of the office of the Treasurer and for the restoration to the Corporation, in case of the Treasurer's death, resignation, retirement or removal from office, of all books, papers, vouchers, money and other property of whatever kind in the Treasurer's possession or under the Treasurer's control belonging to the Corporation.

Section 9. Assistant Secretaries. Assistant Secretaries, if there be any, shall perform such duties and have such powers as from time to time may be assigned to them by the Board of Directors, the President, any Vice President, if there be one, or the Secretary, and in the absence of the Secretary or in the event of the Secretary's inability or refusal to act, shall perform the duties of the Secretary, and when so acting, shall have all the powers of and be subject to all the restrictions upon the Secretary.

Section 10. Assistant Treasurers. Assistant Treasurers, if there be any, shall perform such duties and have such powers as from time to time may be assigned to them by the Board of Directors, the President, any Vice President, if there be one, or the Treasurer, and in the absence of the Treasurer or in the event of the Treasurer's inability or refusal to act, shall perform the duties of the Treasurer, and when so acting, shall have all the powers of and be subject to all the restrictions upon the Treasurer. If required by the Board of Directors, an Assistant Treasurer shall give the Corporation a bond in such sum and with such surety or sureties as shall be satisfactory to the Board of Directors for the faithful performance of the duties of the office of Assistant Treasurer and for the restoration to the Corporation, in case of the Assistant Treasurer's death, resignation, retirement or removal from office, of all books, papers, vouchers, money and other property of whatever kind in the Assistant Treasurer's possession or under the Assistant Treasurer's control belonging to the Corporation.

Section 11. Other Officers. Such other officers as the Board of Directors may choose shall perform such duties and have such powers as from time to time may be assigned to them by the Board of Directors. The Board of Directors may delegate to any other officer of the Corporation the power to choose such other officers and to prescribe their respective duties and powers.

ARTICLE V.
STOCK

Section 1. Form of Certificates(1) . The Corporation may issue some or all of the shares of any or all of the Corporation's classes or series of Stock without certificates if authorized by the Board of Directors. In the event that the Corporation issues shares of stock represented by certificates, such certificates shall be in such form as prescribed by the Board of Directors or a duly authorized officer, shall contain the statements and information required by the General Corporation Law of the State of Delaware (the "DGCL") and shall be signed by the officers of the Corporation in the manner permitted by the DGCL. In the event that the Corporation issues shares of stock without certificates, to the extent then required by the DGCL, the Corporation shall provide to the record holders of such shares a written statement of the information required by the DGCL to be included on stock certificates. There shall be no differences in the rights and obligations of stockholders based on whether or not their shares are represented by certificates. If a class or series of stock is authorized by the Board of Directors to be issued without certificates, no stockholder shall be entitled to a certificate of certificates representing any shares of such class or series of stock held by such stockholder unless otherwise determined by the Board of Directors and then only upon written request by such stockholder to the Secretary.

Section 2. Signatures. Any or all of the signatures on a certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if such person were such officer, transfer agent or registrar at the date of issue.

Section 3. Lost Certificates. The Board of Directors may direct a new certificate to be issued in place of any certificate theretofore issued by the Corporation alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed; provided, that if such shares have ceased to be certificated no new certificate shall be issued unless requested in writing by such stockholder and the Board of Directors has determined that such certificates may be issued. When authorizing such issuance of a new certificate, the Board of Directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen or destroyed certificate, or such owner's legal representative, to advertise the same in such manner as the Board of Directors shall require and/or to give the Corporation a bond in such sum as it may direct as indemnity against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate or the issuance of such new certificate.

Section 4. Transfers. Stock of the Corporation shall be transferable in the manner prescribed by applicable law and in these Bylaws. Transfers of stock shall be made on the books of the Corporation only by the record holder of the shares or by such person's attorney lawfully constituted in writing and, if such shares are certificated, upon the surrender of the certificate therefor, properly endorsed for transfer and payment of all necessary transfer taxes; provided, that such surrender and endorsement or payment of taxes shall not be required in any case in which the officers of the Corporation shall determine to waive such requirement. Every certificate exchanged, returned or surrendered to the Corporation shall be marked "Cancelled," with the date of cancellation, by the Secretary or Assistant Secretary of the Corporation or the transfer agent thereof. No transfer of stock shall be valid as against the Corporation for any purpose until it shall have been entered in the stock records of the Corporation by an entry showing from and to whom transferred.

Section 5. Restrictions on Transfer. No stockholder shall sell, assign, pledge, or in any manner transfer any of the shares of capital stock of the Corporation or any right or interest therein, whether voluntarily or by operation of law, or by gift or otherwise, except by a transfer which meets the requirements hereinafter set forth in these By-laws:

(a) If the stockholder desires to sell or otherwise transfer any of its shares of capital stock, then the stockholder shall first give written notice thereof to the Corporation. The notice shall name the proposed transferee and state the number of shares to be transferred, the proposed consideration, and all other terms and conditions of the proposed transfer.

(b) In addition shares of capital stock may only be transferred with the prior written consent of the Corporation, upon duly authorized action of its Board of Directors, in the event of any transfer (i) to individuals, companies or any other form of entity identified by the Corporation as a potential competitor or considered by the Corporation to be unfriendly, or (ii) if such transfer increases the risk of the Corporation having a class of security held of record by two thousand (2,000) or more persons, or five hundred (500) or more persons who are not accredited investors (as such term is defined by the Securities and Exchange Commission), as described in Section 12(g) of the Securities Exchange Act of 1934 (the **"1934 Act"),** and any related regulations, or otherwise requiring the Corporation to register any class of securities under the 1934 Act; or (iii) if such transfer would result in the loss of any federal or state securities law exemption relied upon by the Corporation in connection with the initial issuance of such shares or the issuance of any other securities; or (iv) if such transfer is facilitated in any manner by any public posting, message board, trading portal, internet site, or similar method of communication, including without limitation any trading portal or internet site intended to facilitate secondary transfers of securities; or (v) if such transfer is to be effected in a brokered transaction.

(c) For up to forty five (45) days following receipt of the notice referred to in Section 5(a) of Article V of these By-laws, the Corporation and/or its assignee(s) shall have the option to purchase all of the shares specified in the notice at the price and upon the terms set forth in such notice; provided, that, with the consent of the stockholder, the Corporation and/or its assignee(s) shall have the option to purchase a lesser portion of the shares specified in said notice at the price and upon the terms set forth therein. In the event of a gift, property settlement or other transfer in which the proposed transferee is not paying the full price for the shares, and that is not otherwise exempted from the provisions of this section, the price shall be deemed to be the fair market value of the stock at such time as determined in good faith by the Board of Directors. In the event the Corporation elects to purchase all of the shares or, with consent of the stockholder, a lesser portion of the shares, it shall give written notice to the transferring stockholder of its election and settlement for said shares shall be made as provided below in paragraph (e).

(d) The Corporation may assign its rights under paragraph (c) above.

(e) In the event the Corporation and/or its assignee(s) elect to acquire any of the shares of the transferring stockholder as specified in said transferring stockholder's notice, the Secretary of the Corporation shall so notify the transferring stockholder and settlement thereof shall be made in cash, property, services or other non-cash consideration (the fair market value of the non-cash consideration shall be as determined in good faith by the Company's Board of Directors and as set forth in the notice) within thirty (30) days after the Secretary of the Corporation receives said transferring stockholder's notice; provided, that if the terms of payment set forth in said transferring stockholder's notice were other than cash against delivery, the Corporation and/or its assignee(s) shall pay for said shares on the same terms and conditions set forth in said transferring stockholder's notice.

(f) In the event the Corporation and/or its assignees(s) do not elect to acquire all of the shares specified in the transferring stockholder's notice, said transferring stockholder may, within the thirty-day period following the expiration or waiver of the option rights granted to the Corporation and/or its assignees(s) herein, transfer the shares specified in said transferring stockholder's notice which were not acquired by the Corporation and/or its assignees(s) as specified in said transferring stockholder's notice. All shares so sold by said transferring stockholder shall continue to be subject to the provisions of these By-laws in the same manner as before said transfer.

(g) Anything to the contrary contained herein notwithstanding, the following transactions shall be exempt from the provisions of this Section 5 (other than clause (b) hereof which shall apply to all transfers):

(1) A stockholder's transfer of any or all shares held either during such stockholder's lifetime or on death by will or intestacy to such stockholder's immediate family or to any custodian or trustee for the account of such stockholder or such stockholder's immediate family or to any limited partnership of which the stockholder, members of such stockholder's immediate family or any trust for the account of such stockholder or such stockholder's immediate family will be the general of limited partner(s) of such partnership. "Immediate family" as used herein shall mean spouse, lineal descendant (natural or adopted), father, mother, brother, or sister of the stockholder making such transfer.

(2) A stockholder's bona fide pledge or mortgage of any shares with a commercial lending institution, provided, that any subsequent transfer of said shares to said institution shall be conducted in the manner set forth in these By-laws.

(3) A stockholder's transfer of any or all of such stockholder's shares to the Corporation or to any other stockholder of the Corporation.

(4) A corporate stockholder's transfer of all of its shares pursuant to and in accordance with the terms of any merger, consolidation, reclassification of shares or capital reorganization of the corporate stockholder, or pursuant to a sale of all or substantially all of the stock or assets of a corporate stockholder.

(5) A corporate, partnership or limited liability company stockholder's transfer of all of its shares to all of its stockholders, partners or members, as applicable, on a pro rata basis.

(6) A transfer by a stockholder to an Affiliate. "Affiliate" means, with respect to any specified person or entity **("Person"),** any other Person who, directly or indirectly, controls, is controlled by, or is under common control with such Person, including without limitation any general partner, managing member, limited partner, member, manager, employee, officer or director of such Person or any venture capital fund now or hereafter existing that is controlled by one or more general partners or managing members of, or shares the same management company with, such Person. For purposes of this definition, the term "control" when used with respect to any Person means the power to direct the management or policies of such Person, directly or indirectly, whether through ownership of voting securities, by contract or otherwise, and the terms "controlling" and "controlled" shall have meanings correlative to the foregoing.

(h) The provisions of this By-law may be waived with respect to any transfer either by the Corporation, upon duly authorized action of its Board of Directors, or by the stockholders, upon the express written consent of the owners of a majority of the voting power of the outstanding shares of preferred stock of the Corporation, voting together as a single class on an as converted to common stock basis (excluding the votes represented by those shares to be transferred by the transferring stockholder, if applicable).

(i) Any sale or transfer, or purported sale or transfer, of capital stock of the Corporation shall be null and void unless the terms, conditions, and provisions of this by-law are strictly observed and followed.

(j) To the extent of a conflict between this Section 5 and any other agreement that may have been entered into by a stockholder with the Corporation that contains a right of first refusal, the terms of the agreement between the stockholder and the Corporation shall control and prevail over this Section 5 to the extent of such conflict, and the right of first refusal herein shall be deemed satisfied by compliance with that agreement.

(k) The provisions of this Section 5 shall automatically terminate upon the earlier of (a) the date securities of the Corporation are first offered to the public pursuant to a registration statement filed with, and declared effective by, the Securities and Exchange Commission under the Securities Act of 1933, as amended, and (b) the consummation of a Deemed Liquidation Event (as defined in the Certificate of Incorporation, as amended from time to time).

(l) The certificates representing shares of capital stock of the Corporation shall bear on their face the following legend so long as the foregoing right of first refusal remains in effect:

> "THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO A RIGHT OF FIRST REFUSAL IN FAVOR OF THE COMPANY, AS PROVIDED IN THE BY-LAWS OF THE COMPANY."

Section 6. Dividend Record Date. Except as otherwise set forth in the Certificate of Incorporation, in order that the Corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than sixty (60) days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

Section 7. Record Owners. The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and to hold liable for calls and assessments a person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise required by law.

Section 8. Transfer and Registry Agents. The Corporation may from time to time maintain one or more transfer offices or agencies and registry offices or agencies at such place or places as may be determined from time to time by the Board of Directors.

ARTICLE VI.
NOTICES

Section 1. Notices. Whenever written notice is required by law, the Certificate of Incorporation or these Bylaws, to be given to any director, member of a committee or stockholder, such notice may be given by mail, addressed to such director, member of a committee or stockholder, at such person's address as it appears on the records of the Corporation, with postage thereon prepaid, and such notice shall be deemed to be given at the time when the same shall be deposited in the United States mail. Written notice may also be given personally or by facsimile, telegram, telex or cable.

Section 2. Waivers of Notice. Whenever any notice is required by applicable law, the Certificate of Incorporation or these Bylaws, to be given to any director, member of a committee or stockholder, a waiver thereof in writing, signed by the person or persons entitled to notice, whether before or after the time stated therein, shall be deemed equivalent thereto. Attendance of a person at a meeting, present in person or represented by proxy, shall constitute a waiver of notice of such meeting, except where the person attends the meeting for the express purpose of objecting at the beginning of the meeting to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any Annual or Special Meeting of Stockholders or any regular or special meeting of the directors or members of a committee of directors need be specified in any written waiver of notice unless so required by law, the Certificate of Incorporation or these Bylaws.

ARTICLE VII.
GENERAL PROVISIONS

Section 1. Dividends. Dividends upon the capital stock of the Corporation, subject to the requirements of the DGCL and the provisions of the Certificate of Incorporation, if any, may be declared by the Board of Directors at any regular or special meeting of the Board of Directors (or any action by written consent in lieu thereof in accordance with Section 8 of Article III hereof), and may be paid in cash, in property, or in shares of the Corporation's capital stock. Before payment of any dividend, there may be set aside out of any funds of the Corporation available for dividends such sum or sums as the Board of Directors from time to time, in its absolute discretion, deems proper as a reserve or reserves to meet contingencies, or for purchasing any of the shares of capital stock, warrants, rights, options, bonds, debentures, notes, scrip or other securities or evidences of indebtedness of the Corporation, or for equalizing dividends, or for repairing or maintaining any property of the Corporation, or for any proper purpose, and the Board of Directors may modify or abolish any such reserve.

Section 2. Disbursements. All checks or demands for money and notes of the Corporation shall be signed by such officer or officers or such other person or persons as the Board of Directors may from time to time designate.

Section 3. Fiscal Year. The fiscal year of the Corporation shall be fixed by resolution of the Board of Directors.

Section 4. Corporate Seal. The Board of Directors may authorize the adoption of a seal by the Corporation. Any such seal shall contain the name of the Corporation and the year of its incorporation and the words "Corporate Seal, Delaware." The Board of Directors may authorize one or more duplicate seals and provide for the custody thereof. The seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

Section 5. Affixing Seal. Whenever the Corporation is permitted or required to affix its seal to a document, it shall be sufficient to meet the requirements of any law, rule or regulation relating to a seal to place the word "(SEAL)'' adjacent to the signature of the person authorized to execute the document on behalf of the Corporation.

ARTICLE VIII.
INDEMNIFICATION

Section 1. Power to Indemnify in Actions, Suits or Proceedings other than Those by or in the Right of the Corporation. Subject to Section 3 of this Article VIII, the Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Corporation), by reason of the fact that such person is or was a director or executive officer of the Corporation, or is or was a director or executive officer of the Corporation serving at the request of the Corporation as a director, executive officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe such person's conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which such person reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that such person's conduct was unlawful.

Section 2. Power to Indemnify in Actions, Suits or Proceedings by or in the Right of the Corporation. Subject to Section 3 of this Article VIII, the Corporation shall indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the Corporation to procure a judgment in its favor by reason of the fact that such person is or was a director or executive officer of the Corporation, or is or was a director or executive officer of the Corporation serving at the request of the

Corporation as a director, executive officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation; except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the Corporation unless and only to the extent that the Court of Chancery of the State of Delaware or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Section 3. Authorization of Indemnification. Any indemnification under this Article VIII (unless ordered by a court) shall be made by the Corporation only as authorized in the specific case upon a determination that indemnification of the present or former director or executive officer is proper in the circumstances because such person has met the applicable standard of conduct set forth in Section 1 or Section 2 of this Article VIII, as the case may be. Such determination shall be made, with respect to a person who is a director or executive officer at the time of such determination, (a) by a majority vote of the directors who are not parties to such action, suit or proceeding, even though less than a quorum, (b) by a committee of such directors designated by a majority vote of such directors, even though less than a quorum, (c) if there are no such directors, or if such directors so direct, by independent legal counsel in a written opinion or (d) by the stockholders. Such determination shall be made, with respect to former directors and executive officers, by any person or persons having the authority to act on the matter on behalf of the Corporation. To the extent, however, that a present or former director or executive officer of the Corporation has been successful on the merits or otherwise in defense of any action, suit or proceeding described above, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith, without the necessity of authorization in the specific case.

Section 4. Good Faith Defined. For purposes of any determination under Section 3 of this Article VIII, a person shall be deemed to have acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation, or, with respect to any criminal action or proceeding, to have had no reasonable cause to believe such person's conduct was unlawful, if such person's action is based on the records or books of account of the Corporation or another enterprise, or on information supplied to such person by the officers of the Corporation or another enterprise in the course of their duties, or on the advice of legal counsel for the Corporation or another enterprise or on information or records given or reports made to the Corporation or another enterprise by an independent certified public accountant or by an appraiser or other expert selected with reasonable care by the Corporation or another enterprise. The provisions of this Section 4 shall not be deemed to be exclusive or to limit in any way the circumstances in which a person may be deemed to have met the applicable standard of conduct set forth in Section 1 or Section 2 of this Article VIII, as the case may be.

Section 5. Indemnification by a Court. Notwithstanding any contrary determination in the specific case under Section 3 of this Article VIII, and notwithstanding the absence of any determination thereunder, any director or executive officer may apply to the Court of Chancery of the State of Delaware or any other court of competent jurisdiction in the State of Delaware for indemnification to the extent otherwise permissible under Section 1 or Section 2 of this Article VIII. The basis of such indemnification by a court shall be a determination by such court that indemnification of the director or executive officer is proper in the circumstances because such person has met the applicable standard of conduct set forth in Section 1 or Section 2 of this Article VIII, as the case may be. Neither a contrary determination in the specific case under Section 3 of this Article VIII nor the absence of any determination thereunder shall be a defense to such application or create a presumption that the director or executive officer seeking indemnification has not met any applicable standard of conduct. Notice of any application for indemnification pursuant to this Section 5 shall be given to the Corporation promptly upon the filing of such application. If successful, in whole or in part, the director or executive officer seeking indemnification shall also be entitled to be paid the expense of prosecuting such application.

Section 6. Expenses Payable in Advance. Expenses (including attorneys' fees) incurred by a director or executive officer in defending any civil, criminal, administrative or investigative action, suit or proceeding shall be paid by the Corporation in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such director or executive officer to repay such amount if it shall ultimately be determined that such person is not entitled to be indemnified by the Corporation as authorized in this Article VIII. Such expenses (including attorneys' fees) incurred by former directors and executive officers or other employees and agents may be so paid upon such terms and conditions, if any, as the Corporation deems appropriate.

Section 7. Nonexclusivity of Indemnification and Advancement of Expenses. The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VIII shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under the Certificate of Incorporation, these By-Laws, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office, it being the policy of the Corporation that indemnification of the persons specified in Section 1 and Section 2 of this Article VIII shall be made to the fullest extent permitted by law. The provisions of this Article VIII shall not be deemed to preclude the indemnification of any person who is not specified in Section 1 or Section 2 of this Article VIII but whom the Corporation has the power or obligation to indemnify under the provisions of the DGCL, or otherwise.

Section 8. Insurance. The Corporation may purchase and maintain insurance on behalf of any person who is or was a director or officer of the Corporation, or is or was a director or officer of the Corporation serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the Corporation would have the power or the obligation to indemnify such person against such liability under the provisions of this Article VIII.

Section 9. Certain Definitions. For purposes of this Article VIII. the term “executive officers” shall have the meaning given to it in Rule 3b-7 promulgated under the 1934 Act. For purposes of this Article VIII, references to “the Corporation” shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors or officers, so that any person who is or was a director or officer of such constituent corporation, or is or was a director or officer of such constituent corporation serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this Article VIII with respect to the resulting or surviving corporation as such person would have with respect to such constituent corporation if its separate existence had continued. The term “another enterprise” as used in this Article VIII shall mean any other corporation or any partnership, joint venture, trust, employee benefit plan or other enterprise of which such person is or was serving at the request of the Corporation as a director, officer, employee or agent. For purposes of this Article VIII. references to “fines” shall include any excise taxes assessed on a person with respect to an employee benefit plan; and references to “serving at the request of the Corporation” shall include any service as a director, officer, employee or agent of the Corporation which imposes duties on, or involves services by, such director or officer with respect to an employee benefit plan, its participants or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner “not opposed to the best interests of the Corporation” as referred to in this Article VIII.

Section 10. Survival of Indemnification and Advancement of Expenses. The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VIII shall, unless otherwise provided when authorized or ratified, continue as to a person who has ceased to be a director or executive officer and shall inure to the benefit of the heirs, executors and administrators of such a person.

Section 11. Limitation on Indemnification. Notwithstanding anything contained in this Article VIII to the contrary, except for proceedings to enforce rights to indemnification (which shall be governed by Section 5 of this Article VIII). the Corporation shall not be obligated to indemnify any director or executive officer (or his or her heirs, executors or personal or legal representatives) or advance expenses in connection with a proceeding (or part thereof) initiated by such person unless such proceeding (or part thereof) was authorized or consented to by the Board of Directors.

Section 12. Indemnification of Other Officers, Employees and Agents. The Corporation may, to the extent authorized from time to time by the Board of Directors, provide rights to indemnification and to the advancement of expenses to officers other than executive officers, employees and agents of the Corporation similar to those conferred in this Article VIII to directors and executive officers of the Corporation.

ARTICLE IX.
MISCELLANEOUS

Section 1. Amendments. Unless otherwise required by the Certificate of Incorporation, these Bylaws may be altered, amended or repealed, in whole or in part, or new Bylaws may be adopted by the stockholders or by the Board of Directors; provided, that notice of such alteration, amendment, repeal or adoption of new Bylaws be contained in the notice of such meeting of the stockholders or Board of Directors, as the case may be. All such amendments must be approved by either the holders of a majority of the outstanding capital stock entitled to vote thereon or by a majority of the entire Board of Directors then in office.

Section 2. Entire Board of Directors. As used in this Article IX and in these Bylaws generally, the term "entire Board of Directors'' means the total number of directors which the Corporation would have if there were no vacancies.

* * *

Adopted as of: July 13, 2018

AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

SANA BIOTECHNOLOGY, INC.

FEBRUARY 13, 2019

AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

THIS AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT (this "**Agreement**"), is made as of February 13, 2019, by and among Sana Biotechnology, Inc. a Delaware corporation (the "**Company**"), and each of the investors listed on Schedule A hereto, each of which is referred to in this Agreement as an "**Investor**".

RECITALS

WHEREAS, certain of the Investors (the "**Existing Investors**") hold shares of the Company's Series A-1 Preferred Stock and/or shares of Common Stock issued upon conversion thereof and possess registration rights, information rights, rights of first offer and other rights pursuant to that certain Investors' Rights Agreement, dated as of October 2, 2018, by and among the Company and such Existing Investors (the "**Prior Agreement**"); and

WHEREAS, the Existing Investors are holders of at least seventy-five percent (75%) of the Registrable Securities (as defined in the Prior Agreement), and desire to amend and restate the Prior Agreement in its entirety and to accept the rights created pursuant to this Agreement in lieu of the rights granted to them under the Prior Agreement; and

WHEREAS, certain of the Investors are parties to that certain Series A-2/B Preferred Stock Purchase Agreement of even date herewith by and among the Company and such Investors (the "**Purchase Agreement**"), under which certain of the Company's and such Investors' obligations are conditioned upon the execution and delivery of this Agreement by such Investors, Existing Investors holding at least seventy-five percent (75%) of the Registrable Securities (as defined in the Prior Agreement) and the Company;

NOW, THEREFORE, the Company and the Existing Investors hereby agree that the Prior Agreement shall be superseded and replaced in its entirety by this Agreement, and the parties to this Agreement further agree as follows:

1. Definitions. For purposes of this Agreement:

1.1 "**Affiliate**" means, with respect to any specified Person, any other Person who, directly or indirectly, controls, is controlled by, or is under common control with such Person, including, without limitation, any general partner, limited partner, manager, member, managing member, officer, director, employee or trustee of such Person or any trust for the benefit of any of the foregoing or any Affiliate of the foregoing, or any investment fund or account, venture capital fund or registered investment company now or hereafter existing that is controlled by one or more general partners, managing members or investment advisers of, or shares the same (or an affiliate of the same) management company or investment adviser with, such Person; and, in addition, with respect to the Baillie Gifford Investor, any person that receives, directly or indirectly, investment management or management advisory services from Baillie Gifford. For purposes of this definition of "Affiliate," the term "control" when used with respect to any Person shall mean the power to direct the management or policies of such Person, directly or indirectly, whether through ownership of voting securities, by contract or otherwise, and the terms "controlling" and "controlled" shall have meanings correlative to the foregoing.

1.2 "**ARCH**" means ARCH Venture Fund IX, L.P., ARCH Venture Fund IX Overage, L.P., ARCH Venture Fund X, L.P., ARCH Venture Fund X Overage, L.P. and their Affiliates.

1.3 "**Baillie Gifford**" means, collectively, Baillie Gifford & Co. or Baillie Gifford Overseas Limited and any successor or affiliated registered investment advisor to the Baillie Gifford Investor.

1.4 "**Baillie Gifford Investor**" means Scottish Mortgage Investment Trust plc, which is an advisory client of Baillie Gifford.

1.5 "**Common Stock**" means shares of the Company's common stock, par value $0.0001 per share.

1.6 "**Damages**" means any loss, damage, claim or liability (joint or several) to which a party hereto may become subject under the Securities Act, the Exchange Act, or other federal or state law, insofar as such loss, damage, claim or liability (or any action in respect thereof) arises out of or is based upon: (i) any untrue statement or alleged untrue statement of a material fact contained in any registration statement of the Company, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto; (ii) an omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading; or (iii) any violation or alleged violation by the indemnifying party (or any of its agents or Affiliates) of the Securities Act, the Exchange Act, any state securities law, or any rule or regulation promulgated under the Securities Act, the Exchange Act, or any state securities law.

1.7 "**Derivative Securities**" means any securities or rights convertible into, or exercisable or exchangeable for (in each case, directly or indirectly)**,** Common Stock, including options and warrants.

1.8 "**Exchange Act**" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

1.9 "**Excluded Registration**" means (i) a registration relating to the sale of securities to employees of the Company or a subsidiary pursuant to a stock option, stock purchase, or similar plan; (ii) a registration relating to an SEC Rule 145 transaction; (iii) a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities; or (iv) a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities that are also being registered.

1.10 "**Flagship**" means Flagship Pioneering and its Affiliates.

1.11 "**F-Prime**" means F-Prime Capital Partners Life Sciences Fund VI LP and its Affiliates.

1.12 "**Form S-1**" means such form under the Securities Act as in effect on the date hereof or any successor registration form under the Securities Act subsequently adopted by the SEC.

1.13 "**Form S-3**" means such form under the Securities Act as in effect on the date hereof or any registration form under the Securities Act subsequently adopted by the SEC that permits incorporation of substantial information by reference to other documents filed by the Company with the SEC.

1.14 "**GAAP**" means generally accepted accounting principles in the United States.

1.15 "**Holder**" means any holder of Registrable Securities who is a party to this Agreement.

1.16 "**Immediate Family Member**" means a child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, including, adoptive relationships, of a natural person referred to herein.

1.17 "**Initiating Holders**" means, collectively, Holders who properly initiate a registration request under this Agreement.

1.18 "**IPO**" means the Company's first underwritten public offering of its Common Stock under the Securities Act.

1.19 "**Key Employee**" means any executive-level employee (including, division director and vice president-level positions) as well as any employee who, either alone or in concert with others, develops, invents, programs, or designs any Company Intellectual Property (as defined in the Purchase Agreement).

1.20 "**Major Investor**" means any Investor that, individually or together with such Investor's Affiliates, either (i) purchases (or who has committed to purchase pursuant to the Purchase Agreement), or (ii) receives pursuant to the Agreement and Plan of Merger by and among the Company, Sana Biotechnology IV, Inc., Cobalt Biomedicine, Inc., and VentureLabs VI, Inc., dated as of December 20, 2018, as amended (the "**Merger Agreement**"), at least 10,000,000 shares of Registrable Securities (as adjusted for any stock split, stock dividend, combination or other recapitalization or reclassification effected after the date hereof).

1.21 "**New Securities**" means, collectively, equity securities of the Company, whether or not currently authorized, as well as rights, options, or warrants to purchase such equity securities, or securities of any type whatsoever that are, or may become, convertible or exchangeable into or exercisable for such equity securities.

1.22 "**Person**" means any individual, corporation, partnership, trust, limited liability company, association or other entity.

1.23 "**Preferred Directors**" means the five (5) directors of the Company that the holders of record of the Preferred Stock are entitled to elect pursuant to the Company's Amended and Restated Certificate of Incorporation.

1.24 "**Preferred Stock**" means shares of the Company's Series A-1 Preferred Stock, Series A-2 Preferred Stock and Series B Preferred Stock, collectively.

1.25 "**Registrable Securities**" means (i) the Common Stock issuable or issued upon conversion of the Preferred Stock, excluding any Common Stock issued upon conversion of the Preferred Stock pursuant to the "Special Mandatory Conversion" provisions of the Company's Amended and Restated Certificate of Incorporation; (ii) any Common Stock, or any Common Stock issued or issuable (directly or indirectly) upon conversion and/or exercise of any other securities of the Company acquired by the Investors after the date hereof and (iii) any Common Stock issued as (or issuable upon the conversion or exercise of any warrant, right, or other security that is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of, the shares referenced in clauses (i) and (ii) above; excluding in all cases, however, any Registrable Securities sold by a Person in a transaction in which the applicable rights under this Agreement are not assigned pursuant to Subsection 6.1, and excluding for purposes of Section 2 any shares for which registration rights have terminated pursuant to Subsection 2.13 of this Agreement.

1.26 "**Registrable Securities then outstanding**" means the number of shares determined by adding the number of shares of outstanding Common Stock that are Registrable Securities and the number of shares of Common Stock issuable (directly or indirectly) pursuant to then exercisable and/or convertible securities that are Registrable Securities.

1.27 "**Requisite Holders**" means (a) prior to the issuance of Series B Preferred Stock, the holders of at least 70% of the outstanding Series A-1 Preferred Stock and Series A-2 Preferred Stock, voting together as a single class on an as converted basis, and which must include Series B Large Investors (as defined in the Purchase Agreement) representing at least a majority of the Series B Preferred Stock that all Series B Large Investors have committed to purchase pursuant to the Purchase Agreement, and (b) following the issuance of the Series B Preferred Stock, the holders of at least 61% of the outstanding Preferred Stock, voting together as a single class on an as converted basis, and which must include the holders of at least a majority of the Series B Preferred Stock then held by the Series B Large Investors.

1.28 "**Restricted Securities**" means the securities of the Company required to be notated with the legend set forth in Subsection 2.12(b) hereof.

1.29 "**SEC**" means the Securities and Exchange Commission.

1.30 "**SEC Rule 144**" means Rule 144 promulgated by the SEC under the Securities Act.

1.31 "**SEC Rule 145**" means Rule 145 promulgated by the SEC under the Securities Act.

1.32 "**Securities Act**" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

1.33 "**Selling Expenses**" means all underwriting discounts, selling commissions, and stock transfer taxes applicable to the sale of Registrable Securities, and fees and disbursements of counsel for any Holder, except for the fees and disbursements of the Selling Holder Counsel borne and paid by the Company as provided in Subsection 2.6.

1.34 "**Series A-1 Preferred Stock**" means shares of the Company's Series A-1 Preferred Stock, par value $0.0001 per share.

1.35 "**Series A-2 Preferred Stock**" means shares of the Company's Series A-2 Preferred Stock, par value $0.0001 per share.

1.36 "**Series B Preferred Stock**" means shares of the Company's Series B Preferred Stock, par value $0.0001 per share.

2. Registration Rights. The Company covenants and agrees as follows:

2.1 Demand Registration.

(a) Form S-1 Demand. If at any time after the earlier of (i) five (5) years after the date of this Agreement or (ii) one hundred and eighty (180) days after the effective date of the registration statement for the IPO, the Company receives a request from Major Investors holding forty percent (40%) of the Registrable Securities held by all Major Investors that the Company file a Form S-1 registration statement with respect to at least forty percent (40%) of the Registrable Securities then held by all Major Investors (or a lesser percent if the anticipated aggregate offering price, net of Selling Expenses, would exceed $20 million) then the Company shall (x) within ten (10) days after the date such request is given, give notice thereof (the "**Demand Notice**") to all Holders other than the Initiating Holders; and (y) as soon as practicable, and in any event within sixty (60) days after the date such request is given by the Initiating Holders, file a Form S-1 registration statement under the Securities Act covering all Registrable Securities that the Initiating Holders requested to be registered and any additional Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within twenty (20) days of the date the Demand Notice is given, and in each case, subject to the limitations of Subsections 2.1(c) and 2.3.

(b) Form S-3 Demand. If at any time when it is eligible to use a Form S-3 registration statement, the Company receives a request from Major Investors holding at least twenty-five percent (25%) of the Registrable Securities held by all Major Investors that the Company file a Form S-3 registration statement with respect to outstanding Registrable Securities of such Holders having an anticipated aggregate offering price, net of Selling Expenses, of at least $15 million then the Company shall (i) within ten (10) days after the date such request is given, give a Demand Notice to all Holders other than the Initiating Holders; and (ii) as soon as

practicable, and in any event within forty-five (45) days after the date such request is given by the Initiating Holders, file a Form S-3 registration statement under the Securities Act covering all Registrable Securities that the Initiating Holders requested to be registered and any additional Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within twenty (20) days of the date the Demand Notice is given, and in each case, subject to the limitations of Subsections 2.1(c) and 2.3.

(c) Notwithstanding the foregoing obligations, if the Company furnishes to such Holders requesting a registration pursuant to this Subsection 2.1 a certificate signed by the Company's chief executive officer stating that in the good faith judgment of the Company's Board of Directors it would be materially detrimental to the Company and its stockholders for such registration statement to either become effective or remain effective for as long as such registration statement otherwise would be required to remain effective, because such action would (i) materially interfere with a significant acquisition, corporate reorganization, or other similar transaction involving the Company; (ii) require premature disclosure of material information that the Company has a bona fide business purpose for preserving as confidential; or (iii) render the Company unable to comply with requirements under the Securities Act or Exchange Act, then the Company shall have the right to defer taking action with respect to such filing, and any time periods with respect to filing or effectiveness thereof shall be tolled correspondingly, for a period of not more than ninety (90) days after the request of the Initiating Holders is given; provided, however, that the Company may not invoke this right more than once in any twelve (12) month period; and provided further that the Company shall not register any securities for its own account or that of any other stockholder during such ninety (90) day period other than an Excluded Registration.

(d) The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Subsection 2.1(a) (i) during the period that is sixty (60) days before the Company's good faith estimate of the date of filing of, and ending on a date that is one hundred and eighty (180) days after the effective date of, a Company-initiated registration, provided that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; (ii) after the Company has effected two registrations pursuant to Subsection 2.1(a); or (iii) if the Initiating Holders propose to dispose of shares of Registrable Securities that may be immediately registered on Form S-3 pursuant to a request made pursuant to Subsection 2.1(b). The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Subsection 2.1(b) (i) during the period that is 30 days before the Company's good faith estimate of the date of filing of, and ending on a date that is 90 days after the effective date of, a Company-initiated registration, provided that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; or (ii) if the Company has effected two registrations pursuant to Subsection 2.1(b) within the 12 month period immediately preceding the date of such request. A registration shall not be counted as "effected" for purposes of this Subsection 2.1(d) until such time as the applicable registration statement has been declared effective by the SEC, unless the Initiating Holders withdraw their request for such registration, elect not to pay the registration expenses therefor, and forfeit their right to one demand registration statement pursuant to Subsection 2.6, in which case such withdrawn registration statement shall be counted as "effected" for purposes of this Subsection 2.1(d); provided, that if such withdrawal is during a period the Company has deferred taking action pursuant to Subsection 2.1(c), then the Initiating Holders may withdraw their request for registration and such registration will not be counted as "effected" for purposes of this Subsection 2.1(d).

2.2 Company Registration(a) . If the Company proposes to register (including, for this purpose, a registration effected by the Company for stockholders other than the Holders) any of its Common Stock under the Securities Act in connection with the public offering of such securities solely for cash (other than in an Excluded Registration), the Company shall, at such time, promptly give each Holder notice of such registration. Upon the request of each Holder given within twenty (20) days after such notice is given by the Company, the Company shall, subject to the provisions of Subsection 2.3, cause to be registered all of the Registrable Securities that each such Holder has requested to be included in such registration. The Company shall have the right to terminate or withdraw any registration initiated by it under this Subsection 2.2 before the effective date of such registration, whether or not any Holder has elected to include Registrable Securities in such registration. The expenses (other than Selling Expenses) of such withdrawn registration shall be borne by the Company in accordance with Subsection 2.6.

2.3 Underwriting Requirements.

(a) If, pursuant to Subsection 2.1, the Initiating Holders intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to Subsection 2.1, and the Company shall include such information in the Demand Notice. The underwriter(s) will be selected by the Company and shall be reasonably acceptable to at least a majority of the voting power of the Initiating Holders. In such event, the right of any Holder to include such Holder's Registrable Securities in such registration shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall (together with the Company as provided in Subsection 2.4(e)) enter into an underwriting agreement in customary form with the underwriter(s) selected for such underwriting. Notwithstanding any other provision of this Subsection 2.3, if the managing underwriter(s) advise(s) the Initiating Holders in writing that marketing factors require a limitation on the number of shares to be underwritten, then the Initiating Holders shall so advise all Holders of Registrable Securities that otherwise would be underwritten pursuant hereto, and the number of Registrable Securities that may be included in the underwriting shall be allocated among such Holders of Registrable Securities, including the Initiating Holders, in proportion (as nearly as practicable) to the number of Registrable Securities owned by each Holder or in such other proportion as shall mutually be agreed to by all such selling Holders; provided, however, that the number of Registrable Securities held by the Holders to be included in such underwriting shall not be reduced unless all other securities are first entirely excluded from the underwriting. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest one hundred (100) shares.

(b) In connection with any offering involving an underwriting of shares of the Company's capital stock pursuant to Subsection 2.2, the Company shall not be required to include any of the Holders' Registrable Securities in such underwriting unless the Holders accept the terms of the underwriting as agreed upon between the Company and its underwriters, and then only in such quantity as the underwriters in their sole discretion determine will not jeopardize the success of the offering by the Company. If the total number of securities, including Registrable Securities, requested by stockholders to be included in such offering exceeds the number of securities to be sold (other than by the Company) that the underwriters in their reasonable discretion determine is compatible with the success of the offering, then the Company shall be required to include in the offering only that number of such securities, including Registrable Securities, which the underwriters and the Company in their sole discretion determine will not jeopardize the success of the offering. If the underwriters determine that less than all of the Registrable Securities requested to be registered can be included in such offering, then the Registrable Securities that are included in such offering shall be allocated among the selling Holders in proportion (as nearly as practicable to) the number of Registrable Securities owned by each selling Holder or in such other proportions as shall mutually be agreed to by all such selling Holders. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest one hundred (100) shares. Notwithstanding the foregoing, in no event shall (i) the number of Registrable Securities included in the offering be reduced unless all other securities (other than securities to be sold by the Company) are first entirely excluded from the offering, or (ii) the number of Registrable Securities included in the offering be reduced below 30% of the total number of securities included in such offering, unless such offering is the IPO, in which case the selling Holders may be excluded further if the underwriters make the determination described above and no other stockholder's securities are included in such offering. For purposes of the provision in this Subsection 2.3(b) concerning apportionment, for any selling Holder that is a partnership, limited liability company, or corporation, the partners, members, retired partners, retired members, stockholders, and Affiliates of such Holder, or the estates and Immediate Family Members of any such partners, retired partners, members, and retired members and any trusts for the benefit of any of the foregoing Persons, shall be deemed to be a single "selling Holder," and any pro rata reduction with respect to such "selling Holder" shall be based upon the aggregate number of Registrable Securities owned by all Persons included in such "selling Holder," as defined in this sentence.

(c) For purposes of Subsection 2.1, a registration shall not be counted as "effected" if, as a result of an exercise of the underwriter's cutback provisions in Subsection 2.3(a), fewer than fifty percent (50%) of the total number of Registrable Securities that Holders have requested to be included in such registration statement are actually included.

2.4 Obligations of the Company. Whenever required under this Section 2 to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) prepare and file with the SEC a registration statement with respect to such Registrable Securities and use its commercially reasonable efforts to cause such registration statement to become effective and, upon the request of the Holders of a majority of the Registrable Securities registered thereunder, keep such registration statement effective for a period of up to one hundred twenty (120) days or, if earlier, until the distribution contemplated in

the registration statement has been completed; provided, however, that (i) such one hundred twenty (120) day period shall be extended for a period of time equal to the period the Holder refrains, at the request of an underwriter of Common Stock (or other securities) of the Company, from selling any securities included in such registration, and (ii) in the case of any registration of Registrable Securities on Form S-3 that are intended to be offered on a continuous or delayed basis, subject to compliance with applicable SEC rules, such one hundred twenty (120) day period shall be extended for up to ninety (90) days, if necessary, to keep the registration statement effective until all such Registrable Securities are sold;

(b) prepare and file with the SEC such amendments and supplements to such registration statement, and the prospectus used in connection with such registration statement, as may be necessary to comply with the Securities Act in order to enable the disposition of all securities covered by such registration statement;

(c) furnish to the selling Holders such numbers of copies of a prospectus, including a preliminary prospectus, as required by the Securities Act, and such other documents as the Holders may reasonably request in order to facilitate their disposition of their Registrable Securities;

(d) use its commercially reasonable efforts to register and qualify the securities covered by such registration statement under such other securities or blue-sky laws of such jurisdictions as shall be reasonably requested by the selling Holders; provided that the Company shall not be required to qualify to do business or to file a general consent to service of process in any such states or jurisdictions, unless the Company is already subject to service in such jurisdiction and except as may be required by the Securities Act;

(e) in the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the underwriter(s) of such offering;

(f) use its commercially reasonable efforts to cause all such Registrable Securities covered by such registration statement to be listed on a national securities exchange or trading system and each securities exchange and trading system (if any) on which similar securities issued by the Company are then listed;

(g) provide a transfer agent and registrar for all Registrable Securities registered pursuant to this Agreement and provide a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration;

(h) promptly make available for inspection by the selling Holders, any managing underwriter(s) participating in any disposition pursuant to such registration statement, and any attorney or accountant or other agent retained by any such underwriter or selected by the selling Holders, all financial and other records, pertinent corporate documents, and properties of the Company, and cause the Company's officers, directors, employees, and independent accountants to supply all information reasonably requested by any such seller, underwriter, attorney, accountant, or agent, in each case, as necessary or advisable to verify the accuracy of the information in such registration statement and to conduct appropriate due diligence in connection therewith;

(i) notify each selling Holder, promptly after the Company receives notice thereof, of the time when such registration statement has been declared effective or a supplement to any prospectus forming a part of such registration statement has been filed; and

(j) after such registration statement becomes effective, notify each selling Holder of any request by the SEC that the Company amend or supplement such registration statement or prospectus.

In addition, the Company shall ensure that, at all times after any registration statement covering a public offering of securities of the Company under the Securities Act shall have become effective, its insider trading policy shall provide that the Company's directors may implement a trading program under Rule 10b5-1 of the Exchange Act.

2.5 Furnish Information. It shall be a condition precedent to the obligations of the Company to take any action pursuant to this Section 2 with respect to the Registrable Securities of any selling Holder that such Holder shall furnish to the Company such information regarding itself, the Registrable Securities held by it, and the intended method of disposition of such securities as is reasonably required to effect the registration of such Holder's Registrable Securities.

2.6 Expenses of Registration. All expenses (other than Selling Expenses) incurred in connection with registrations, filings, or qualifications pursuant to Section 2, including all registration, filing, and qualification fees; printers' and accounting fees; fees and disbursements of counsel for the Company; and the reasonable fees and disbursements, not to exceed $50,000, of one counsel for the selling Holders ("**Selling Holder Counsel**"), shall be borne and paid by the Company; provided, however, that the Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to Subsection 2.1 if the registration request is subsequently withdrawn at the request of the Holders of at least a majority of the Registrable Securities to be registered (in which case all selling Holders shall bear such expenses pro rata based upon the number of Registrable Securities that were to be included in the withdrawn registration), unless the Holders of at least a majority of the Registrable Securities agree to forfeit their right to one registration pursuant to Subsections 2.1(a) or 2.1(b), as the case may be; provided further that if, at the time of such withdrawal, the Holders shall have learned of a material adverse change in the condition, business, or prospects of the Company from that known to the Holders at the time of their request and have withdrawn the request with reasonable promptness after learning of such information then the Holders shall not be required to pay any of such expenses and shall not forfeit their right to one registration pursuant to Subsections 2.1(a) or 2.1(b). All Selling Expenses relating to Registrable Securities registered pursuant to this Section 2 shall be borne and paid by the Holders pro rata on the basis of the number of Registrable Securities registered on their behalf.

2.7 Delay of Registration. No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any registration pursuant to this Agreement as the result of any controversy that might arise with respect to the interpretation or implementation of this Section 2.

2.8 Indemnification. If any Registrable Securities are included in a registration statement under this Section 2:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each selling Holder, and the partners, members, officers, directors, and stockholders of each such Holder; legal counsel and accountants for each such Holder; any underwriter (as defined in the Securities Act) for each such Holder; and each Person, if any, who controls such Holder or underwriter within the meaning of the Securities Act or the Exchange Act, against any Damages, and the Company will pay to each such Holder, underwriter, controlling Person, or other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Subsection 2.8(a) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Company, which consent shall not be unreasonably withheld, nor shall the Company be liable for any Damages to the extent that they arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of any such Holder, underwriter, controlling Person, or other aforementioned Person expressly for use in connection with such registration.

(b) To the extent permitted by law, each selling Holder, severally and not jointly, will indemnify and hold harmless the Company, and each of its directors, each of its officers who has signed the registration statement, each Person (if any), who controls the Company within the meaning of the Securities Act, legal counsel and accountants for the Company, any underwriter (as defined in the Securities Act), any other Holder selling securities in such registration statement, and any controlling Person of any such underwriter or other Holder, against any Damages, in each case only to the extent that such Damages arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of such selling Holder expressly for use in connection with such registration; and each such selling Holder will pay to the Company and each other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Subsection 2.8(b) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Holder, which consent shall not be unreasonably withheld; and provided further that in no event shall the aggregate amounts payable by any Holder by way of indemnity or contribution under Subsections 2.8(b) and 2.8(d) exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of fraud or willful misconduct by such Holder.

(c) Promptly after receipt by an indemnified party under this Subsection 2.8 of notice of the commencement of any action (including any governmental action) for which a party may be entitled to indemnification hereunder, such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Subsection 2.8, give the

indemnifying party notice of the commencement thereof. The indemnifying party shall have the right to participate in such action and, to the extent the indemnifying party so desires, participate jointly with any other indemnifying party to which notice has been given, and to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an indemnified party (together with all other indemnified parties that may be represented without conflict by one counsel) shall have the right to retain one separate counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such action. The failure to give notice to the indemnifying party within a reasonable time of the commencement of any such action shall relieve such indemnifying party of any liability to the indemnified party under this Subsection 2.8, to the extent that such failure materially prejudices the indemnifying party's ability to defend such action. The failure to give notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Subsection 2.8.

(d) To provide for just and equitable contribution to joint liability under the Securities Act in any case in which either: (i) any party otherwise entitled to indemnification hereunder makes a claim for indemnification pursuant to this Subsection 2.8 but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case, notwithstanding the fact that this Subsection 2.8 provides for indemnification in such case, or (ii) contribution under the Securities Act may be required on the part of any party hereto for which indemnification is provided under this Subsection 2.8, then, and in each such case, such parties will contribute to the aggregate losses, claims, damages, liabilities, or expenses to which they may be subject (after contribution from others) in such proportion as is appropriate to reflect the relative fault of each of the indemnifying party and the indemnified party in connection with the statements, omissions, or other actions that resulted in such loss, claim, damage, liability, or expense, as well as to reflect any other relevant equitable considerations. The relative fault of the indemnifying party and of the indemnified party shall be determined by reference to, among other things, whether the untrue or allegedly untrue statement of a material fact, or the omission or alleged omission of a material fact, relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent such statement or omission; provided, however, that, in any such case (x) no Holder will be required to contribute any amount in excess of the public offering price of all such Registrable Securities offered and sold by such Holder pursuant to such registration statement, and (y) no Person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation; and provided further that in no event shall a Holder's liability pursuant to this Subsection 2.8(d), when combined with the amounts paid or payable by such Holder pursuant to Subsection 2.8(b), exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of willful misconduct or fraud by such Holder.

(e) Notwithstanding the foregoing, to the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in connection with the underwritten public offering are in conflict with the foregoing provisions, the provisions in the underwriting agreement shall control.

(f) Unless otherwise superseded by an underwriting agreement entered into in connection with the underwritten public offering, the obligations of the Company and Holders under this Subsection 2.8 shall survive the completion of any offering of Registrable Securities in a registration under this Section 2, and otherwise shall survive the termination of this Agreement.

2.9 Reports Under Exchange Act. With a view to making available to the Holders the benefits of SEC Rule 144 and any other rule or regulation of the SEC that may at any time permit a Holder to sell securities of the Company to the public without registration or pursuant to a registration on Form S-3, the Company shall:

(a) make and keep available adequate current public information, as those terms are understood and defined in SEC Rule 144, at all times after the effective date of the registration statement filed by the Company for the IPO;

(b) use commercially reasonable efforts to file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act (at any time after the Company has become subject to such reporting requirements); and

(c) furnish to any Holder, so long as the Holder owns any Registrable Securities, forthwith upon request (i) to the extent accurate, a written statement by the Company that it has complied with the reporting requirements of SEC Rule 144 (at any time after ninety (90) days after the effective date of the registration statement filed by the Company for the IPO), the Securities Act, and the Exchange Act (at any time after the Company has become subject to such reporting requirements), or that it qualifies as a registrant whose securities may be resold pursuant to Form S-3 (at any time after the Company so qualifies); and (ii) such other information as may be reasonably requested in availing any Holder of any rule or regulation of the SEC that permits the selling of any such securities without registration (at any time after the Company has become subject to the reporting requirements under the Exchange Act) or pursuant to Form S-3 (at any time after the Company so qualifies to use such form).

2.10 Limitations on Subsequent Registration Rights. From and after the date of this Agreement, the Company shall not, without the prior written consent of the Requisite Holders, enter into any agreement with any holder or prospective holder of any securities of the Company that would (i) provide to such holder the right to include securities in any registration on other than either a pro rata basis with respect to the Registrable Securities or on a subordinate basis after all Holders have had the opportunity to include in the registration and offering all shares of Registrable Securities that they wish to so include; or (ii) allow such holder or prospective holder to initiate a demand for registration of any securities held by such holder or prospective holder; provided that this limitation shall not apply to Registrable Securities acquired by any additional Investor that becomes a party to this Agreement in accordance with Subsection 6.9.

2.11 "Market Stand-off" Agreement. Each Holder hereby agrees that it will not, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to the registration by the Company of shares of its Common Stock or any other equity securities under the Securities Act for its IPO and ending on the date specified by the Company and the managing underwriter (such period not to exceed one hundred eighty (180) days), or such longer period as may be required to accommodate applicable regulatory restrictions on (1) the publication or other distribution of research reports, and (2) analyst recommendations and opinions, including, but not limited to, the restrictions contained in FINRA Rule 2241, or any successor provisions or amendments thereto), (i) lend; offer; pledge; sell; contract to sell; sell any option or contract to purchase; purchase any option or contract to sell; grant any option, right, or warrant to purchase; or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable (directly or indirectly) for Common Stock (whether such shares or any such securities are then owned by the Holder or are thereafter acquired) or (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of such securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or other securities, in cash, or otherwise. The foregoing provisions of this Subsection 2.11 shall apply only to the IPO, shall not apply to the sale of any shares acquired in the IPO or open market following the IPO or to an underwriter pursuant to an underwriting agreement, or the transfer of any shares to any trust for the direct or indirect benefit of the Holder or the immediate family of the Holder, provided that the trustee of the trust agrees to be bound in writing by the restrictions set forth herein, and provided further that any such transfer shall not involve a disposition for value, and shall be applicable to the Holders only if all officers, directors and stockholders individually owning more than one percent (1.0%) of the Company's outstanding Common Stock (after giving effect to conversion into Common Stock of all outstanding Preferred Stock) are subject to the same restrictions. The underwriters in connection with such registration are intended third-party beneficiaries of this Subsection 2.11 and shall have the right, power and authority to enforce the provisions hereof as though they were a party hereto. Each Holder further agrees to execute such agreements as may be reasonably requested by the underwriters in connection with such registration that are consistent with this Subsection 2.11 or that are necessary to give further effect thereto. Subject to customary shareholding thresholds and exceptions, any discretionary waiver or termination of the restrictions of any or all of such agreements by the Company or the underwriters shall apply pro rata to all Holders subject to such agreements, based on the number of shares subject to such agreement.

2.12 Restrictions on Transfer.

(a) The Preferred Stock and the Registrable Securities shall not be sold, pledged, or otherwise transferred, and the Company shall not recognize and shall issue stop-transfer instructions to its transfer agent with respect to any such sale, pledge, or transfer, except upon the conditions specified in this Agreement, which conditions are intended to ensure compliance with the provisions of the Securities Act. A transferring Holder will cause any proposed purchaser, pledgee, or transferee of the Preferred Stock and the Registrable Securities held by such Holder to agree to take and hold such securities subject to the provisions and upon the conditions specified in this Agreement.

(b) Each certificate, instrument, or book entry representing (i) the Preferred Stock, (ii) the Registrable Securities, and (iii) any other securities issued in respect of the securities referenced in clauses (i) and (ii), upon any stock split, stock dividend, recapitalization, merger, consolidation, or similar event, shall (unless otherwise permitted by the provisions of Subsection 2.12(c)) be notated with a legend substantially in the following form:

THE SECURITIES REPRESENTED HEREBY HAVE BEEN ACQUIRED FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933. SUCH SHARES MAY NOT BE SOLD, PLEDGED, OR TRANSFERRED IN THE ABSENCE OF SUCH REGISTRATION OR A VALID EXEMPTION FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF SAID ACT.

THE SECURITIES REPRESENTED HEREBY MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF AN AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY.

The Holders consent to the Company making a notation in its records and giving instructions to any transfer agent of the Restricted Securities in order to implement the restrictions on transfer set forth in this Subsection 2.12.

(c) The holder of such Restricted Securities, by acceptance of ownership thereof, agrees to comply in all respects with the provisions of this Section 2. Before any proposed sale, pledge, or transfer of any Restricted Securities, unless there is in effect a registration statement under the Securities Act covering the proposed transaction, the Holder thereof shall give notice to the Company of such Holder's intention to effect such sale, pledge, or transfer. Each such notice shall describe the manner and circumstances of the proposed sale, pledge, or transfer in sufficient detail and, if reasonably requested by the Company, shall be accompanied at such Holder's expense by either (i) a written opinion of legal counsel who shall, and whose legal opinion shall, be reasonably satisfactory to the Company, addressed to the Company, to the effect that the proposed transaction may be effected without registration under the Securities Act; (ii) a "no action" letter from the SEC to the effect that the proposed sale, pledge, or transfer of such Restricted Securities without registration will not result in a recommendation by the staff of the SEC that action be taken with respect thereto; or (iii) any other evidence reasonably satisfactory to counsel to the Company to the effect that the proposed sale, pledge, or transfer of the Restricted Securities may be effected without registration under the Securities Act, whereupon the Holder of such Restricted Securities shall be entitled to sell, pledge, or transfer such Restricted Securities in accordance with the terms of the notice given by the Holder to the Company. The Company will not require such a notice, legal opinion or "no action" letter (x) in any transaction in compliance with SEC Rule 144; or (y) in any transaction in which such Holder distributes Restricted Securities to an Affiliate of such Holder; provided that each transferee agrees in writing to be subject to the terms of this Subsection 2.12. Each certificate, instrument, or book entry representing the Restricted Securities transferred as above provided shall be notated with, except if such transfer is made pursuant to SEC Rule 144, the appropriate restrictive legend set forth in Subsection 2.12(b), except that such certificate instrument, or book entry shall not be notated with such restrictive legend if, in the opinion of counsel for such Holder and the Company, such legend is not required in order to establish compliance with any provisions of the Securities Act.

2.13 Termination of Registration Rights. The right of any Holder to request registration or inclusion of Registrable Securities in any registration pursuant to Subsections 2.1 or 2.2 shall terminate upon the earliest to occur of:

(a) the closing of a Deemed Liquidation Event, as such term is defined in the Company's Amended and Restated Certificate of Incorporation;

(b) such time after the IPO as Rule 144 or another similar exemption under the Securities Act is available for the sale of all of such Holder's shares without limitation during a three-month period without registration; and

(c) the fifth anniversary of the IPO.

3. Information and Observer Rights.

3.1 Delivery of Financial Statements. The Company shall deliver to each Major Investor, provided that the Board of Directors has not reasonably determined that such Major Investor is a competitor of the Company:

(a) as soon as practicable, but in any event within one hundred twenty (120) days after the end of each fiscal year of the Company (i) a balance sheet as of the end of such year, (ii) statements of income and of cash flows for such year, and a comparison between (x) the actual amounts as of and for such fiscal year and (y) the comparable amounts for the prior year and as included in the Budget (as defined below) for such year, with an explanation of any material differences between such amounts and a schedule as to the sources and applications of funds for such year, and (iii) a statement of stockholders' equity as of the end of such year, all such financial statements audited and certified by independent public accountants selected by the Company; provided, however, the obligation to deliver such financial statements audited and certified shall not apply until fiscal year 2019;

(b) as soon as practicable, but in any event within thirty (30) days after the end of each month and each of the first three (3) quarters of each fiscal year of the Company respectively, unaudited statements of income and cash flows for such month or quarter, as applicable, including comparison of actuals against the Budget (as defined below), and an unaudited balance sheet as of the end of such month or quarter, as applicable, all prepared in accordance with GAAP (except that such financial statements may (i) be subject to normal year-end audit adjustments; and (ii) not contain all notes thereto that may be required in accordance with GAAP);

(c) as soon as practicable, but in any event within forty-five (45) days after the end of each quarter of each fiscal year of the Company, a statement showing the number of shares of each class and series of capital stock and securities convertible into or exercisable for shares of capital stock outstanding at the end of the period, the Common Stock issuable upon conversion or exercise of any outstanding securities convertible or exercisable for Common Stock and the exchange ratio or exercise price applicable thereto, and the number of shares of issued stock options and stock options not yet issued but reserved for issuance, if any, all in sufficient detail as to permit the Major Investors to calculate their respective percentage equity ownership in the Company, and certified by the chief financial officer or chief executive officer of the Company as being true, complete, and correct;

(d) as soon as practicable, but in any event thirty (30) days before the end of each fiscal year, a budget and business plan for the next fiscal year (collectively, the "**Budget**"), prepared on a monthly basis, including balance sheets, income statements, and statements of cash flow for such months and, promptly after prepared, any other budgets or revised budgets prepared by the Company; and

(e) such other information relating to the financial condition, capitalization, business, prospects, or corporate affairs of the Company as any Major Investor may from time to time reasonably request; provided, however, that the Company shall not be obligated under this Subsection 3.1 to provide information (i) that the Company reasonably determines in good faith to be a trade secret or confidential information (unless covered by an enforceable confidentiality agreement, in a form acceptable to the Company); or (ii) the disclosure of which would adversely affect the attorney-client privilege between the Company and its counsel.

If, for any period, the Company has any subsidiary whose accounts are consolidated with those of the Company, then in respect of such period the financial statements delivered pursuant to the foregoing sections shall be the consolidated and consolidating financial statements of the Company and all such consolidated subsidiaries.

Notwithstanding anything else in this Subsection 3.1 to the contrary, the Company may cease providing the information set forth in this Subsection 3.1 during the period starting with the date sixty (60) days before the Company's good-faith estimate of the date of filing of a registration statement if it reasonably concludes it must do so to comply with the SEC rules applicable to such registration statement and related offering; provided that the Company's covenants under this Subsection 3.1 shall be reinstated at such time as the Company is no longer actively employing its commercially reasonable efforts to cause such registration statement to become effective.

Except as set forth in Subsection 3.3, the information rights set forth in this Subsection 3.1 shall not be terminated with respect to any Major Investor without such Major Investor's prior written consent.

3.2 Inspection. The Company shall permit each Major Investor (provided that the Board of Directors has not reasonably determined that such Major Investor is a competitor of the Company), at such Major Investor's expense, to visit and inspect the Company's properties; examine its books of account and records; and discuss the Company's affairs, finances, and accounts with its officers, during normal business hours of the Company as may be reasonably requested by the Major Investor; provided, however, that the Company shall not be obligated pursuant to this Subsection 3.2 to provide access to any information that it reasonably and in good faith considers to be a trade secret or confidential information (unless covered by an enforceable confidentiality agreement, in form reasonably acceptable to the Company) or the disclosure of which would adversely affect the attorney-client privilege between the Company and its counsel.

3.3 Termination of Information. The covenants set forth in Subsection 3.1 and Subsection 3.2 shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) upon a Deemed Liquidation Event, as such term is defined in the Company's Amended and Restated Certificate of Incorporation, whichever event occurs first.

3.4 Confidentiality. Each Investor agrees that such Investor will keep confidential and will not disclose, divulge, or use for any purpose (other than to monitor its investment in the Company) any confidential information obtained from the Company pursuant to the terms of this Agreement (including notice of the Company's intention to file a registration statement), unless such confidential information (a) is known or becomes known to the public in general (other than as a result of a breach of this Subsection 3.4 by such Investor), (b) is or has been independently developed or conceived by the Investor without use of the Company's confidential information, or (c) is or has been made known or disclosed to the Investor by a third party without a breach of any obligation of confidentiality such third party may have to the Company; provided, however, that an Investor may disclose confidential information (i) to its attorneys, accountants, consultants, and other professionals to the extent necessary to obtain their services in connection with monitoring its investment in the Company; (ii) to any prospective purchaser of any Registrable Securities from such Investor, if such prospective purchaser agrees to be bound by the provisions of this Subsection 3.4; (iii) to any existing or prospective Affiliate, partner, member, stockholder, or wholly owned subsidiary of such Investor in the ordinary course of business, provided that such Investor informs such Person that such information is confidential and directs such Person to maintain the confidentiality of such information; or (iv) as may otherwise be required by law or legal order, provided that the Investor, to the extent legally permissible, promptly notifies the Company of such disclosure and takes reasonable steps in accordance with applicable law (as determined by Investor's counsel) to minimize the extent of any such required disclosure.

4. Rights to Future Stock Issuances.

4.1 Right of First Offer. Subject to the terms and conditions of this Subsection 4.1 and applicable securities laws, if the Company proposes to offer or sell any New Securities the Company shall first offer such New Securities to each Major Investor. A Major Investor shall be entitled to apportion the right of first offer hereby granted to it, in such proportions as it deems appropriate, among itself and its Affiliates.

(a) The Company shall give notice (the "**Offer Notice**") to each Major Investor, stating (i) its bona fide intention to offer such New Securities, (ii) the number of such New Securities to be offered, and (iii) the price and terms, if any, upon which it proposes to offer such New Securities.

(b) By notification to the Company within twenty (20) days after the Offer Notice is given, each Major Investor may elect to purchase or otherwise acquire, at the price and on the terms specified in the Offer Notice, up to that portion of such New Securities which equals the proportion that the Common Stock then held by such Major Investor (including all shares of Common Stock issuable or issued upon conversion of the Preferred Stock but excluding any other Derivative Securities then held by such Major Investor or shares reserved under any equity compensation plan) bears to the total Common Stock of the Company then outstanding immediately prior to the issuance of such New Securities (including all shares of Common Stock issuable or issued upon conversion of Preferred Stock but excluding any other Derivative Securities or shares reserved under any equity compensation plan). At the expiration of such twenty (20) day period, the Company shall promptly notify each Major Investor that elects to purchase or acquire all the shares available to it (each, a "**Fully Exercising Investor**") of any other Major Investor's failure to do likewise. During the ten (10) day period commencing after the Company has given such notice, each Fully Exercising Investor may, by giving notice to the Company, elect to purchase or acquire, in addition to the number of shares specified above, up to that portion of the New Securities for which Major Investors were entitled to subscribe but that were not subscribed for by the Major Investors which is equal to the proportion that the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of Preferred Stock and any other Derivative Securities then held, by such Fully Exercising Investor bears to the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of the Preferred Stock and any other Derivative Securities then held, by all Fully Exercising Investors who wish to purchase such unsubscribed shares. The closing of any sale pursuant to this Subsection 4.1(b) shall occur within the later of one hundred and twenty (120) days of the date that the Offer Notice is given and the date of initial sale of New Securities pursuant to Subsection 4.1(c).

(c) If all New Securities referred to in the Offer Notice are not elected to be purchased or acquired as provided in Subsection 4.1(b), the Company may, during the ninety (90) day period following the expiration of the periods provided in Subsection 4.1(b), offer and sell the remaining unsubscribed portion of such New Securities to any Person or Persons at a price not less than, and upon terms no more favorable to the offeree than, those specified in the Offer Notice. If the Company does not enter into an agreement for the sale of the New Securities within such period, or if such agreement is not consummated within thirty (30) days of the execution thereof, the right provided hereunder shall be deemed to be revived and such New Securities shall not be offered unless first reoffered to the Major Investors in accordance with this Subsection 4.1.

(d) The right of first offer in this Subsection 4.1 shall not be applicable to (i) Exempted Securities (as defined in the Restated Certificate), (ii) shares of Common Stock issued in the IPO; and (iii) the issuance of shares of Preferred Stock pursuant to Section 1.2 of the Purchase Agreement.

4.2 Termination. The covenants set forth in Subsection 4.1 shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) upon a Deemed Liquidation Event, as such term is defined in the Company's Amended and Restated Certificate of Incorporation, whichever event occurs first.

5. Additional Covenants.

5.1 Insurance. The Company shall use its commercially reasonable efforts to obtain, within ninety (90) days of the date hereof, from financially sound and reputable insurers Directors and Officers liability insurance in an amount and on terms and conditions satisfactory to the Board of Directors, and will use commercially reasonable efforts to cause such insurance policy to be maintained until such time as the Board of Directors determines that such insurance should be discontinued.

5.2 Employee Agreements. The Company will cause each person now or hereafter employed by it or by any subsidiary (or engaged by the Company or any subsidiary as a consultant/independent contractor) with access to confidential information and/or trade secrets to enter into a nondisclosure and proprietary rights assignment agreement in the form previously approved by the Board of Directors.

5.3 Employee Stock. Unless otherwise approved by the Board of Directors, all future employees and consultants of the Company who purchase, receive options to purchase, or receive awards of shares of the Company's capital stock after the date hereof shall be required to execute restricted stock or option agreements, as applicable, providing for (i) the vesting of shares over a four (4) year period, with the first twenty-five percent (25%) of such shares vesting following twelve (12) months of continued employment or service, and the remaining shares vesting in equal monthly installments over the following thirty-six (36) months, and (ii) a market stand-off provision substantially similar to that in Subsection 2.11. In addition, unless otherwise approved by the Board of Directors, the Company shall retain a "right of first refusal" on employee transfers (subject to customary exempt transfers) until the Company's IPO and shall have the right to repurchase unvested shares at cost upon termination of employment of a holder of restricted stock.

5.4 Certain Board of Directors Matters. So long as the holders of Preferred Stock are entitled to elect the Preferred Directors, the Company hereby covenants and agrees with each of the Investors that it shall not, without approval of the Board of Directors, which approval must include the affirmative vote of at least three of the Preferred Directors:

(a) otherwise enter into or be a party to any transaction with any director, officer, or employee of the Company or any "associate" (as defined in Rule 12b-2 promulgated under the Exchange Act) of any such Person, including without limitation any "management bonus" or similar plan providing payments to employees in connection with a Deemed Liquidation Event, as such term is defined in the Amended and Restated Certificate of Incorporation;

(b) sell, assign, exclusively license, pledge, or encumber material technology or intellectual property, other than licenses granted in the ordinary course of business;

(c) enter into any corporate strategic relationship involving the payment, contribution, or assignment by the Company or to the Company of money or assets greater than $10,000,000;

(d) make any investment inconsistent with any investment policy approved by the Board of Directors;

(e) hire, terminate, or change the compensation of the executive officers, including approving any option grants or stock awards to executive officers;

(f) change the principal business of the Company, enter new lines of business, or exit the current line of business; or

(g) increase the shares of Common Stock reserved for issuance under the Company's 2018 Equity Incentive Plan or adopt any other equity incentive plan.

The Company further agrees that it shall (i) provide full disclosure to the Board of Directors of any discussions relating to the potential sale of the Company, and/or the sale or licensing of any material assets, intellectual property or marketing rights of the Company, and of any adverse developments and (ii) reimburse the nonemployee directors for all reasonable out-of-pocket travel expenses incurred (consistent with the Company's travel policy) in connection with attending meetings of the Board of Directors.

5.5 Successor Indemnification. If the Company or any of its successors or assignees consolidates with or merges into any other Person and is not the continuing or surviving corporation or entity of such consolidation or merger, then to the extent necessary, proper provision shall be made so that the successors and assignees of the Company assume the obligations of the Company with respect to indemnification of members of the Board of Directors as in effect immediately before such transaction, whether such obligations are contained in the Company's Bylaws, its Amended and Restated Certificate of Incorporation, or elsewhere, as the case may be.

5.6 Expenses of Counsel. In the event of a transaction which is a Sale of the Company (as defined in the Amended and Restated Voting Agreement of even date herewith among the Investors, the Company and the other parties named therein), the reasonable fees and disbursements of one counsel for the Major Investors ("**Investor Counse**l"), in their capacities as stockholders, shall be borne and paid by the Company. At the outset of considering a transaction which, if consummated would constitute a Sale of the Company, the Company shall obtain the ability to share with the Investor Counsel (and such counsel's clients) and shall share the confidential information (including, without limitation, the initial and all subsequent drafts of memoranda of understanding, letters of intent and other transaction documents and related noncompete, employment, consulting and other compensation agreements and plans) pertaining to and memorializing any of the transactions which, individually or when aggregated with others would constitute the Sale of the Company. The Company shall be obligated to share (and cause the Company's counsel and investment bankers to share) such materials when distributed to the Company's executives and/or any one or more of the other parties to such transaction(s). In the event that Investor Counsel deems it appropriate, in its reasonable discretion, to enter into a joint defense agreement or other arrangement to enhance the ability of the parties to protect their communications and other reviewed materials under the attorney client privilege, the Company shall, and shall direct its counsel to, execute and deliver to Investor Counsel and its clients such an

agreement in form and substance reasonably acceptable to Investor Counsel. In the event that one or more of the other party or parties to such transactions require the clients of Investor Counsel to enter into a confidentiality agreement and/or joint defense agreement in order to receive such information, then the Company shall share whatever information can be shared without entry into such agreement and shall, at the same time, in good faith work expeditiously to enable Investor Counsel and its clients to negotiate and enter into the appropriate agreement(s) without undue burden to the clients of Investor Counsel.

5.7 Right to Conduct Activities5.7 . The Company hereby acknowledges that each of ARCH, Flagship, GV 2019, L.P. ("**GV**"), Investment Corporation of Dubai ("**ICD**"), F-Prime, Osage University Partners ("**OUP**"), Alaska Permanent Fund Corporation or Crestline ("**APFC/Crestline**"), Baillie Gifford and the Baillie Gifford Investor is an investment fund or venture arm of its Affiliates or is the venture capital division or affiliate of an operating company, and as such invests in numerous portfolio companies and has affiliates, some of which may be deemed competitive with the Company's business. Neither ARCH, Flagship, GV, ICD, F-Prime, OUP, APFC/Crestline, Baillie Gifford nor the Baillie Gifford Investor (each, a "**Fund**"), nor any of their respective partners, employees, Affiliates, advisors or affiliated investment funds shall be liable to the Company for any claim arising out of, or based upon, (i) the investment by such Fund or any affiliated investment fund in any entity, or activities of such Affiliates, that may be competitive to the Company or (ii) actions taken by any partner, officer, advisor or other representative of such Fund in his, her or its capacity as such to assist any such competitive company (including their activities in connection with their Affiliates). ARCH, Flagship, GV, ICD, F-Prime, OUP, APFC/Crestline, Baillie Gifford and the Baillie Gifford Investor are not currently and in the future shall not be deemed to be "competitors" for the purposes of Section 3.1 or Section 3.2; provided, however, that nothing herein shall relieve any Fund or any other party from liability associated with misuse of the Company's confidential information as set forth herein.

5.8 Indemnification Matters. The Company hereby acknowledges that one (1) or more of the directors nominated to serve on the Board of Directors by the Investors (each an "**Investor Director**") may have certain rights to indemnification, advancement of expenses and/or insurance provided by one or more of the Investors and certain of their Affiliates (collectively, the "**Investor Indemnitors**"). The Company hereby agrees (a) that it is the indemnitor of first resort (*i.e.*, its obligations to any such Investor Director are primary and any obligation of the Investor Indemnitors to advance expenses or to provide indemnification for the same expenses or liabilities incurred by such Investor Director are secondary), (b) that it shall be required to advance the full amount of expenses incurred by such Investor Director and shall be liable for the full amount of all expenses, judgments, penalties, fines and amounts paid in settlement by or on behalf of any such Investor Director to the extent legally permitted and as required by the Company's Amended and Restated Certificate of Incorporation or Bylaws of the Company (or any agreement between the Company and such Investor Director), without regard to any rights such Investor Director may have against the Investor Indemnitors, and, (c) that it irrevocably waives, relinquishes and releases the Investor Indemnitors from any and all claims against the Investor Indemnitors for contribution, subrogation or any other recovery of any kind in respect thereof. The Company further agrees that no advancement or payment by the Investor Indemnitors on behalf of any such Investor Director with respect to any claim for which such Investor Director has sought indemnification from the Company shall affect the foregoing and the Investor Indemnitors shall have a right of contribution

and/or be subrogated to the extent of such advancement or payment to all of the rights of recovery of such Investor Director against the Company. The Investor Directors and the Investor Indemnitors are intended third-party beneficiaries of this Subsection 5.8 and shall have the right, power and authority to enforce the provisions of this Subsection 5.8 as though they were a party to this Agreement.

5.9 Tax Reporting. The Company will comply with any obligation imposed on the Company to make any filing (including any filing on Internal Revenue Service Form 5471) as a result of any interest that the Company holds in a non-U.S. Person or any activities that the Company conducts outside of the U.S. and shall include in such filing any information necessary to obviate (to the extent possible) any similar obligation to which any shareholder would otherwise be subject with respect to such interest or such activity. The Company shall promptly provide each Investor with a copy of any such filing.

5.10 Board Matters. Unless otherwise determined by the vote of a majority of the directors then in office, including at least three of the Preferred Directors, the Board of Directors shall meet at least quarterly in accordance with an agreed-upon schedule. At least three of the Preferred Directors shall be entitled to membership on any committee of the Board of Directors so long as such committee was not formed, in whole or in part, to address a conflict of interest or potential conflict of interest involving any Investor designated by such Preferred Director(s).

5.11 FCPA. The Company represents that it shall not (and shall not permit any of its subsidiaries or affiliates or any of its or their respective directors, officers, managers, employees, independent contractors, representatives or agents to) promise, authorize or make any payment to, or otherwise contribute any item of value to, directly or indirectly, to any third party, including any Non U.S. Official (as such term is defined in the U.S. Foreign Corrupt Practices Act of 1977, as amended (the "**FCPA**")), in each case, in violation of the FCPA, the U.K. Bribery Act, or any other applicable anti-bribery or anti-corruption law. The Company further represents that it shall (and shall cause each of its subsidiaries and affiliates to) cease all of its or their respective activities, as well as remediate any actions taken by the Company, its subsidiaries or affiliates, or any of their respective directors, officers, managers, employees, independent contractors, representatives or agents in violation of the FCPA, the U.K. Bribery Act, or any other applicable anti-bribery or anti-corruption law. Upon request, the Company agrees to provide responsive information and/or certifications concerning its compliance with applicable anti-corruption laws. The Company shall promptly notify each Investor if the Company becomes aware of any Enforcement Action (as defined in the Purchase Agreement). The Company shall, and shall cause any direct or indirect subsidiary or entity controlled by it, whether now in existence or formed in the future, to comply with the FCPA. The Company shall use its best efforts to cause any direct or indirect subsidiary, whether now in existence or formed in the future, to comply in all material respects with all applicable laws.

5.12 Qualified Small Business Stock. The Company shall use commercially reasonable efforts to cause the shares of Series A-1 Preferred Stock, as well as any shares into which such shares are converted, within the meaning of Section 1202(f) of the Internal Revenue Code (the "**Code**"), to constitute "qualified small business stock" as defined in Section 1202(c) of the Code; provided, however, that such requirement shall not be applicable if the Board of Directors of the Company determines, in its good-faith business judgment, that such qualification is inconsistent with the best interests of the Company. The Company shall submit to its stockholders (including the Investors) and to the Internal Revenue Service any reports that may be required under Section 1202(d)(1)(C) of the Code and the regulations promulgated thereunder. In addition, within twenty (20) business days after any Investor's written request therefor, the Company shall, at its option, either (i) deliver to such Investor a written statement indicating whether (and what portion of) such Investor's interest in the Company constitutes "qualified small business stock" as defined in Section 1202(c) of the Code or (ii) deliver to such Investor such factual information in the Company's possession as is reasonably necessary to enable such Investor to determine whether (and what portion of) such Investor's interest in the Company constitutes "qualified small business stock" as defined in Section 1202(c) of the Code.

5.13 Affiliate Transactions. The Company shall not enter into any material transaction with an Affiliate of the Company or an Affiliate of any of the Company's Major Investors (other than as contemplated by (i) the Transaction Agreements (as defined in the Purchase Agreement) or future bona fide equity financing transaction on an arm's length basis, and (ii) the Merger Agreement and the transactions and documentation contemplated therein, including the exhibits thereto), without the prior written consent of the holders of a majority of the shares of Preferred Stock held by disinterested Investors with respect to such transaction, voting together as a single class on an as-converted basis.

5.14 Voting Agreements. Other than as contemplated by the Transaction Agreements (as defined in the Purchase Agreement), in the event any Investor enters into an agreement with any other Investor pursuant to which such Investors agree to vote their shares in a particular manner, such Investors shall promptly disclose the terms of such agreement in writing to the Company and to the other Investors.

5.15 Non-Competition Compliance. The Company covenants and agrees not to knowingly cause any of its employees that are subject to an agreement containing a non-competition provision in favor of Juno Therapeutics, Inc. and/or Celgene Corporation to violate such provision, and to take reasonable steps to monitor compliance with any such provisions.

5.16 Termination of Covenants. The covenants set forth in this Section 5, except for Subsections 5.5, 5.6, 5.7 and 5.8, shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO or (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) upon a Deemed Liquidation Event, as such term is defined in the Company's Amended and Restated Certificate of Incorporation, whichever event occurs first.

6. Miscellaneous.

6.1 Successors and Assigns. The rights under this Agreement may be assigned (but only with all related obligations) by a Holder to a transferee of Registrable Securities that (i) is an Affiliate of a Holder; (ii) is a Holder's Immediate Family Member or trust for the benefit of an individual Holder or one or more of such Holder's Immediate Family Members or (iii) after

such transfer, holds at least 10,000,000 shares of Registrable Securities (subject to appropriate adjustment for stock splits, stock dividends, combinations, and other recapitalizations); provided, however, that (x) the Company is, within a reasonable time after such transfer, furnished with written notice of the name and address of such transferee and the Registrable Securities with respect to which such rights are being transferred; and (y) such transferee agrees in a written instrument delivered to the Company to be bound by and subject to the terms and conditions of this Agreement, including the provisions of Subsection 2.11. For the purposes of determining the number of shares of Registrable Securities held by a transferee, the holdings of a transferee (1) that is an Affiliate or stockholder of a Holder; (2) who is a Holder's Immediate Family Member; or (3) that is a trust for the benefit of an individual Holder or such Holder's Immediate Family Member shall be aggregated together and with those of the transferring Holder; provided further that all transferees who would not qualify individually for assignment of rights shall have a single attorney-in-fact for the purpose of exercising any rights, receiving notices, or taking any action under this Agreement. The terms and conditions of this Agreement inure to the benefit of and are binding upon the respective successors and permitted assignees of the parties. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assignees any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided herein.

6.2 Governing Law. This Agreement shall be governed by the internal law of the State of Delaware, without regard to conflict of law principles that would result in the application of any law other than the law of the State of Delaware.

6.3 Counterparts. This Agreement may be executed in two (2) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, *e.g.*, www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes**.**

6.4 Titles and Subtitles. The titles and subtitles used in this Agreement are for convenience only and are not to be considered in construing or interpreting this Agreement.

6.5 Notices.

(a) All notices and other communications given or made pursuant to this Agreement shall be in writing and shall be deemed effectively given upon the earlier of actual receipt or (i) personal delivery to the party to be notified; (ii) when sent, if sent by electronic mail or facsimile during the recipient's normal business hours, and if not sent during normal business hours, then on the recipient's next business day; (iii) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid; or (iv) one (1) business day after the business day of deposit with a nationally recognized overnight courier, freight prepaid, specifying next-day delivery, with written verification of receipt. All communications shall be sent to the respective parties at their addresses as set forth on Schedule A hereto, or to the principal office of the Company and to the attention of the Chief Executive Officer, in the case of the Company, or to such email address, facsimile number, or address as subsequently modified by written notice given in accordance with this Subsection 6.5. If notice is given to the Company, a copy shall also be sent to:

Brian J. Cuneo, Esq.
Latham & Watkins LLP
140 Scott Drive
Menlo Park, CA 94025
fax: (650) 463-2600 / brian.cuneo@lw.com

and if notice is given to the Investors, a copy shall also be given to:

Ori Solomon, Esq.
Morrison & Foerster LLP
200 Clarendon Street, Floor 20
Boston, MA 02116
ori@mofo.com

(b) Consent to Electronic Notice. Each Investor and Key Holder consents to the delivery of any stockholder notice pursuant to the Delaware General Corporation Law (the "**DGCL**"), as amended or superseded from time to time, by electronic transmission pursuant to Section 232 of the DGCL (or any successor thereto) at the electronic mail address or the facsimile number set forth below such Investor's or Key Holder's name on the Schedules hereto, as updated from time to time by notice to the Company, or as on the books of the Company. To the extent that any notice given by means of electronic transmission is returned or undeliverable for any reason, the foregoing consent shall be deemed to have been revoked until a new or corrected electronic mail address has been provided, and such attempted Electronic Notice shall be ineffective and deemed to not have been given. Each Investor and Key Holder agrees to promptly notify the Company of any change in such stockholder's electronic mail address, and that failure to do so shall not affect the foregoing.

6.6 Amendments and Waivers. Any term of this Agreement may be amended and the observance of any term of this Agreement may be waived (either generally or in a particular instance, and either retroactively or prospectively) only with the written consent of (i) the Company and (ii) the Requisite Holders; provided that the Company may in its sole discretion waive compliance with Subsection 2.12(c) (and the Company's failure to object promptly in writing after notification of a proposed assignment allegedly in violation of Subsection 2.12(c) shall be deemed to be a waiver); and provided further that any provision hereof may be waived by any waiving party on such party's own behalf, without the consent of any other party. Notwithstanding the foregoing, (i) this Agreement may not be amended or terminated and the observance of any term hereof may not be waived in a manner that affects any Investor in a manner disproportionately adverse to any other Investor without the written consent of such disproportionately affected Investor (it being agreed that a waiver of the provisions of Section 4 with respect to a particular transaction shall not be deemed to disproportionately affect any Investor if such waiver applies in the same manner by its terms, notwithstanding the fact that certain Investors may nonetheless, by agreement with the Company, purchase securities in such

transaction) (ii) Subsection 5.7 may not be amended or terminated and the observance of any term thereof may not be waived with respect to ARCH, Flagship, GV, F-Prime, OUP, APFC/Crestline, ICD, Baillie Gifford or the Baillie Gifford Investor without the written consent of ARCH, Flagship, GV, F-Prime, OUP, APFC/Crestline, ICD, Baillie Gifford or the Baillie Gifford Investor, as applicable, and (iii) neither clause (ii) of Subsection 1.20 nor clause (ii) of Section 5.13 may be amended or terminated without the written consent of Flagship. The Company shall give prompt notice of any amendment or termination hereof or waiver hereunder to any party hereto that did not consent in writing to such amendment, termination, or waiver. Any amendment, termination, or waiver effected in accordance with this Subsection 6.6 shall be binding on all parties hereto, regardless of whether any such party has consented thereto. No waivers of or exceptions to any term, condition, or provision of this Agreement, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such term, condition, or provision.

6.7 Severability. In case any one or more of the provisions contained in this Agreement is for any reason held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision of this Agreement, and such invalid, illegal, or unenforceable provision shall be reformed and construed so that it will be valid, legal, and enforceable to the maximum extent permitted by law.

6.8 Aggregation of Stock. All shares of Registrable Securities held or acquired by Affiliates shall be aggregated together for the purpose of determining the availability of any rights under this Agreement and such Affiliated persons may apportion such rights as among themselves in any manner they deem appropriate.

6.9 Additional Investors. Notwithstanding anything to the contrary contained herein, if the Company issues additional shares of the Company's Series A-2 Preferred Stock or Series B Preferred Stock after the date hereof, whether pursuant to the Purchase Agreement or otherwise, any purchaser of such shares of Series A-2 Preferred Stock or Series B Preferred Stock may become a party to this Agreement by executing and delivering an additional counterpart signature page to this Agreement, and thereafter shall be deemed an "Investor" for all purposes hereunder. No action or consent by the Investors shall be required for such joinder to this Agreement by such additional Investor, so long as such additional Investor has agreed in writing to be bound by all of the obligations as an "Investor" hereunder.

6.10 Entire Agreement. This Agreement (including any Schedules and Exhibits hereto) constitutes the full and entire understanding and agreement among the parties with respect to the subject matter hereof, and any other written or oral agreement relating to the subject matter hereof existing between the parties is expressly canceled.

6.11 Dispute Resolution. Any unresolved controversy or claim arising out of or relating to this Agreement, except as (i) otherwise provided in this Agreement, or (ii) any such controversies or claims arising out of either party's intellectual property rights for which a provisional remedy or equitable relief is sought, shall be submitted to arbitration by one arbitrator mutually agreed upon by the parties, and if no agreement can be reached within thirty (30) days after names of potential arbitrators have been proposed by the American Arbitration Association (the "**AAA**"), then by one arbitrator having reasonable experience in corporate finance transactions

of the type provided for in this Agreement and who is chosen by the AAA. The arbitration shall take place in San Francisco, California, in accordance with the AAA rules then in effect, and judgment upon any award rendered in such arbitration will be binding and may be entered in any court having jurisdiction thereof. There shall be limited discovery prior to the arbitration hearing as follows: (a) exchange of witness lists and copies of documentary evidence and documents relating to or arising out of the issues to be arbitrated, (b) depositions of all party witnesses, and (c) such other depositions as may be allowed by the arbitrators upon a showing of good cause. Depositions shall be conducted in accordance with the Delaware Code of Civil Procedure, the arbitrator shall be required to provide in writing to the parties the basis for the award or order of such arbitrator, and a court reporter shall record all hearings, with such record constituting the official transcript of such proceedings.

WAIVER OF JURY TRIAL: EACH PARTY HEREBY WAIVES ITS RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS AGREEMENT, THE OTHER TRANSACTION DOCUMENTS, THE SECURITIES OR THE SUBJECT MATTER HEREOF OR THEREOF. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL-ENCOMPASSING OF ANY AND ALL DISPUTES THAT MAY BE FILED IN ANY COURT AND THAT RELATE TO THE SUBJECT MATTER OF THIS TRANSACTION, INCLUDING, WITHOUT LIMITATION, CONTRACT CLAIMS, TORT CLAIMS (INCLUDING NEGLIGENCE), BREACH OF DUTY CLAIMS, AND ALL OTHER COMMON LAW AND STATUTORY CLAIMS. THIS SECTION HAS BEEN FULLY DISCUSSED BY EACH OF THE PARTIES HERETO AND THESE PROVISIONS WILL NOT BE SUBJECT TO ANY EXCEPTIONS. EACH PARTY HERETO HEREBY FURTHER WARRANTS AND REPRESENTS THAT SUCH PARTY HAS REVIEWED THIS WAIVER WITH ITS LEGAL COUNSEL, AND THAT SUCH PARTY KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL.

6.12 Delays or Omissions. No delay or omission to exercise any right, power, or remedy accruing to any party under this Agreement, upon any breach or default of any other party under this Agreement, shall impair any such right, power, or remedy of such nonbreaching or nondefaulting party, nor shall it be construed to be a waiver of or acquiescence to any such breach or default, or to any similar breach or default thereafter occurring, nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. All remedies, whether under this Agreement or by law or otherwise afforded to any party, shall be cumulative and not alternative.

6.13 Acknowledgment. The Company acknowledges that the Investors are in the business of venture capital investing and therefore review the business plans and related proprietary information of many enterprises, including enterprises which may have products or services which compete directly or indirectly with those of the Company. Nothing in this Agreement shall preclude or in any way restrict the Investors from investing or participating in any particular enterprise whether or not such enterprise has products or services which compete with those of the Company.

6.14 Effect on Prior Agreement. Upon the execution and delivery of this Agreement by the Company and the holders of at least 75% of the Preferred Stock held by those Investors who are party to the Prior Agreement (measured before giving effect to any purchase of shares of Series A-2 Preferred Stock or Series B Preferred Stock by such Investors), the Prior Agreement automatically shall terminate and be of no further force and effect and shall be amended and restated in its entirety as set forth in this Agreement.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

COMPANY:

SANA BIOTECHNOLOGY, INC.

By: /s/ Steven Harr, M.D.
Name: Steven Harr, M.D.
Title: Chief Executive Officer

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

ARCH VENTURE FUND IX, L.P.

By: ARCH Venture Partners IX, L.P., its General Partner

By: ARCH Venture Partners IX, LLC, its General Partner

By: /s/ Mark McDonnell
Name: Mark McDonnell
Title: Managing Director

Addresses for notices:

c/o ARCH Venture Partners
8755 W. Higgins Road, Suite 1025
Chicago, IL 60631
Attn: Mark McDonnell
Phone: (773) 380-6600
Email: mmcdonnell@archventure.com

With a mandatory copy, which shall not constitute notice, to:

Morrison & Foerster LLP
200 Clarendon Street, Floor 20
Boston, MA 02116
Attn: Ori Solomon
ori@mofo.com

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

ARCH VENTURE FUND IX OVERAGE, L.P.

By: ARCH Venture Partners IX Overage, L.P., its General Partner

By: ARCH Venture Partners IX, LLC, its General Partner

By: /s/ Mark McDonnell
Name: Mark McDonnell
Title: Managing Director

Addresses for notices:

c/o ARCH Venture Partners
8755 W. Higgins Road, Suite 1025
Chicago, IL 60631
Attn: Mark McDonnell
Phone: (773) 380-6600
Email: mmcdonnell@archventure.com

With a mandatory copy, which shall not constitute notice, to:

Morrison & Foerster LLP
200 Clarendon Street, Floor 20
Boston, MA 02116
Attn: Ori Solomon
ori@mofo.com

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

ARCH VENTURE FUND X, L.P.

By: ARCH Venture Partners X, L.P., its General Partner

By: ARCH Venture Partners X, LLC, its General Partner

By: /s/ Mark McDonnell
Name: Mark McDonnell
Title: Managing Director

Addresses for notices:

c/o ARCH Venture Partners
8755 W. Higgins Road, Suite 1025
Chicago, IL 60631
Attn: Mark McDonnell
Phone: (773) 380-6600
Email: mmcdonnell@archventure.com

With a mandatory copy, which shall not constitute notice, to:

Morrison & Foerster LLP
200 Clarendon Street, Floor 20
Boston, MA 02116
Attn: Ori Solomon
ori@mofo.com

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

ARCH VENTURE FUND X OVERAGE, L.P.

By: ARCH Venture Partners X Overage, L.P., its General Partner

By: ARCH Venture Partners X, LLC, its General Partner

By: /s/ Mark McDonnell
Name: Mark McDonnell
Title: Managing Director

Addresses for notices:

c/o ARCH Venture Partners
8755 W. Higgins Road, Suite 1025
Chicago, IL 60631
Attn: Mark McDonnell
Phone: (773) 380-6600
Email: mmcdonnell@archventure.com

With a mandatory copy, which shall not constitute notice, to:

Morrison & Foerster LLP
200 Clarendon Street, Floor 20
Boston, MA 02116
Attn: Ori Solomon
ori@mofo.com

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

F-PRIME CAPITAL PARTNERS LIFE SCIENCES FUND VI LP

By: F-Prime Capital Partners Life Sciences Advisors Fund VI LP, its general partner

By: Impresa Holdings LLC, its general partner

By: Impresa Management LLC, its managing member

By: /s/ Mary Bevelock Pendergast
Name: Mary Bevelock Pendergast
Title: Vice President

Address for notices:

One Main Street, 13th Floor, Cambridge, MA 02142,
Attention: Mary Bevelock Pendergast
Phone: (617) 231-2400
Fax: (617) 231-2425
Email: mpendergast@fprimecapital.com

With a mandatory copy, which shall not constitute notice, to:

Morrison & Foerster LLP
200 Clarendon Street, Floor 20
Boston, MA 02116
Attn: Ori Solomon
ori@mofo.com

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

THE TRUSTEES OF COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK

By: /s/ Julius Mercado
Name: Julius Mercadi
Title: Chief Operating Officer, Columbia Investment Management Company, L.L.C.

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

GV 2019 L.P.

By: GV 2019 GP, L.P., its General Partner

By: GV 2019 GP, L.L.C., its General Partner

By: /s/ Daphne M. Chang
Name: Daphne M. Chang
Title: Authorized Signatory

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

ACCESS INDUSTRIES HOLDINGS LLC

By: Access Industries Management, LLC, its Manager

By: /s/ Alejandro Moreno
Name: Alejandro Moreno
Title: Executive Vice President

By: /s/ Richard B. Storey
Name: Richard B. Storey
Title: Executive Vice President

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

SCOTTISH MORTGAGE INVESTMENT TRUST plc

By: Executed for and on behalf of Scottish Mortgage Investment Trust plc, acting through its agent, Baillie Gifford & Co.

By: /s/ Kave Sigaroudinia
Name: Kave Sigaroudinia
Title: Partner of Baillie Gifford & Co.

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

PLATINUM FALCON B 2018 RSC LTD.

By: /s/ Mohamed Fahed Mohamed Abdulla AlMazrouei
Name: Mohamed Fahed Mohamed Abdulla AlMazrouei
Title: Authorized Signatory

By: /s/ Saif Surour Omair Maaded AlMashghouni
Name: Saif Surour Omair Maaded AlMashghouni
Title: Authorized Signatory

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

OSAGE UNIVERSITY PARTNERS III, LP

By: Osage University GP III, LLC
Its: General Partner

By: /s/ William Harrington
Name: William Harrington
Title: Managing Member

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

EXPLORE HOLDINGS LLC

By: /s/ Paul Dauber
Name: Paul Dauber
Title: Manager

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

REED CAPITAL HOLDINGS 1 LTD.

By: /s/ Nader Bekhouche
Name: Nader Bekhouche
Title: Director

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

ALTITUDE LIFE SCIENCE VENTURES FUND III, L.P.

By: /s/ David Maki
Name:
Title:

ALTITUDE LIFE SCIENCE VENTURES SIDE FUND III, L.P.

By: /s/ David Maki
Name:
Title:

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

WO SELECT INVESTMENTS LLC

By: /s/ Aaron Wolfson
Name: Aaron Wolfson
Title: Manager

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

ALEXANDRIA VENTURE INVESTMENTS, LLC,
a Delaware limited liability company

By: ALEXANDRIA REAL ESTATE EQUITIES, INC.,
a Maryland corporation, managing member

By: /s/ Aaron Jacobson
Name: Aaron Jacobson
Title: SVP – Venture Counsel

Address: 385 E. Colorado Blvd., Suite 299
Pasadena, CA 91101

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

CANADA PENSION PLAN INVESTMENT BOARD

By: /s/ Frank Ieraci
Name: Frank Ieraci
Title: Managing Director

By: /s/ Paul McCracken
Name: Paul McCracken
Title: Senior Portfolio Manager

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

SANA INVESTORS, LLC

By: /s/ Steven Harr, M.D.
Name: Steven Harr, M.D.
Title: Manager

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

By: /s/ Steven Harr, M.D.
Name: Steven Harr, M.D.

Address for notices:
715 McGilvra Boulevard East
Seattle WA 98112
sdharr@gmail.com

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

By: /s/ Hans Bishop.
Name: Hans Bishop

Address for notices:
2212 Queen Anne Ave. North, #738
Seattle WA 98109
Email: hansbishop@me.com

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

HARVARD MANAGEMENT PRIVATE EQUITY CORPORATION

By: /s/ Kathryn I. Murtagh
Name: Kathryn I. Murtagh
Title: Authorized Signatory

By: /s/ James Perencevich
Name: James Perenchevich
Title: Authorized Signatory

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

CL EOF, L.P. - Fusion

By: CL EOF (GP), L.L.C., its general partner of Series Fusion

By: Crestline Investors, Inc., its manager

By: /s/ John S. Cochran, Vice President

Name: John S. Cochran, Vice President

CL AK Fusion, L.P.

By: Crestline SI (GP), L.P., its general partner

By: Crestline Investors, Inc., its general partner

By: /s/ John S. Cochran, Vice President

Name: John S. Cochran, Vice President

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

By: /s/ Bryan White
Name: Bryan White

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

OMEGA FUND VI, L.P.

By: Omega Fund VI GP, L.P., its General Partner
By: Omega Fund VI GP Manager, Ltd., its General Partner

By: /s/ Anne-Mari Paster
Name: Anne-Mari Paster
Title: Director

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

PRESIDENT AND FELLOWS OF HARVARD COLLEGE

By: /s/ Jordan B. Grant
Name: Jordan B. Grant
Title: Director of Technology Transactions Office of Technology Development Harvard University

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

PSP PUBLIC CREDIT I INC.

By: /s/ Sumita Banerjee
Name: Sumita Banerjee
Title: Authorized Signatory

By: /s/ Loïc Julé
Name: Loïc Julé
Title: Authorized Signatory

Address for notices:

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

EMERSON COLLECTIVE INVESTMENTS, LLC

/s/ Steve McDermid
Signature

Steve McDermid
Print name

Authorized Signatory
Print title

Address for notices

555 Bryant Street #259
Palo Alto, CA 94301

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

113011 INVESTMENT HOLDINGS LLC

By: /s/ Andrew Mulderry
Name: Andrew Mulderry
Title: Authorized Signatory

91313 INVESTMENT HOLDINGS LLC

By: /s/ Andrew Mulderry
Name: Andrew Mulderry
Title: Authorized Signatory

63019 HOLDINGS, LLC

By: /s/ Andrew Mulderry
Name: Andrew Mulderry
Title: Authorized Signatory

PARAGON HOLDINGS II LLC

By: /s/ Michael Minars
Name: Michael Minars
Title: Authorized Signatory

YINGZHE ZHAO

/s/ Yingzhe Zhao

Address for notices:

Unit A, 12/F, Tower 3 One Homantin
1 Sheung Foo Street
Ho Man Tin
Hong Kong

SCHEDULE A

Investors

ARCH Venture Fund IX, L.P.
c/o ARCH Venture Partners
8755 West Higgins Road
Suite 1025
Chicago, IL 60631
Attn: Mark McDonnell
Email: mmcdonnell@archventure.com

with a mandatory copy, which shall not constitute notice, to:

Morrison & Foerster LLP
200 Clarendon Street, Floor 20
Boston, MA 02116
Attn: Ori Solomon
ori@mofo.com

ARCH Venture Fund IX Overage, L.P.
c/o ARCH Venture Partners
8755 West Higgins Road
Suite 1025
Chicago, IL 60631
Attn: Mark McDonnell
Email: mmcdonnell@archventure.com

with a mandatory copy, which shall not constitute notice, to:

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Attn: Ori Solomon
ori@mofo.com

ARCH Venture Fund X, L.P.
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8755 West Higgins Road
Suite 1025
Chicago, IL 60631
Attn: Mark McDonnell
Email: mmcdonnell@archventure.com

with a mandatory copy, which shall not constitute notice, to:

Morrison & Foerster LLP
200 Clarendon Street, Floor 20
Boston, MA 02116
Attn: Ori Solomon
ori@mofo.com

F-Prime Capital Partners Life Sciences Fund VI LP
One Main Street, 13th Floor, Cambridge, MA 02142
Attention: Mary Bevelock Pendergast
Phone: (617) 231-2400
Fax: (617) 231-2425
Email: mpendergast@fprimecapital.com

with a mandatory copy, which shall not constitute notice, to:

Morrison & Foerster LLP
200 Clarendon Street, Floor 20
Boston, MA 02116
Attn: Ori Solomon
ori@mofo.com

The Trustees of Columbia University in the City of New York
c/o Columbia Investment Management Company, LLC
405 Lexington Avenue, 63rd Floor
New York, NY 10174

GV 2019 L.P.
Attention: GV Legal Department
1600 Amphitheatre Parkway
Mountain View, CA 94043
Email: notice@gv.com

Access Industries Holdings LLC
40 West 57th Street, 28th Floor
New York, New York 10019
United States of America
Attention: Legal Department
E-mail: legalnotices@accind.com; mauten@accind.com
Phone: +1 (212) 247-6400

Scottish Mortgage Investment Trust plc
c/o Baillie Gifford & Co.
Calton Square, 1 Greenside Row
Edinburgh EH1 3AN
Scotland, the United Kingdom
Email: keith.borrows@bailliegifford.com; christopher.smith@bailliegifford.com;
eilidh.gillanders@bailliegifford.com; robert.natzler@bailliegifford.com;
peter.singlehurst@bailliegifford.com

Platinum Falcon B 2018 RSC Ltd.
Office 3530, 35th Floor,
Al Marqam Tower
Abu Dhabi Global Market Square
Al Maryah Island, PO Box 5100192
Abu Dhabi, UAE

Osage University Partners III, LP
Attention: Beth Grafstrom
50 Monument Road, Suite 201
Bala Cynwyd, PA 19004
Email: bgrafstrom@oup.vc

Explore Holdings LLC
PO Box 94314
Seattle, WA 98124

Raed Capital Holdings I Ltd
Levels 5 & 6, Gate Village Building 7,
DIFC, Dubai, United Arab Emirates
PO Box 333888.
Email: legaldept@icd.gov.ae

Altitude Life Science Ventures Fund III, LP
1014 Market Street, Suite 200
Kirkland, WA 98033

Altitude Life Science Ventures Side Fund III, L.P.
1014 Market Street, Suite 200
Kirkland, WA 98033

WO Select Investments, LLC
Attention: Lawrence Adolf
One State Street Plaza, 29th FL
New York, NY 10004
Email: reportingpe@wolfsongroup.com

Alexandria Venture Investments, LLC
Attention: Aaron Jacobson
385 E. Colorado Blvd., Suite 299
Pasadena, CA 91101
Email: investments@are.com

Canada Pension Plan Investment Board
Attention: Paul McCracken
Address: One Queen Street East, Suite 2500 Toronto, ON, Canada M5C 2W5
Email: pmccracken@cppib.com

Hans Bishop
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David Schenkein
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David.schenkein@agios.com
Rebecca.rizzo-lora@agios.com

Brian Harr
1125 S. 103rd Street, Suite 800
Omaha, Nebraska 68124
Email: Brian.Harr@koleyjessen.com

Harvard Management Private Equity Corporation
c/o Harvard Management Company, Inc.
600 Atlantic Avenue
Boston, MA 02210

CL AK Fusion L.P.
CL EOF, L.P.
Jeremiah J. Loeffler
Crestline Investors, Inc.
201 Main Street, Suite 1900
Fort Worth, TX 76102
Office: (817) 339-7342
Mobile: (817) 903-3189
Opportunity2@crestlineinc.com

Sana Investors, LLC
1616 Eastlake Ave E
Suite 360
Seattle, WA 98102

President and Fellows of Harvard College
Richard A. and Susan F. Smith Campus Center, Suite 727
1350 Massachusetts Avenue
Cambridge, MA 02138

PSP Public Credit I Inc.
c/o PSP Investments - Global Investment Partnerships Portfolio
1250 René-Lévesque West, Suite 1400
Montreal, Québec, Canada, H3B 5E9
Attention: Sumita Banerjee
Tel: 514-939-5375
E-mail: partnershipportfolio@investpsp.ca with a copy to
legalnotices@investpsp.ca

Emerson Collective Investments, LLC
555 Bryant Street, #259
Palo Alto, CA 94301

113011 Investment Holdings LLC
Unit A, 12/F, Tower 3, One Homantin
1 Sheung Foo Street
Ho Man Tin
Hong Kong

91313 Investment Holdings LLC
Unit A, 12/F, Tower 3, One Homantin
1 Sheung Foo Street
Ho Man Tin
Hong Kong

63019 Holdings, LLC
Unit A, 12/F, Tower 3, One Homantin
1 Sheung Foo Street
Ho Man Tin
Hong Kong

Paragon Holdings II LLC
Unit A, 12/F, Tower 3, One Homantin
1 Sheung Foo Street
Ho Man Tin
Hong Kong

Yinzhe Zhao
Unit A, 12/F, Tower 3, One Homantin
1 Sheung Foo Street
Ho Man Tin
Hong Kong

Exhibit 10.3(a)

SANA BIOTECHNOLOGY, INC.

2018 EQUITY INCENTIVE PLAN

(Revised November 2, 2018)

1. Purpose.

The purpose of the Plan is to advance the interests of the Company's stockholders by enhancing the Company's ability to attract, retain and motivate persons who make (or are expected to make) important contributions to the Company by providing such persons with equity ownership opportunities and thereby better aligning the interests of such persons with those of the Company's stockholders. Capitalized terms used in the Plan are defined in Section 11 below.

2. Eligibility.

Service Providers are eligible to be granted Awards under the Plan, subject to the limitations described herein.

3. Administration and Delegation.

3.1 Administration. The Plan will be administered by the Administrator. The Administrator shall have authority to determine which Service Providers will receive Awards, to grant Awards and to set all terms and conditions of Awards (including, but not limited to, vesting, exercise and forfeiture provisions). In addition, the Administrator shall have the authority to take all actions and make all determinations contemplated by the Plan and to adopt, amend and repeal such administrative rules, guidelines and practices relating to the Plan as it shall deem advisable. The Administrator may correct any defect or ambiguity, supply any omission or reconcile any inconsistency in the Plan or any Award in the manner and to the extent it shall deem necessary or appropriate to carry the Plan and any Awards into effect, as determined by the Administrator. The Administrator shall make all determinations under the Plan in the Administrator's sole discretion and all such determinations shall be final and binding on all persons having or claiming any interest in the Plan or in any Award.

3.2 Appointment of Committees. To the extent permitted by Applicable Laws, the Board may delegate any or all of its powers under the Plan to one or more Committees. The Board may abolish any Committee at any time and re-vest in itself any previously delegated authority.

4. Stock Available for Awards.

4.1 Number of Shares. Subject to adjustment under Section 8 hereof, Awards may be made under the Plan covering up to 27,300,000 shares of Common Stock. If any Award expires or lapses or is terminated, surrendered or canceled without having been fully exercised or is forfeited in whole or in part (including as the result of shares of Common Stock subject to such Award being repurchased by the Company at or below the original issuance price), in any case in a manner that results in any shares of Common Stock covered by such Award not being issued or being so reacquired by the Company, the unused Common Stock covered by such Award shall again be available for the grant of Awards under the Plan. Further, shares of Common Stock delivered (either by actual delivery or attestation) to the Company by a Participant to satisfy the applicable exercise or purchase price of an Award and/or to satisfy any applicable tax withholding obligation (including shares retained by the Company from the Award being exercised or purchased and/or creating the tax obligation) shall be added to the number of shares of Common Stock available for the grant of Awards under the Plan. However, in the case of Incentive Stock Options (as hereinafter defined), the foregoing provisions shall be subject to any limitations under the Code. Shares of Common Stock issued under the Plan may consist in whole or in part of authorized but unissued shares, shares purchased on the open market or treasury shares.

4.2 Substitute Awards. In connection with a merger or consolidation of an entity with the Company or the acquisition by the Company of property or stock of an entity, the Administrator may grant Awards in substitution for any options or other stock or stock-based awards granted prior to such merger or consolidation by such entity or an affiliate thereof. Substitute Awards may be granted on such terms as the Administrator deems appropriate in the circumstances, notwithstanding any limitations on Awards contained in the Plan. Substitute Awards shall not count against the overall share limit set forth in Section 4.1 hereof, except as may be required by reason of Section 422 of the Code.

5. Stock Options.

5.1 General. The Administrator may grant Options to any Service Provider, subject to the limitations on Incentive Stock Options described below. The Administrator shall determine the number of shares of Common Stock to be covered by each Option, the exercise price of each Option and the conditions and limitations applicable to the exercise of each Option, including conditions relating to Applicable Laws, as it considers necessary or advisable.

5.2 Incentive Stock Options. The Administrator may grant Options intended to qualify as Incentive Stock Options only to employees of the Company, any of the Company's present or future "parent corporations" or "subsidiary corporations" as defined in Sections 424(e) or (f) of the Code, respectively, and any other entities the employees of which are eligible to receive Incentive Stock Options under the Code. All Options intended to qualify as Incentive Stock Options shall be subject to and shall be construed consistently with the requirements of Section 422 of the Code. Neither the Company nor the Administrator shall have any liability to a Participant, or any other party, (i) if an Option (or any part thereof) which is intended to qualify as an Incentive Stock Option fails to qualify as an Incentive Stock Option or (ii) for any action or omission by the Administrator that causes an Option not to qualify as an Incentive Stock Option, including without limitation, the conversion of an Incentive Stock Option to a Non-Qualified Stock Option or the grant of an Option intended as an Incentive Stock Option that fails to satisfy the requirements under the Code applicable to an Incentive Stock Option. Any Option that is intended to qualify as an Incentive Stock Option, but fails to so qualify for any reason, including without limitation, the portion of any Option becoming exercisable in excess of the $100,000 limitation described in Treasury Regulation Section 1.422-4, shall be treated as a Non-Qualified Stock Option for all purposes.

5.3 Exercise Price. The Administrator shall establish the exercise price of each Option and specify the exercise price in the applicable Award Agreement. The exercise price shall be not less than 100% of the Fair Market Value on the date the Option is granted. In the case of an Incentive Stock Option granted to an employee who, at the time of grant of the Option, owns (or is treated as owning under Section 424 of the Code) stock representing more than 10% of the voting power of all classes of stock of the Company (or a "parent corporation" or "subsidiary corporation" thereof within the meaning of Sections 424(e) or 424(f) of the Code, respectively), the per share exercise price shall be no less than 110% of the Fair Market Value on the date the Option is granted.

5.4 Duration of Options. Each Option shall be exercisable at such times and subject to such terms and conditions as the Administrator may specify in the applicable Award Agreement, provided that the term of any Option shall not exceed ten years. In the case of an Incentive Stock Option granted to an employee who, at the time of grant of the Option, owns (or is treated as owning under Section 424 of the Code) stock representing more than 10% of the voting power of all classes of stock of the Company (or a "parent corporation" or "subsidiary corporation" thereof within the meaning of Sections 424(e) or 424(f) of the Code, respectively), the term of the Option shall not exceed five years.

5.5 Exercise of Option; Notification of Disposition. Options may be exercised by delivery to the Company of a written notice of exercise, in a form approved by the Administrator (which may be an electronic form), signed by the person authorized to exercise the Option, together with payment in full (i) as specified in Section 5.6 hereof for the number of shares for which the Option is exercised and (ii) as specified in Section 9.5 hereof for any applicable withholding taxes. Unless otherwise determined by the Administrator, an Option may not be exercised for a fraction of a share of Common Stock. If an Option is designated as an Incentive Stock Option, the Participant shall give prompt notice to the Company of any disposition or other transfer of any shares of Common Stock acquired from the Option if such disposition or transfer is made (i) within two years from the grant date with respect to such Option or (ii) within one year after the transfer of such shares to the Participant (other than any such disposition made in connection with a Change in Control). Such notice shall specify the date of such disposition or other transfer and the amount realized, in cash, other property, assumption of indebtedness or other consideration, by the Participant in such disposition or other transfer.

5.6 Payment Upon Exercise. Common Stock purchased upon the exercise of an Option granted under the Plan shall be paid for in cash or by check, payable to the order of the Company, or, to the extent permitted by the Administrator, by:

(a) (A) delivery of an irrevocable and unconditional undertaking by a broker acceptable to the Company to deliver promptly to the Company sufficient funds to pay the exercise price and any required tax withholding, or (B) delivery by the Participant to the Company of a copy of irrevocable and unconditional instructions to a broker acceptable to the Company to deliver promptly to the Company cash or a check sufficient to pay the exercise price and any required tax withholding;

(b) delivery (either by actual delivery or attestation) of shares of Common Stock owned by the Participant valued at their Fair Market Value, provided (A) such method of payment is then permitted under Applicable Laws, (B) such Common Stock, if acquired directly from the Company, was owned by the Participant for such minimum period of time, if any, as may be established by the Company at any time, and (C) such Common Stock is not subject to any repurchase, forfeiture, unfulfilled vesting or other similar requirements;

(c) surrendering shares of Common Stock then issuable upon exercise of the Option valued at their Fair Market Value on the date of exercise;

(d) delivery of a promissory note of the Participant to the Company on terms determined by the Administrator;

(e) delivery of property of any other kind which constitutes good and valuable consideration as determined by the Administrator; or

(f) any combination of the above permitted forms of payment (including cash or check).

5.7 Early Exercise of Options. The Administrator may provide in the terms of an Award Agreement that the Service Provider may exercise an Option in whole or in part prior to the full vesting of the Option in exchange for unvested shares of Restricted Stock with respect to any unvested portion of the Option so exercised. Shares of Restricted Stock acquired upon the exercise of any unvested portion of an Option shall be subject to such terms and conditions as the Administrator shall determine.

6. Restricted Stock; Restricted Stock Units.

6.1 General. The Administrator may grant Restricted Stock, or the right to purchase Restricted Stock, to any Service Provider, subject to the right of the Company to repurchase all or part of such shares at their issue price or other stated or formula price from the Participant (or to require forfeiture of such shares if issued at no cost) in the event that conditions specified by the Administrator in the applicable Award Agreement are not satisfied prior to the end of the applicable restriction period or periods established by the Administrator for such Award. In addition, the Administrator may grant to Service Providers Restricted Stock Units, which may be subject to vesting and forfeiture conditions during applicable restriction period or periods, as set forth in an applicable Award Agreement.

6.2 Terms and Conditions for All Restricted Stock and Restricted Stock Unit Awards. The Administrator shall determine and set forth in the applicable Award Agreement the terms and conditions applicable to each Restricted Stock and Restricted Stock Unit Award, including the conditions for vesting and repurchase (or forfeiture) and the issue price, in each case, if any.

6.3 Additional Provisions Relating to Restricted Stock.

(a) *Dividends*. Participants holding shares of Restricted Stock will be entitled to all ordinary cash dividends paid with respect to such shares to the extent such dividends have a record date that is on or after the date on which the Participant to whom such Restricted Shares are granted becomes the record holder of such Restricted Shares, unless otherwise provided by the Administrator in the applicable Award Agreement. In addition, unless otherwise provided by the Administrator, if any dividends or distributions are paid in shares, or consist of a dividend or distribution to holders of Common Stock of property other than an ordinary cash dividend, the shares or other property will be subject to the same restrictions on transferability and forfeitability as the shares of Restricted Stock with respect to which they were paid. Each dividend payment will be made as provided in the applicable Award Agreement, but in no event later than the end of the calendar year in which the dividends are paid to stockholders of that class of stock or, if later, the 15th day of the third month following the later of (A) the date the dividends are paid to stockholders of that class of stock, and (B) the date the dividends are no longer subject to forfeiture.

(b) *Stock Certificates*. The Company may require that any stock *certificates* issued in respect of shares of Restricted Stock be deposited in escrow by the Participant, together with a stock power endorsed in blank, with the Company (or its designee).

6.4 Additional Provisions Relating to Restricted Stock Units.

(a) *Settlement*. Upon the vesting of a Restricted Stock Unit, the Participant *shall* be entitled to receive from the Company one share of Common Stock or an amount of cash or other property equal to the Fair Market Value of one share of Common Stock on the settlement date, as the Administrator shall determine and as provided in the applicable Award Agreement. The Administrator may provide that settlement of Restricted Stock Units shall occur upon or as soon as reasonably practicable after the vesting of the Restricted Stock Units or shall instead be deferred, on a mandatory basis or at the election of the Participant, in a manner that complies with Section 409A.

(b) *Voting Rights*. A Participant shall have no voting rights with respect to any Restricted Stock Units unless and until shares are delivered in settlement thereof.

(c) *Dividend Equivalents*. To the extent provided by the Administrator, a grant of Restricted Stock Units may provide a Participant with the right to receive Dividend Equivalents. Dividend Equivalents may be paid currently or credited to an account for the Participant, may be settled in cash and/or shares of Common Stock and may be subject to the same restrictions on transfer and forfeitability as the Restricted Stock Units with respect to which the Dividend Equivalents are paid, as determined by the Administrator, subject, in each case, to such terms and conditions as the Administrator shall establish and set forth in the applicable Award Agreement.

7. Other Stock-Based Awards.

Other Stock-Based Awards may be granted hereunder to Participants, including, without limitation, Awards entitling Participants to receive shares of Common Stock to be delivered in the future. Such Other Stock-Based Awards shall also be available as a form of payment in the settlement of other Awards granted under the Plan, as stand-alone payments and/or as payment in lieu of compensation to which a Participant is otherwise entitled. Other Stock-Based Awards may be paid in shares of Common Stock, cash or other property, as the Administrator shall determine. Subject to the provisions of the Plan, the Administrator shall determine the terms and conditions of each Other Stock-Based Award, including any purchase price, transfer restrictions, vesting conditions and other terms and conditions applicable thereto, which shall be set forth in the applicable Award Agreement.

8. Adjustments for Changes in Common Stock and Certain Other Events.

8.1 In the event that the Administrator determines that any dividend or other distribution (whether in the form of cash, Common Stock, other securities, or other property), reorganization, merger, consolidation, combination, repurchase, recapitalization, liquidation, dissolution, or sale, transfer, exchange or other disposition of all or substantially all of the assets of the Company, or sale or exchange of Common Stock or other securities of the Company, issuance of warrants or other rights to purchase Common Stock or other securities of the Company, or other similar corporate transaction or event, as determined by the Administrator, affects the Common Stock such that an adjustment is determined by the Administrator to be appropriate in order to prevent dilution or enlargement of the benefits or potential benefits intended by the Company to be made available under the Plan or with respect to any Award, then the Administrator may, in such manner as it may deem equitable, adjust any or all of:

(a) the number and kind of shares of Common Stock (or other securities or property) with respect to which Awards may be granted or awarded (including, but *not* limited to, adjustments of the limitations in Section 4 hereof on the maximum number and kind of shares which may be issued);

(b) the number and kind of shares of Common Stock (or other securities or property) subject to outstanding Awards;

(c) the grant or exercise price with respect to any Award; and

(d) the terms and conditions of any Awards (including, without limitation, any applicable financial or other performance “targets” specified in an Award Agreement).

8.2 In the event of any transaction or event described in Section 8.1 hereof (including without limitation any Change in Control) or any unusual or nonrecurring transaction or event affecting the Company or the financial statements of the Company, or any change in any Applicable Laws or accounting principles, the Administrator, on such terms and conditions as it deems appropriate, either by the terms of the Award or by action taken prior to the occurrence of such transaction or event and either automatically or upon the Participant’s request, is hereby authorized to take any one or more of the following actions whenever the Administrator determines that such action is appropriate in order to (x) prevent dilution or enlargement of the benefits or potential benefits intended by the Company to be made available under the Plan or with respect to any Award granted or issued under the Plan, (y) to facilitate such transaction or event or (z) give effect to such changes in Applicable Laws or accounting principles:

(a) To provide for the cancellation of any such Award in exchange for either an amount of cash or other property with a value equal to the amount that could have been obtained upon the exercise or settlement of the vested portion of such Award or realization of the Participant's rights under the vested portion of such Award, as applicable; provided that, if the amount that could have been obtained upon the exercise or settlement of the vested portion of such Award or realization of the Participant's rights, in any case, is equal to or less than zero, then the vested portion of such Award may be terminated without payment;

(b) To provide that such Award shall vest and, to the extent applicable, be exercisable as to all shares covered thereby, notwithstanding anything to the contrary in the Plan or the provisions of such Award;

(c) To provide that such Award be assumed by the successor or survivor corporation, or a parent or subsidiary thereof, or shall be substituted for by awards covering the stock of the successor or survivor corporation, or a parent or subsidiary thereof, with appropriate adjustments as to the number and kind of shares and applicable exercise or purchase price, in all cases, as determined by the Administrator;

(d) To make adjustments in the number and type of shares of Common Stock (or other securities or property) subject to outstanding Awards, and/or in the terms and conditions of (including the grant or exercise price), and the criteria included in, outstanding Awards which may be granted in the future;

(e) To replace such Award with other rights or property selected by the Administrator; and/or

(f) To provide that the Award will terminate and cannot vest, be exercised or become payable after the applicable event.

8.3 Notwithstanding the provisions of Section 8.2 above, if a Change in Control occurs and a Participant's Awards are not continued, converted, assumed, or replaced with a substantially similar award by (i) the Company, or (ii) a successor entity or its parent or subsidiary (an "Assumption"), and provided that the Participant has not had a Termination of Service, then immediately prior to the Change in Control such Awards shall become fully vested, exercisable and/or payable, as applicable, and all forfeiture, repurchase and other restrictions on such Awards shall lapse, in which case, such Awards shall be canceled upon the consummation of the Change in Control in exchange for the right to receive the Change in Control consideration payable to other holders of Common Stock (A) which may be on such terms and conditions as apply generally to holders of Common Stock under the Change in Control documents (including, without limitation, any escrow, earn-out or other deferred consideration provisions) or such other terms and conditions as the Administrator may provide, and (B) determined by reference to the number of shares subject to such Awards and net of any applicable exercise price; provided that to the extent that any Awards constitute "nonqualified deferred compensation" that may not be paid upon the Change in Control under Section 409A without the imposition of taxes thereon

under Section 409A, the timing of such payments shall be governed by the applicable Award Agreement (subject to any deferred consideration provisions applicable under the Change in Control documents); and provided, further, that if the amount to which a Participant would be entitled upon the settlement or exercise of such Award at the time of the Change in Control is equal to or less than zero, then such Award may be terminated without payment. The Administrator shall determine whether an Assumption of an Award has occurred in connection with a Change in Control.

8.4 In connection with the occurrence of any Equity Restructuring, and notwithstanding anything to the contrary in this Section 8, the Administrator will equitably adjust each outstanding Award, which adjustments may include adjustments to the number and type of securities subject to each outstanding Award and/or the exercise price or grant price thereof, if applicable, the grant of new Awards to Participants, and/or the making of a cash payment to Participants, as the Administrator deems appropriate to reflect such Equity Restructuring. The adjustments provided under this Section 8.4 shall be nondiscretionary and shall be final and binding on the affected Participant and the Company; provided that whether an adjustment is equitable shall be determined by the Administrator.

8.5 In the event of any pending stock dividend, stock split, combination or exchange of shares, merger, consolidation or other distribution (other than normal cash dividends) of Company assets to stockholders, or any other change affecting the shares of Common Stock or the share price of the Common Stock, including any Equity Restructuring, for reasons of administrative convenience the Administrator may refuse to permit the exercise of any Award during a period of up to thirty days prior to the consummation of any such transaction.

8.6 Except as expressly provided in the Plan or pursuant to action of the Administrator under the Plan, no Participant shall have any rights by reason of any subdivision or consolidation of shares of stock of any class, the payment of any dividend, any increase or decrease in the number of shares of stock of any class or any dissolution, liquidation, merger, or consolidation of the Company or any other corporation. Except as expressly provided in the Plan or pursuant to action of the Administrator under the Plan, no issuance by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, shall affect, and no adjustment by reason thereof shall be made with respect to, the number of shares of Common Stock subject to an Award or the grant or exercise price of any Award. The existence of the Plan, any Award Agreements and the Awards granted hereunder shall not affect or restrict in any way the right or power of the Company to make or authorize (i) any adjustment, recapitalization, reorganization or other change in the Company's capital structure or its business, (ii) any merger, consolidation dissolution or liquidation of the Company or sale of Company assets or (iii) any sale or issuance of securities, including without limitation, securities with rights superior to those of the Common Stock or which are convertible into or exchangeable for Common Stock. The Administrator may treat Participants and Awards (or portions thereof) differently under this Section 8.

9. General Provisions Applicable to Awards.

9.1 Transferability. Except as the Administrator may otherwise determine or provide in an Award Agreement or otherwise, in any case in accordance with Applicable Laws, Awards shall not be sold, assigned, transferred, pledged or otherwise encumbered by the person to whom they are granted, either voluntarily or by operation of law, except by will or the laws of descent and distribution, and, during the life of the Participant, shall be exercisable only by the Participant. References to a Participant, to the extent relevant in the context, shall include references to authorized transferees.

9.2 Documentation. Each Award shall be evidenced in an Award Agreement, which may be in such form (written, electronic or otherwise) as the Administrator shall determine. Each Award may contain terms and conditions in addition to those set forth in the Plan.

9.3 Discretion. Except as otherwise provided by the Plan, each Award may be made alone or in addition or in relation to any other Award. The terms of each Award to a Participant need not be identical, and the Administrator need not treat Participants or Awards (or portions thereof) uniformly.

9.4 Termination of Status. The Administrator shall determine the effect on an Award of the disability, death, retirement, authorized leave of absence or any other change or purported change in a Participant's Service Provider status and the extent to which, and the period during which, the Participant, the Participant's legal representative, conservator, guardian or Designated Beneficiary may exercise rights under the Award, if applicable.

9.5 Withholding. Each Participant shall pay to the Company, or make provision satisfactory to the Administrator for payment of, any taxes required by law to be withheld in connection with Awards to such Participant no later than the date of the event creating the tax liability. Except as the Administrator may otherwise determine, all such payments shall be made in cash or by certified check. Notwithstanding the foregoing, to the extent permitted by the Administrator, Participants may satisfy such tax obligations in whole or in part by delivery of shares of Common Stock, including shares retained from the Award creating the tax obligation, valued at their Fair Market Value. The Company may, to the extent permitted by Applicable Laws, deduct any such tax obligations from any payment of any kind otherwise due to a Participant.

9.6 Amendment of Award. The Administrator may amend, modify or terminate any outstanding Award, including but not limited to, substituting therefor another Award of the same or a different type, changing the date of exercise or settlement, and converting an Incentive Stock Option to a Non-Qualified Stock Option. The Participant's consent to such action shall be required unless (i) the Administrator determines that the action, taking into account any related action, would not materially and adversely affect the Participant, or (ii) the change is permitted under Section 8 and 10.6 hereof.

9.7 Conditions on Delivery of Stock. The Company will not be obligated to deliver any shares of Common Stock pursuant to the Plan or to remove restrictions from shares previously delivered under the Plan until (i) all conditions of the Award have been met or removed to the satisfaction of the Company, (ii) in the opinion of the Company's counsel, all other legal matters in connection with the issuance and delivery of such shares have been satisfied, including any applicable securities laws and any applicable stock exchange or stock

market rules and regulations, and (iii) the Participant has executed and delivered to the Company such representations or agreements as the Administrator deems necessary or appropriate to satisfy the requirements of any Applicable Laws. The inability of the Company to obtain authority from any regulatory body having jurisdiction, which authority is determined by the Administrator to be necessary to the lawful issuance and sale of any securities hereunder, shall relieve the Company of any liability in respect of the failure to issue or sell such shares as to which such requisite authority shall not have been obtained.

9.8 Acceleration. The Administrator may at any time provide that any Award shall become immediately vested and/or exercisable in full or in part, free of some or all restrictions or conditions, or otherwise realizable in full or in part, as the case may be.

10. Miscellaneous.

10.1 No Right To Employment or Other Status. No person shall have any claim or right to be granted an Award, and the grant of an Award shall not be construed as giving a Participant the right to continued employment or any other relationship with the Company. The Company expressly reserves the right at any time to dismiss or otherwise terminate its relationship with a Participant free from any liability or claim under the Plan or any Award, except as expressly provided in an applicable Award Agreement.

10.2 No Rights As Stockholder; Certificates. Subject to the provisions of the applicable Award Agreement, no Participant or Designated Beneficiary shall have any rights as a stockholder with respect to any shares of Common Stock to be distributed with respect to an Award until becoming the record holder of such shares. Notwithstanding any other provision of the Plan, unless otherwise determined by the Administrator or required by any Applicable Laws, the Company shall not be required to deliver to any Participant certificates evidencing shares of Common Stock issued in connection with any Award and instead such shares of Common Stock may be recorded in the books of the Company (or, as applicable, its transfer agent or stock plan administrator). The Company may place legends on any stock certificates issued under the Plan deemed necessary or appropriate by the Administrator in order to comply with Applicable Laws.

10.3 Effective Date and Term of Plan. The Plan shall become effective on the date on which it is adopted by the Board. No Awards shall be granted under the Plan after the completion of ten years from the earlier of (i) the date on which the Plan was adopted by the Board or (ii) the date the Plan was approved by the Company's stockholders, but Awards previously granted may extend beyond that date in accordance with the terms of the Plan.

10.4 Amendment of Plan. The Administrator may amend, suspend or terminate the Plan or any portion thereof at any time; provided that no amendment of the Plan shall materially and adversely affect any Award outstanding at the time of such amendment without the consent of the affected Participant. Awards outstanding under the Plan at the time of any suspension or termination of the Plan shall continue to be governed in accordance with the terms of the Plan and the applicable Award Agreement, as in effect prior to such suspension or termination. The Board shall obtain stockholder approval of any Plan amendment to the extent necessary to comply with Applicable Laws.

10.5 Provisions for Foreign Participants. The Administrator may modify Awards granted to Participants who are foreign nationals or employed outside the United States or establish subplans or procedures under the Plan to address differences in laws, rules, regulations or customs of such foreign jurisdictions with respect to tax, securities, currency, employee benefit or other matters.

10.6 Section 409A.

(a) *General*. The Company intends that all Awards be structured in compliance with, or to satisfy an exemption from, Section 409A, such that no adverse tax consequences, interest, or penalties under Section 409A apply in connection with any Awards. Notwithstanding anything herein or in any Award Agreement to the contrary, the Administrator may, without a Participant's prior consent, amend this Plan and/or Awards, adopt policies and procedures, or take any other actions (including amendments, policies, procedures and actions with retroactive effect) as are necessary or appropriate to preserve the intended tax treatment of Awards under the Plan, including without limitation, any such actions intended to (A) exempt this Plan and/or any Award from the application of Section 409A, and/or (B) comply with the requirements of Section 409A, including without limitation any such regulations, guidance, compliance programs and other interpretative authority that may be issued after the date of grant of any Award. The Company makes no representations or warranties as to the tax treatment of any Award under Section 409A or otherwise. The Company shall have no obligation under this Section 10.6 or otherwise to take any action (whether or not described herein) to avoid the imposition of taxes, penalties or interest under Section 409A with respect to any Award and shall have no liability to any Participant or any other person if any Award, compensation or other benefits under the Plan are determined to constitute non-compliant, "nonqualified deferred compensation" subject to the imposition of taxes, penalties and/or interest under Section 409A.

(b) *Separation from Service*. With respect to any Award that constitutes "nonqualified deferred compensation" under Section 409A, any payment or settlement of such Award that is to be made upon a termination of a Participant's Service Provider relationship shall, to the extent necessary to avoid the imposition of taxes under Section 409A, be made only upon the Participant's "separation from service" (within the meaning of Section 409A), whether such "separation from service" occurs upon or subsequent to the termination of the Participant's Service Provider relationship. For purposes of any such provision of this Plan or any Award Agreement relating to any such payments or benefits, references to a "termination," "termination of employment" or like terms shall mean "separation from service."

(c) *Payments to Specified Employees*. Notwithstanding any contrary provision in the Plan or any Award Agreement, any payment(s) of "nonqualified deferred compensation" that are otherwise required to be made under an Award to a "specified employee" (as defined under Section 409A and determined by the Administrator) as a result of his or her "separation from service" shall, to the extent necessary to avoid the imposition of taxes under Code Section 409A(a)(2)(B)(i), be delayed until the expiration of the six-month period immediately following such "separation from service" (or, if earlier, until the date of death of the specified employee) and shall instead be paid (in a manner set forth in the Award agreement) on the day that immediately follows the end of such six-month period or as soon as administratively practicable thereafter (without interest). Any payments of "nonqualified deferred compensation" under such Award that are, by their terms, payable more than six months following the Participant's "separation from service" shall be paid at the time or times such payments are otherwise scheduled to be made.

10.7 Limitations on Liability. Notwithstanding any other provisions of the Plan, no individual acting as a director, officer, other employee or agent of the Company will be liable to any Participant, former Participant, spouse, beneficiary, or any other person for any claim, loss, liability, or expense incurred in connection with the Plan or any Award, nor will such individual be personally liable with respect to the Plan because of any contract or other instrument he or she executes in his or her capacity as an Administrator, director, officer, other employee or agent of the Company. The Company will indemnify and hold harmless each director, officer, other employee and agent of the Company to whom any duty or power relating to the administration or interpretation of the Plan has been or will be granted or delegated, against any cost or expense (including attorneys' fees) or liability (including any sum paid in settlement of a claim with the Administrator's approval) arising out of any act or omission to act concerning this Plan unless arising out of such person's own fraud or bad faith.

10.8 Lock-Up Period. Participants shall not offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any Common Stock (or other securities) of the Company or enter into any swap, hedging or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of any Common Stock (or other securities) of the Company held by Participant (other than those included in the registration) for a period specified by the representative of the underwriters of Common Stock (or other securities) of the Company not to exceed one hundred and eighty (180) days following the effective date of any registration statement of the Company filed under the Securities Act (or such other period as may be requested by the Company or the underwriters to accommodate regulatory restrictions on (i) the publication or other distribution of research reports and (ii) analyst recommendations and opinions, including, but not limited to, the restrictions contained in FINRA Rule 2241, or any successor provisions or amendments thereto). Participants shall execute and deliver such other agreements as may be reasonably requested by the Company or the underwriter which are consistent with the foregoing or which are necessary to give further effect thereto. The obligations described in this Section 10.8 shall not apply to a registration relating solely to employee benefit plans on Form S-1 or Form S-8 or similar forms that may be promulgated in the future, or a registration relating solely to a Securities and Exchange Commission Rule 145 transaction on Form S-4 or similar forms that may be promulgated in the future. The Company may impose stop-transfer instructions with respect to the shares of Common Stock (or other securities) subject to the foregoing restriction until the end of said 180 day (or other) period.

10.9 Limitations on Transfer. A Participant shall not sell, assign, transfer, pledge, hypothecate or otherwise dispose of, by operation of law or otherwise (collectively "Transfer") any interest in any shares of Common Stock held by Participant except in compliance with the provisions herein, in the Company's Bylaws and applicable securities laws. Furthermore, the shares of Common Stock shall be subject to a right of first refusal in favor of the Company or its assignees as set forth in the Company's Bylaws. Notwithstanding the foregoing, Participant may, subject to compliance with the transfer restrictions set forth in the

Company's Bylaws, transfer shares of Common Stock to or for the benefit of any spouse, children, parents, uncles, aunts, siblings, grandchildren and any other relatives approved by the Board of Directors (collectively, "Approved Relatives") or to a trust established solely for the benefit of the Participant and/or Approved Relatives, provided that such shares of Common Stock shall remain subject to the provisions of this Plan and any other applicable agreements, and such permitted transferee shall, as a condition to such transfer, deliver to the Company a written instrument confirming that such transferee shall be bound by all of the terms and conditions of this Plan and any other applicable agreements. The Company shall not be required (a) to transfer on its books any of the shares of Common Stock that have been sold or otherwise transferred in violation of any of the provisions of this Plan, any other applicable agreement or the provisions of the Company's Bylaws or (b) to treat as owner of such shares of Common Stock or to accord the right to vote or pay dividends to any purchaser or other transferee to whom any such shares of Common Stock shall have been so sold or transferred.

10.10 Data Privacy. As a condition of receipt of any Award, each Participant explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of personal data as described in this paragraph by and among, as applicable, the Company and its subsidiaries and affiliates for the exclusive purpose of implementing, administering and managing the Participant's participation in the Plan. The Company and its subsidiaries and affiliates may hold certain personal information about a Participant, including but not limited to, the Participant's name, home address and telephone number, date of birth, social security or insurance number or other identification number, salary, nationality, job title(s), any shares of stock held in the Company or any of its subsidiaries and affiliates, details of all Awards, in each case, for the purpose of implementing, managing and administering the Plan and Awards (the "Data"). The Company and its subsidiaries and affiliates may transfer the Data amongst themselves as necessary for the purpose of implementation, administration and management of a Participant's participation in the Plan, and the Company and its subsidiaries and affiliates may each further transfer the Data to any third parties assisting the Company in the implementation, administration and management of the Plan. These recipients may be located in the Participant's country, or elsewhere, and the Participant's country may have different data privacy laws and protections than the recipients' country. Through acceptance of an Award, each Participant authorizes such recipients to receive, possess, use, retain and transfer the Data, in electronic or other form, for the purposes of implementing, administering and managing the Participant's participation in the Plan, including any requisite transfer of such Data as may be required to a broker or other third party with whom the Company or the Participant may elect to deposit any shares of Common Stock. The Data related to a Participant will be held only as long as is necessary to implement, administer, and manage the Participant's participation in the Plan. A Participant may, at any time, view the Data held by the Company with respect to such Participant, request additional information about the storage and processing of the Data with respect to such Participant, recommend any necessary corrections to the Data with respect to the Participant or refuse or withdraw the consents herein in writing, in any case without cost, by contacting his or her local human resources representative. The Company may cancel Participant's ability to participate in the Plan and, in the Administrator's discretion, the Participant may forfeit any outstanding Awards if the Participant refuses or withdraws his or her consents as described herein. For more information on the consequences of refusal to consent or withdrawal of consent, Participants may contact their local human resources representative.

10.11 Severability. In the event any portion of the Plan or any action taken pursuant thereto shall be held illegal or invalid for any reason, the illegality or invalidity shall not affect the remaining parts of the Plan, and the Plan shall be construed and enforced as if the illegal or invalid provisions had not been included, and the illegal or invalid action shall be null and void.

10.12 Governing Documents. In the event of any contradiction between the Plan and any Award Agreement or any other written agreement between a Participant and the Company or any Subsidiary of the Company that has been approved by the Administrator, the terms of the Plan shall govern, unless it is expressly specified in such Award Agreement or other written document that a specific provision of the Plan shall not apply.

10.13 Submission to Jurisdiction; Waiver of Jury Trial. By accepting an Award, each Participant irrevocably and unconditionally consents to submit to the exclusive jurisdiction of the courts of the State of California and of the United States of America, in each case located in the State of California, for any action arising out of or relating to the Plan (and agrees not to commence any litigation relating thereto except in such courts), and further agrees that service of any process, summons, notice or document by U.S. registered mail to the address contained in the records of the Company shall be effective service of process for any litigation brought against it in any such court. By accepting an Award, each Participant irrevocably and unconditionally waives any objection to the laying of venue of any litigation arising out of Plan or Award hereunder in the courts of the State of California or the United States of America, in each case located in the State of California, and further irrevocably and unconditionally waives and agrees not to plead or claim in any such court that any such litigation brought in any such court has been brought in an inconvenient forum. By accepting an Award, each Participant irrevocably and unconditionally waives, to the fullest extent permitted by applicable law, any and all rights to trial by jury in connection with any litigation arising out of or relating to the Plan or any Award hereunder.

10.14 Governing Law. The provisions of the Plan and all Awards made hereunder shall be governed by and interpreted in accordance with the laws of the State of Delaware, disregarding choice-of-law principles of the law of any state that would require the application of the laws of a jurisdiction other than such state.

10.15 Restrictions on Shares; Claw-back Provisions. Shares of Common Stock acquired in respect of Awards shall be subject to such terms and conditions as the Administrator shall determine, including, without limitation, restrictions on the transferability of shares of Common Stock, the right of the Company to repurchase shares of Common Stock, the right of the Company to require that shares of Common Stock be transferred in the event of certain transactions, tag-along rights, bring-along rights, redemption and co-sale rights and voting requirements. Such terms and conditions may be additional to those contained in the Plan and may, as determined by the Administrator, be contained in the applicable Award Agreement or in an exercise notice, stockholders' agreement or in such other agreement as the Administrator shall determine, in each case in a form determined by the Administrator. The issuance of such shares of Common Stock shall be conditioned on the Participant's consent to such terms and conditions and the Participant's entering into such agreement or agreements. All Awards (including any proceeds, gains or other economic benefit actually or constructively received by Participant upon

any receipt or exercise of any Award or upon the receipt or resale of any shares of Common Stock underlying the Award) shall be subject to the provisions of any claw-back policy implemented by the Company, including, without limitation, any claw-back policy adopted to comply with the requirements of the Dodd-Frank Wall Street Reform and Consumer Protection Act and any rules or regulations promulgated thereunder, to the extent set forth in such claw-back policy and/or in the applicable Award Agreement.

10.16 Titles and Headings. The titles and headings of the Sections in the Plan are for convenience of reference only and, in the event of any conflict, the text of the Plan, rather than such titles or headings, shall control.

10.17 Conformity to Securities Laws. Participant acknowledges that the Plan is intended to conform to the extent necessary with all provisions of the Securities Act and the Exchange Act and any and all regulations and rules promulgated by the Securities and Exchange Commission thereunder, and state securities laws and regulations. Notwithstanding anything herein to the contrary, the Plan and all Awards granted hereunder shall be administered only in such a manner as to conform to such laws, rules and regulations. To the extent permitted by Applicable Laws, the Plan and all Award Agreements shall be deemed amended to the extent necessary to conform to such laws, rules and regulations.

11. Definitions. As used in the Plan, the following words and phrases shall have the following meanings:

11.1 "Administrator" means the Board or a Committee to the extent that the Board's powers or authority under the Plan have been delegated to such Committee.

11.2 "Applicable Laws" means the requirements relating to the administration of equity incentive plans under U.S. federal and state securities, tax and other applicable laws, rules and regulations, the applicable rules of any stock exchange or quotation system on which the Common Stock is listed or quoted and the applicable laws and rules of any foreign country or other jurisdiction where Awards are granted or issued under the Plan.

11.3 "Award" means, individually or collectively, a grant under the Plan of Options, Restricted Stock, Restricted Stock Units or Other Stock-Based Awards.

11.4 "Award Agreement" means a written agreement evidencing an Award, which agreements may be in electronic medium and shall contain such terms and conditions with respect to an Award as the Administrator shall determine, consistent with and subject to the terms and conditions of the Plan.

11.5 "Board" means the Board of Directors of the Company.

11.6 "Change in Control" means (i) a merger or consolidation of the Company with or into any other corporation or other entity or person, (ii) a sale, lease, exchange or other transfer in one transaction or a series of related transactions of all or substantially all of the Company's assets, or (iii) any other transaction, including the sale by the Company of new shares of its capital stock or a transfer of existing shares of capital stock of the Company, the result of which is that a third party that is not an affiliate of the Company or its stockholders (or a

group of third parties not affiliated with the Company or its stockholders) immediately prior to such transaction acquires or holds capital stock of the Company representing a majority of the Company's outstanding voting power immediately following such transaction; provided that the following events shall not constitute a "Change in Control": (A) a transaction (other than a sale of all or substantially all of the Company's assets) in which the holders of the voting securities of the Company immediately prior to the merger or consolidation hold, directly or indirectly, at least a majority of the voting securities in the successor corporation or its parent immediately after the merger or consolidation; (B) a sale, lease, exchange or other transaction in one transaction or a series of related transactions of all or substantially all of the Company's assets to an affiliate of the Company; (C) an initial public offering of any of the Company's securities; (D) a reincorporation of the Company solely to change its jurisdiction; or (E) a transaction undertaken for the primary purpose of creating a holding company that will be owned in substantially the same proportion by the persons who held the Company's securities immediately before such transaction. Notwithstanding the foregoing, if a Change in Control would give rise to a payment or settlement event with respect to any Award that constitutes "nonqualified deferred compensation," the transaction or event constituting the Change in Control must also constitute a "change in control event" (as defined in Treasury Regulation §1.409A-3(i)(5)) in order to give rise to the payment or settlement event for such Award, to the extent required by Section 409A.

11.7 "Code" means the Internal Revenue Code of 1986, as amended, and the regulations issued thereunder.

11.8 "Committee" means one or more committees or subcommittees of the Board, which may be comprised of one or more directors and/or executive officers of the Company, in either case, to the extent permitted in accordance with Applicable Laws.

11.9 "Common Stock" means the common stock of the Company.

11.10 "Company" means Sana Biotechnology, Inc., a Delaware corporation, or any successor thereto. Except where the context otherwise requires, the term "Company" includes any of the Company's present or future parent or subsidiary corporations as defined in Sections 424(e) or (f) of the Code and any other business venture (including, without limitation, joint venture or limited liability company) in which the Company has a significant interest, as determined by the Administrator.

11.11 "Consultant" means any person, including any advisor, engaged by the Company or a parent or subsidiary of the Company to render services to such entity if: (i) the consultant or adviser renders *bona fide* services to the Company; (ii) the services rendered by the consultant or advisor are not in connection with the offer or sale of securities in a capital-raising transaction and do not directly or indirectly promote or maintain a market for the Company's securities; and (iii) the consultant or advisor is a natural person, or such other advisor or consultant as is approved by the Administrator.

11.12 "Designated Beneficiary" means the beneficiary or beneficiaries designated, in a manner determined by the Administrator, by a Participant to receive amounts due or exercise rights of the Participant in the event of the Participant's death or incapacity In the absence of an effective designation by a Participant, "Designated Beneficiary" shall mean the Participant's estate.

11.13 “Director” means a member of the Board.

11.14 “Disability” means a permanent and total disability within the meaning of Section 22(e)(3) of the Code, as it may be amended from time to time.

11.15 “Dividend Equivalents” means a right granted to a Participant pursuant to Section 6.4(c) hereof to receive the equivalent value (in cash or shares of Common Stock) of dividends paid on shares of Common Stock.

11.16 “Employee” means any person, including officers and Directors, employed by the Company (within the meaning of Section 3401(c) of the Code) or any parent or subsidiary of the Company.

11.17 “Equity Restructuring” means, as determined by the Administrator, a non-reciprocal transaction between the Company and its stockholders, such as a stock dividend, stock split, spin-off or recapitalization through a large, nonrecurring cash dividend, that affects the shares of Common Stock (or other securities of the Company) or the share price of Common Stock (or other securities of the Company) and causes a change in the per share value of the Common Stock underlying outstanding Awards.

11.18 “Exchange Act” means the Securities Exchange Act of 1934, as amended.

11.19 “Fair Market Value” means, as of any date, the value of Stock determined as follows: (i) if the Common Stock is listed on any established stock exchange, its Fair Market Value shall be the closing sales price for such Common Stock as quoted on such exchange for such date, or if no sale occurred on such date, the first market trading day immediately prior to such date during which a sale occurred, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable; (ii) if the Common Stock is not traded on a stock exchange but is quoted on a national market or other quotation system, the last sales price on such date, or if no sales occurred on such date, then on the date immediately prior to such date on which sales prices are reported, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable; or (iii) in the absence of an established market for the Common Stock, the Fair Market Value thereof shall be determined by the Administrator in its sole discretion.

11.20 “Incentive Stock Option” means an “incentive stock option” as defined in Section 422 of the Code.

11.21 “Non-Qualified Stock Option” means an Option that is not intended to be or otherwise does not qualify as an Incentive Stock Option.

11.22 “Option” means an option to purchase Common Stock.

11.23 “Other Stock-Based Awards” means other Awards of shares of Common Stock, and other Awards that are valued in whole or in part by reference to, or are otherwise based on, shares of Common Stock or other property.

11.24 “Participant” means a Service Provider who has been granted an Award under the Plan.

11.25 “Plan” means this 2018 Equity Incentive Plan.

11.26 “Publicly Listed Company” means that the Company or its successor (i) is required to file periodic reports pursuant to Section 12 of the Exchange Act and (ii) the Common Stock is listed on one or more National Securities Exchanges (within the meaning of the Exchange Act) or is quoted on NASDAQ or a successor quotation system.

11.27 “Restricted Stock” means Common Stock awarded to a Participant pursuant to Section 6 hereof that is subject to certain vesting conditions and other restrictions.

11.28 “Restricted Stock Unit” means an unfunded, unsecured right to receive, on the applicable settlement date, one share of Common Stock or an amount in cash or other consideration determined by the Administrator equal to the value thereof as of such payment date, which right may be subject to certain vesting conditions and other restrictions.

11.29 “Section 409A” means Section 409A of the Code and all regulations, guidance, compliance programs and other interpretative authority thereunder.

11.30 “Securities Act” means the Securities Act of 1933, as amended from time to time.

11.31 “Service Provider” means an Employee, Consultant or Director.

11.32 “Termination of Service” means the date the Participant ceases to be a Service Provider.

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SANA BIOTECHNOLOGY, INC.

2018 EQUITY INCENTIVE PLAN

CALIFORNIA SUPPLEMENT

This supplement is intended to satisfy the requirements of Section 25102(o) of the California Corporations Code and the regulations issued thereunder ("Section 25102(o)"). Notwithstanding anything to the contrary contained in the Plan and except as otherwise determined by the Administrator, the provisions set forth in this supplement shall apply to all Awards granted under the Plan to a Participant who is a resident of the State of California on the date of grant (a "California Participant") and which are intended to be exempt from registration in California pursuant to Section 25102(o), and otherwise to the extent required to comply with applicable law (but only to such extent). Definitions in the Plan are applicable to this supplement.

1. Limitation On Securities Issuable Under Plan. The amount of securities issued pursuant to the Plan shall not exceed the amounts permitted under Section 260.140.45 of the California code of regulations to the extent applicable.

2. Additional Limitations For Grants. The terms of all Awards shall comply, to the extent applicable, with Sections 260.140.41 and 260.140.42 of the California Code of Regulations.

3. Additional Requirement To Provide Information To California Participants. The Company shall provide to each California Participant, not less frequently than annually, copies of annual financial statements (which need not be audited). The Company shall not be required to provide such statements to key persons whose duties in connection with the Company assure their access to equivalent information. In addition, this information requirement shall not apply to any plan or agreement that complies with all conditions of Rule 701 of the Securities Act ("Rule 701"); provided that for purposes of determining such compliance, any registered domestic partner shall be considered a "family member" as that term is defined in Rule 701.

* * * * *

SANA BIOTECHNOLOGY, INC.

2018 EQUITY INCENTIVE PLAN

AMENDMENT

Pursuant to the authority reserved to the Board of Directors (the "**Board**") of Sana Biotechnologies, Inc., a Delaware corporation (the "**Company**"), under Section 10.4 of the Company's 2018 Equity Incentive Plan (the "**Plan**"), the Board hereby amends the Plan as follows.

1. The first sentence of Section 4.1 of the Plan is hereby amended to read in its entirety as follows:

"Subject to adjustment under Section 8 hereof, Awards may be made under the Plan covering up to 63,699,641 shares of Common Stock."

2. Except as set forth herein, the Plan shall remain in full force and effect in accordance with its terms.

*** * * * * * * * * ***

I hereby certify that the foregoing Amendment to the Plan was duly adopted by the Board effective in part as of October 21, 2020 and in part as of November 4, 2020.

I hereby further certify that the foregoing Amendment to the Plan was duly adopted by the Company's stockholders effective as of November 9, 2020.

Executed on this 9th day of November, 2020.

/s/ James J. MacDonald

James J. MacDonald, *Secretary*

SANA BIOTECHNOLOGY, INC.

2018 EQUITY INCENTIVE PLAN

AMENDMENT

Pursuant to the authority reserved to the Board of Directors (the "**Board**") of Sana Biotechnologies, Inc., a Delaware corporation (the "**Company**"), under Section 10.4 of the Company's 2018 Equity Incentive Plan (the "**Plan**"), the Board hereby amends the Plan as follows.

1. The first sentence of Section 4.1 of the Plan is hereby amended to read in its entirety as follows:

"Subject to adjustment under Section 8 hereof, Awards may be made under the Plan covering up to 64,599,641 shares of Common Stock."

2. Except as set forth herein, the Plan shall remain in full force and effect in accordance with its terms.

*** * * * * * * * * ***

I hereby certify that the foregoing Amendment to the Plan was duly adopted by the Board effective as of November 30, 2020.

I hereby further certify that the foregoing Amendment to the Plan was duly adopted by the Company's stockholders effective as of December 4, 2020.

Executed on this 4th day of December, 2020.

/s/ James J. MacDonald

James J. MacDonald, *Secretary*

Exhibit 10.3(d)

SANA BIOTECHNOLOGY, INC.

2018 EQUITY INCENTIVE PLAN

STOCK OPTION GRANT NOTICE AND
STOCK OPTION AGREEMENT

Sana Biotechnology, Inc. (the "Company"), pursuant to its 2018 Equity Incentive Plan (the "Plan"), hereby grants to the participant set forth below ("Participant"), an option (the "Option") to purchase the number of shares of the Company's Common Stock (referred to herein as "Shares") set forth below. This Option is subject to all of the terms and conditions as set forth herein and in the Stock Option Agreement attached hereto as Exhibit A (the "Stock Option Agreement") and the Plan, each of which is incorporated herein by reference. Unless otherwise defined herein, the terms defined in the Plan shall have the same defined meanings in this Stock Option Grant Notice and the Stock Option Agreement.

Participant:	_____
Grant Date:	_____
Vesting Commencement Date:	_____
Exercise Price per Share:	$_____
Total Exercise Price:	$_____
Total Number of Shares Subject to Option:	_____
Expiration Date:	_____
Type of Option:	___ Incentive Stock Option ___ Non-Qualified Stock Option
Vesting Schedule:	The Option shall vest and become exercisable as to 25% of the total number of Shares subject to the Option on the first anniversary of the Vesting Commencement Date and as to 1/48th of the total number of Shares subject to the Option on each monthly anniversary thereafter, so that all of the Shares subject to the Option shall be fully vested and exercisable on the fourth anniversary of the Vesting Commencement Date, subject to Participant not experiencing a Termination of Service through each such vesting date.

By his or her signature and the Company's signature below, Participant agrees to be bound by the terms and conditions of the Plan, the Stock Option Agreement and this Grant Notice. Participant has reviewed the Stock Option Agreement, the Plan and this Grant Notice in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Grant Notice and fully understands all provisions of this Grant Notice, the Stock Option Agreement and the Plan. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator of the Plan upon any questions arising under the Plan or the Option.

SANA BIOTECHNOLOGY, INC.:

By: _____
Name: _____
Title: _____

PARTICIPANT:

By: _____
Name: _____
Address: _____

_____

_____

Exhibit A

TO STOCK OPTION GRANT NOTICE

STOCK OPTION AGREEMENT

Pursuant to the Stock Option Grant Notice ("Grant Notice") to which this Stock Option Agreement (this "Agreement") is attached, Sana Biotechnology, Inc. (the "Company") has granted to Participant an Option under the Company's 2018 Equity Incentive Plan (the "Plan") to purchase the number of Shares indicated in the Grant Notice.

1. General.

1.1 Defined Terms. Capitalized terms not specifically defined herein shall have the meanings specified in the Plan and the Grant Notice.

1.2 Incorporation of Terms of Plan. The Option is subject to the terms and conditions of the Plan which are incorporated herein by reference. In the event of a conflict between the terms of the Agreement and the Plan, the terms of the Plan shall control.

1.3 Grant of Option. In consideration of Participant's past and/or continued employment with or service to the Company or a parent or subsidiary and for other good and valuable consideration, effective as of the grant date set forth in the Grant Notice (the "Grant Date"), the Company irrevocably grants to Participant an Option to purchase any part or all of an aggregate of the number of Shares set forth in the Grant Notice, upon the terms and conditions set forth in the Plan and this Agreement. Unless designated as a Non-Qualified Stock Option in the Grant Notice, the Option shall be an Incentive Stock Option to the maximum extent permitted by law.

2. Period of Exercisability.

2.1 Vesting; Commencement of Exercisability.

(a) Subject to Sections 2.1(b) and 2.3 below, the Option shall become vested and exercisable in such amounts and at such times as are set forth in the vesting schedule in the Grant Notice (the "Vesting Schedule").

(b) Unless otherwise determined by the Administrator, any portion of the Option that has not become vested and exercisable on or prior to the date of Participant's Termination of Service shall be forfeited on the date of Participant's Termination of Service and shall not thereafter become vested or exercisable.

2.2 Duration of Exercisability. The installments provided for in the Vesting Schedule are cumulative. Each such installment which becomes vested and exercisable pursuant to the Vesting Schedule shall remain vested and exercisable until it becomes unexercisable under Section 2.3 below or pursuant to the terms of the Plan. Once the Option becomes unexercisable, it shall be forfeited immediately.

2.3 Expiration of Option. The Option may not be exercised to any extent by anyone after the first to occur of the following events:

(a) The Expiration Date set forth in the Grant Notice;

(b) The expiration of three months following the date of Participant's Termination of Service, unless such Termination of Service occurs by reason of Participant's death, Disability or Cause;

(c) The expiration of one year following the date of Participant's Termination of Service by reason of Participant's death or Disability; or

(d) The date of Participant's Termination of Service for Cause.

Participant acknowledges that an Incentive Stock Option exercised more than three (3) months after Participant's Termination of Service as an Employee, other than by reason of death or Disability, will be taxed as a Non-Qualified Stock Option.

2.4 Special Tax Consequences. Participant acknowledges that, to the extent that the aggregate Fair Market Value (determined as of the time the Option is granted) of all Shares with respect to which Incentive Stock Options, including the Option, are first exercisable for the first time by Participant in any calendar year exceeds $100,000 (or such other limitation as imposed by Section 422(d) of the Code), the Option and such other options shall be treated as not qualifying under Section 422 of the Code but rather shall be considered Non-Qualified Stock Options. Participant further acknowledges that the rule set forth in the preceding sentence shall be applied by taking Options and other "incentive stock options" into account in the order in which they were granted.

3. Exercise of Option.

3.1 Person Eligible to Exercise. Except as may be otherwise provided by the Administrator, during the lifetime of Participant, only Participant may exercise the Option or any portion thereof. After the death of Participant, any exercisable portion of the Option may, prior to the time when the Option becomes unexercisable under Section 2.3, be exercised by Participant's personal representative or by any person empowered to do so under the deceased Participant's will or under the then applicable laws of descent and distribution.

3.2 Partial Exercise. Any exercisable portion of the Option or the entire Option, if then wholly exercisable, may be exercised in whole or in part at any time prior to the time when the Option or portion thereof becomes unexercisable under Section 2.3.

3.3 Manner of Exercise. The Option, or any exercisable portion thereof, may be exercised solely by delivery to the Secretary of the Company or the Secretary's office, or such other place as may be determined by the Administrator, of all of the following prior to the time when the Option or such portion thereof becomes unexercisable under Section 2.3 above:

(a) An exercise notice in substantially in the form attached as Exhibit B to the Grant Notice (or such other form as is prescribed by the Administrator) (the "Exercise Notice") in writing signed by Participant or any other person then entitled to exercise the Option or portion thereof, stating that the Option or portion thereof is thereby exercised, such notice complying with all Applicable Laws established by the Administrator;

(b) Subject to Section 5.6 of the Plan:

(i) Full payment (in cash or by check) for the Shares with respect to which the Option or portion thereof is exercised; or

(ii) With the consent of the Administrator, by delivery of Shares then issuable upon exercise of the Option having a Fair Market Value on the date of delivery equal to the aggregate exercise price of the Option or exercised portion thereof; or

(iii) On and after the date the Company becomes a Publicly Listed Company, through the (A) delivery by Participant to the Company of an irrevocable and unconditional undertaking by a broker acceptable to the Company to deliver promptly to the Company sufficient funds to pay the exercise price or (B) delivery by Participant to the Company of a copy of irrevocable and unconditional instructions to a broker acceptable to the Company to deliver promptly to the Company cash or a check sufficient to pay the exercise price; provided that payment is then made to the Company at such time as may be required by the Administrator; or

(iv) With the consent of the Administrator, any other method of payment permitted under the terms of the Plan; or

(v) Subject to any Applicable Laws, any combination of the consideration allowed under the foregoing paragraphs;

(c) The receipt by the Company of full payment for any applicable withholding tax in cash or by check or in the form of consideration permitted by the Administrator, which, following the date the Company becomes a Publicly Listed Company shall include the method provided for in Section 5.6(a) of the Plan;

(d) If the Company is a not a Publicly Listed Company, the Investment Representation Statement in the form attached as Exhibit B-1 to the Exercise Notice executed by Participant; and

(e) In the event the Option or portion thereof shall be exercised pursuant to Section 3.1 above by any person or persons other than Participant, appropriate proof of the right of such person or persons to exercise the Option.

4. Other Provisions.

4.1 Restrictive Legends and Stop-Transfer Orders.

(a) Participant agrees that, in order to ensure compliance with the restrictions referred to herein, the Company may issue appropriate "stop transfer" instructions to its transfer agent, if any, and that, if the Company transfers its own securities, it may make appropriate notations to the same effect in its own records.

(b) The Company shall not be required: (i) to transfer on its books any Shares that have been sold or otherwise transferred in violation of any of the provisions of this Agreement, or (ii) to treat as owner of such Shares or to accord the right to vote or pay dividends to any purchaser or other transferee to whom such shares shall have been so transferred.

4.2 Notices. Any notice to be given under the terms of this Agreement to the Company shall be addressed to the Company at its principal executive offices in care of the Secretary of the Company, and any notice to be given to Participant shall be addressed to Participant at the most recent address for Participant shown in the Company's records. By a notice given pursuant to this Section 4.2, either party may hereafter designate a different address for notices to be given to that party. Any notice which is required to be given to Participant shall, if Participant is then deceased, be given to the person entitled to exercise his or her Option by written notice under this Section 4.2. Any notice shall be deemed duly given when sent via email or when sent by certified mail (return receipt requested) and deposited (with postage prepaid) in a post office or branch post office regularly maintained by the United States Postal Service.

4.3 Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

4.4 Submission to Jurisdiction; Waiver of Jury Trial. By accepting this Option, the Participant irrevocably and unconditionally consents to submit to the exclusive jurisdiction of the courts of the State of California and of the United States of America, in each case located in the State of California, for any action arising out of or relating to the Plan and this Option (and agrees not to commence any litigation relating thereto except in such courts), and further agrees that service of any process, summons, notice or document by U.S. registered mail to the address contained in the records of the Company shall be effective service of process for any litigation brought against it in any such court. By accepting this Option, the Participant irrevocably and unconditionally waives any objection to the laying of venue of any litigation arising out of Plan or the Option in the courts of the State of California or the United States of America, in each case located in the State of California, and further irrevocably and unconditionally waives and agrees not to plead or claim in any such court that any such litigation brought in any such court has been brought in an inconvenient forum. By accepting this Option, the Participant irrevocably and unconditionally waives, to the fullest extent permitted by applicable law, any and all rights to trial by jury in connection with any litigation arising out of or relating to the Plan or the Option.

4.5 Governing Law; Severability. This Agreement and the Exercise Notice shall be administered, interpreted and enforced under the laws of the State of Delaware, without regard to the conflicts of law principles thereof. Should any provision of this Agreement be determined by a court of law to be illegal or unenforceable, the other provisions shall nevertheless remain effective and shall remain enforceable.

4.6 Conformity to Securities Laws. Participant acknowledges that the Plan is intended to conform to the extent necessary with all provisions of the Securities Act and the Exchange Act and any and all regulations and rules promulgated by the Securities and Exchange Commission thereunder, and state securities laws and regulations. Notwithstanding anything herein to the contrary, the Plan shall be administered, and the Option is granted and may be exercised, only in such a manner as to conform to such laws, rules and regulations. To the extent permitted by Applicable Laws, the Plan and this Agreement shall be deemed amended to the extent necessary to conform to such laws, rules and regulations.

4.7 Successors and Assigns. The Company may assign any of its rights under this Agreement and the Exercise Notice to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth, this Agreement shall be binding upon Participant and his or her heirs, executors, administrators, successors and assigns.

4.8 Entire Agreement. The Plan, this Agreement (including all Exhibits hereto) and any written employment agreement (including an offer letter) between Participant and the Company providing for acceleration of vesting of equity awards upon certain events constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof.

* * * * *

Exhibit B

TO STOCK OPTION GRANT NOTICE

FORM OF EXERCISE NOTICE

Effective as of today, _____,_____, the undersigned *(*"Participant") hereby elects to exercise Participant's option to purchase Shares of Sana Biotechnology, Inc. (the "Company") under and pursuant to the Company's 2018 Equity Incentive Plan (the "Plan") and the Stock Option Grant Notice and Stock Option Agreement dated , ____ (the "Option Agreement"). Capitalized terms used herein without definition shall have the meanings given in the Option Agreement.

Grant Date:	_____
Number of Shares as to which Option is Exercised:	_____
Exercise Price per Share:	$_____
Total Exercise Price:	$_____
Certificate to be issued or book entry to be made in name of:	_____
Cash Payment delivered herewith:	$_____ (Representing the full Exercise Price for the Shares, as well as any applicable withholding tax)

Type of Option: ☐ Incentive Stock Option ☐ Non-Qualified Stock Option

1. Representations of Participant. Participant acknowledges that Participant has received, read and understood the Plan and the Option Agreement. Participant agrees to abide by and be bound by their terms and conditions. To the extent the Shares are issued in uncertificated form, Participant also acknowledges and agrees that this Exercise Notice constitutes the notice required by Section 151(f) of the Delaware General Corporation Law.

2. Tax Consultation. Participant understands that Participant may suffer adverse tax consequences as a result of Participant's purchase or disposition of the Shares. Participant represents that Participant has consulted with any tax consultants Participant deems advisable in connection with the purchase or disposition of the Shares and that Participant is not relying on the Company for any tax advice. Participant is relying solely on such advisors and not on any statements or representations of the Company or any of its agents. Participant understands that Participant (and not the Company) shall be responsible for Participant's tax liability that may arise as a result of this investment or the transactions contemplated by this Agreement.

3. Restrictive Legends and Stop-Transfer Orders.

3.1 Legends. Participant understands and agrees that the Company shall cause any certificates issued evidencing the Shares to have the legends set forth below or legends substantially equivalent thereto, together with any other legends that may be required by state or federal securities laws:

THE SHARES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED ("ACT"), NOR HAVE THEY BEEN REGISTERED OR QUALIFIED UNDER THE SECURITIES LAWS OF ANY STATE. NO TRANSFER OF SUCH SECURITIES WILL BE PERMITTED UNLESS A REGISTRATION STATEMENT UNDER THE ACT IS IN EFFECT AS TO SUCH TRANSFER, THE TRANSFER IS MADE IN ACCORDANCE WITH RULE 144 UNDER THE ACT, OR IN THE OPINION OF COUNSEL (WHICH MAY BE COUNSEL FOR THE COMPANY) REGISTRATION UNDER THE ACT IS UNNECESSARY IN ORDER FOR SUCH TRANSFER TO COMPLY WITH THE ACT AND WITH APPLICABLE STATE SECURITIES LAWS.

THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN RESTRICTIONS ON TRANSFER AND A RIGHT OF FIRST REFUSAL HELD BY THE ISSUER OR ITS ASSIGNEE(S) AS SET FORTH IN THE PLAN PURSUANT TO WHICH THESE SHARES WERE ISSUED, A COPY OF WHICH MAY BE OBTAINED AT THE PRINCIPAL OFFICE OF THE ISSUER. SUCH TRANSFER RESTRICTIONS AND RIGHT OF FIRST REFUSAL ARE BINDING ON TRANSFEREES OF THESE SHARES.

3.2 Participant agrees that, in order to ensure compliance with the restrictions referred to herein, the Company may issue appropriate "stop transfer" instructions to its transfer agent, if any, and that, if the Company transfers its own securities, it may make appropriate notations to the same effect in its own records.

3.3 The Company shall not be required (i) to transfer on its books any Shares that have been sold or otherwise transferred in violation of any of the provisions of this Agreement or (ii) to treat as owner of such Shares or to accord the right to vote or pay dividends to any purchaser or other transferee to whom such Shares shall have been so transferred.

3.4 To the extent the Shares are issued in uncertificated form, this Section 3 provides the Participant with notice that the Shares are subject to the aforementioned restrictions in satisfaction of the notice requirement set forth in Section 151(f) of the Delaware General Corporation Law.

4. Notices. Any notice required or permitted hereunder shall be given in accordance with the provisions set forth in Section 4.2 of the Option Agreement.

5. Lock-Up Period. Participant shall not offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any Common Stock (or other securities) of the Company or enter into any swap, hedging or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of any Common Stock (or other securities) of the Company held by Participant (other than those included in the registration) for a period specified by the representative of the underwriters of Common Stock (or other securities) of the Company not to exceed 180 days following the effective date of any registration statement of the Company filed under the Securities Act (or such other period as may be requested by the Company or the underwriters to accommodate regulatory restrictions on (i) the publication or other distribution of research reports and (ii) analyst recommendations and opinions, including, but not limited to, the restrictions contained in NASD Rule 2711(f)(4) or NYSE Rule 472(f)(4), or any successor provisions or amendments thereto).

Participant agrees to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriter which are consistent with the foregoing or which are necessary to give further effect thereto. In addition, if requested by the Company or the representative of the underwriters of Common Stock (or other securities) of the Company, Participant shall provide, within ten days of such request, such information as may be required by the Company or such representative in connection with the completion of any public offering of the Company's securities pursuant to a registration statement filed under the Securities Act. The obligations described in this Section 5 shall not apply to a registration relating solely to employee benefit plans on Form S-1 or Form S-8 or similar forms that may be promulgated in the future, or a registration relating solely to a Securities and Exchange Commission Rule 145 transaction on Form S-4 or similar forms that may be promulgated in the future. The Company may impose stop-transfer instructions with respect to the shares of Common Stock (or other securities) subject to the foregoing restriction until the end of said one hundred and eighty (180) day (or other) period. Participant agrees that any transferee of the Option or shares acquired pursuant to the Option shall be bound by this Section 5.

6. Further Instruments. Participant hereby agrees to execute such further instruments, including, without limitation, the Investment Representation Statement in the form attached hereto as Exhibit B-1, and to take such further action as the Company determines are reasonably necessary to carry out the purposes and intent of this Agreement.

7. Entire Agreement. The Plan, the Investment Representation Statement in the form attached hereto as Exhibit B-1, the Option Agreement and any written employment agreement (including an offer letter) between Participant and the Company providing for acceleration of vesting of equity awards upon certain events are incorporated herein by reference. This Agreement, the Plan, the Investment Representation Statement in the form attached hereto as Exhibit B-1, the Option Agreement and any written employment agreement (including an offer letter) between Participant and the Company providing for acceleration of vesting of equity awards upon certain events constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof.

ACCEPTED BY:
SANA BIOTECHNOLOGY, INC.

By: _____
Print Name: _____

SUBMITTED BY
PARTICIPANT:

By: _____
Print Name: _____
Address: _____
_____

Exhibit B-1

TO EXERCISE NOTICE

INVESTMENT REPRESENTATION STATEMENT

PARTICIPANT	:	
COMPANY	:	SANA BIOTECHNOLOGY, INC.
SECURITY	:	COMMON STOCK
AMOUNT	:	
DATE	:	

In connection with the purchase of the above-listed shares of Common Stock (the "Securities") of Sana Biotechnology, Inc. (the "Company"), the undersigned ("Participant") represents to the Company the following:

1. Participant is aware of the Company's business affairs and financial condition and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Securities. Participant is acquiring these Securities for investment for Participant's own account only and not with a view to, or for resale in connection with, any "distribution" thereof within the meaning of the United States Securities Act of 1933, as amended (the "Securities Act").

2. Participant acknowledges and understands that the Securities constitute "restricted securities" under the Securities Act and have not been registered under the Securities Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of Participant's investment intent as expressed herein. In this connection, Participant understands that, in the view of the United States Securities and Exchange Commission, the statutory basis for such exemption may be unavailable if Participant's representation was predicated solely upon a present intention to hold these Securities for the minimum capital gains period specified under tax statutes, for a deferred sale, for or until an increase or decrease in the market price of the Securities, or for a period of one year or any other fixed period in the future. Participant further understands that the Securities must be held indefinitely unless they are subsequently registered under the Securities Act or an exemption from such registration is available. Participant further acknowledges and understands that the Company is under no obligation to register the Securities. Participant understands that any certificate evidencing the Securities will be imprinted with a legend which prohibits the transfer of the Securities unless they are registered or such registration is not required in the opinion of counsel satisfactory to the Company and any other legend required under applicable securities laws or agreements.

3. Participant is familiar with the provisions of Rule 701 and Rule 144, each promulgated under the Securities Act, which, in substance, permit limited public resale of "restricted securities" acquired, directly or indirectly from the issuer thereof, in a non-public offering subject to the satisfaction of certain conditions. Rule 701 provides that if the issuer qualifies under Rule 701 at the time of the grant of the Option to Participant, the exercise will be exempt from registration under the Securities Act. In the event the Company becomes subject to the reporting requirements of Section 13 or 15(d) of the United States Securities Exchange Act of 1934, ninety (90) days thereafter (or such longer period as any market stand-off agreement may require) the Securities exempt under Rule 701 may under present law be resold, subject to the satisfaction of certain of the conditions specified by Rule 144, including: (1) the resale being made through a broker in an unsolicited "broker's transaction" or in transactions directly with a market maker (as said term is defined under the United States Securities Exchange Act of 1934); and, in the case of an affiliate, (2) the availability of certain public information about the Company, (3) the amount of Securities being sold during any three (3) month period not exceeding the limitations specified in Rule 144(e), and (4) the timely filing of a Form 144, if applicable.

In the event that the Company does not qualify under Rule 701 at the time of grant of the Option, then the Securities may be resold in certain limited circumstances subject to the provisions of Rule 144, which, effective as of February 15, 2008, requires the resale to occur not less than six months, or, in the event the Company is not subject to the reporting requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, not less than one year, after the later of the date the Securities were sold by the Company or the date the Securities were sold by an affiliate of the Company, within the meaning of Rule 144; and, in the case of acquisition of the Securities by an affiliate, the satisfaction of the conditions set forth in sections (1), (2), (3) and (4) of the paragraph immediately above or, in the case of a non-affiliate who subsequently hold the Securities less than one year, the satisfaction of the conditions set forth in section (2) of the paragraph immediately above.

4. Participant further understands that in the event all of the applicable requirements of Rule 701 or 144 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption will be required; and that, notwithstanding the fact that Rules 144 and 701 are not exclusive, the Staff of the United States Securities and Exchange Commission has expressed its opinion that persons proposing to sell private placement securities other than in a registered offering and otherwise than pursuant to Rules 144 or 701 will have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales, and that such persons and their respective brokers who participate in such transactions do so at their own risk. Participant understands that no assurances can be given that any such other registration exemption will be available in such event.

Signature of Participant:

_____

Date: _____, _____

Exhibit 10.6

SANA BIOTECHNOLOGY, INC.
1616 Eastlake Avenue East
Seattle, Washington 98102

September 24, 2018

Steven D. Harr, M.D.
715 McGilvra Ave E
Seattle, WA 98112

Re: Employment Terms

Dear Steve:

Sana Biotechnology, Inc. (the "Company"), is pleased to offer you fulltime employment in the exempt position of Chief Executive Officer, effective as of September 4, 2018 (the date you actually commence employment, your "Commencement Date"), in which you will be responsible for such duties as are normally associated with such position or as otherwise determined by the Board of Directors of the Company (the "Board"). You will report directly to the Board, and will be initially headquartered in our offices located at the address in our letterhead, or such other location as the Company may designate, except for such travel as may be necessary to fulfill your responsibilities. While employed as Chief Executive Officer, you will also serve as a member of the Board. In the course of your employment with Company, you will be subject to and required to comply with all company policies, and applicable laws and regulations.

You will be paid a base salary at the monthly rate of $41,666.67 (subject to required tax withholding and other authorized deductions). Your base salary will be payable in accordance with the Company's standard payroll policies and subject to adjustment pursuant to the Company's policies as in effect from time to time.

In addition to your base salary, you will be eligible for an annual cash bonus, at the discretion of the Board. Your target annual bonus shall be 50% of your base salary, but the actual amount of your annual bonus may be more or less (and may equal zero). Any annual bonus awarded to you shall be paid within two and a half months following the year to which the annual bonus relates and will be contingent upon your continued employment through the applicable payment date. You hereby acknowledge and agree that nothing contained herein confers upon you any right to an annual bonus in any year, and that whether the Company pays you an annual bonus and the amount of any such annual bonus will be determined by the Company in its sole discretion.

On July 27, 2018, the Company issued you 2,730 shares of the Company's common stock (the "Restricted Shares"), which, pursuant to a Restricted Stock Purchase Agreement you entered into with the Company, became subject to a risk of forfeiture in the event you terminate employment with the Company. As of the Commencement Date, 12.5% of the total number of Restricted Shares will vest, and the risk of forfeiture thereon lapse. On each monthly anniversary

of the Commencement Date thereafter, 1/48th of the remaining 87.5% of the total number of Restricted Shares shall vest, and the risk of forfeiture thereon shall lapse, subject to your continued provision of services to the Company through the applicable vesting date, such that, assuming continued services, the Restricted Shares shall be fully vested and no longer subject to a risk of forfeiture on the fourth anniversary of the Commencement Date. Notwithstanding the foregoing, upon a Change in Control, and provided that you remain an employee of the Company through the closing date of such Change in Control, the vesting of 75% of the then-unvested Restricted Shares shall accelerate. It is the intention of the parties to this letter that these Restricted Shares, together with future equity awards granted to you, will result in you holding Company common stock or options to purchase Company common stock that together represent ownership, or the right to purchase, an aggregate of 4% to 5% of the fully diluted capitalization of the Company at the time of an initial public offering of the Company's common stock.

As soon as administratively practicable following the closing of the Company's Series A and B Preferred Stock financings, if your ownership percentage (considering the aggregate of any options to purchase shares of Company common stock, restricted shares of Company common stock (including the Restricted Shares) or other shares or rights to purchase Company common stock then held by you but, excluding for this purpose, any shares of the Company's Preferred Stock purchased by you (your "Existing Holdings")) of the fully-diluted stock of the Company (inclusive of shares available for issuance as part of the Company's 2018 Equity Incentive Plan but excluding any Preferred Stock purchased by you) is less than 5.25%, the Board will grant you an equity award (the "Top-Up Award") such that your ownership percentage of the Company on a fully-diluted basis (inclusive of shares available for issuance as part of the Company's 2018 Equity Incentive Plan but excluding any Preferred Stock purchased by you) including your Existing Holdings and the Top-Up Award equals no less than 5.25%. The Board will make a determination at that time of such grant(s), in good faith, as to whether the Top-Up Award will be in the form of a restricted stock award or an option to purchase common stock ("Top-Up Option"). Any Top-Up Option will have an exercise price per share equal to the per share fair market value of the Company's common stock on the date of grant, as determined by the Board. The Top-Up Award will vest (and become exercisable), or, if applicable, the risk of forfeiture shall lapse, in respect of 25% of the total number of shares underlying the Top-Up Award on the first anniversary of the grant date and 1/48th of the total number of shares initially underlying the Top-Up Award on each monthly anniversary thereafter, subject to your continued provision of services to the Company through the applicable vesting date. Each Top-Up Award will otherwise be subject to the 2018 Equity Incentive Plan and an equity award agreement to be entered into between you and the Company.

You will be eligible to receive future stock options and other equity awards in the discretion of the Board.

You will be eligible to participate in all of the employee benefits and benefit plans that the Company generally makes available to its regular fulltime employees. You will be eligible for paid time off, vacation and/or paid sick leave in accordance with applicable law and Company policy.

The Company requires that, as a full-time employee, you devote your full business time, attention, skill, and efforts to the tasks and duties of your position as assigned by the Company. If you wish to request consent to provide services (for any or no form of compensation) to any other person or business entity while employed by the Company, please discuss that with me in advance of accepting another position.

As a condition of employment, you will be required (1) to sign and comply with an At-Will Employment Agreement, a copy of which is attached hereto as Exhibit A, which, among other things, prohibits unauthorized use or disclosure of Company proprietary information; (2) to sign and return a satisfactory I-9 Immigration form attached hereto as Exhibit B and provide sufficient documentation establishing your employment eligibility in the United States of America (enclosed is a list of acceptable INS Form I-9 documentation); and (3) to provide satisfactory proof of your identity as required by U.S. law.

By signing below, you represent that your performance of services to the Company will not violate any duty which you may have to any other person or entity (such as a present or former employer), including obligations concerning providing services (whether or not competitive) to others, confidentiality of proprietary information and assignment of inventions, ideas, patents or copyrights, and you agree that you will not do anything in the performance of services hereunder that would violate any such duty.

Notwithstanding any of the above, your employment with the Company is "at will." This means that it is not for any specified period of time and can be terminated by you or by the Company at any time, with or without advance notice, and for any or no particular reason or cause. It also means that your job duties, title and responsibility and reporting level, work schedule, compensation and benefits, as well as the Company's personnel policies and procedures, may be changed with prospective effect, with or without notice, at any time in the sole discretion of the Company.

If your employment with the Company is terminated as a result of your death, your estate or beneficiary shall be entitled to any unpaid annual bonus for a year prior to the year of termination and a pro rata annual bonus for the year of termination, in each case, to be paid as soon as administratively practicable following the date of such termination.

Without limiting the foregoing, if at any time other than during a Change in Control Period (as defined below) your employment with the Company is terminated by the Company without Cause (other than due to your death or disability) or you resign for Good Reason (each, as defined herein) and you deliver to the Company a general release of all claims against the Company and its affiliates in a form reasonably acceptable to the Company (a "Release") that becomes effective and irrevocable within 60 days following such termination of employment, then you shall be entitled to receive (i) continuing payments of severance pay (less applicable withholding taxes) for a period of twelve (12) months to be paid periodically in accordance with the Company's normal payroll policies at a rate equal to the sum of your monthly base salary rate and one-twelfth of your target annual bonus, in each case as in effect immediately prior to your termination (but without taking into account any reduction of your base salary or target annual bonus in breach of this letter), less applicable withholdings, with such installments to commence on the first payroll date following the date the Release becomes effective and irrevocable, with the first installment to include any amount that would have been paid had the Release been effective and irrevocable on your termination date and (ii) direct payment or reimbursement for premiums for continued health, vision and dental benefit coverage through COBRA for you, your spouse and dependents at the same level of coverage as in effect for you on the day immediately preceding the day of termination of employment for a period ending on the earlier of (a) twelve (12) months after the date of termination of employment and (b) the date you are eligible to receive health, vision and dental benefits through a new employer. If your employment with the Company is terminated for any reason except for Cause, or if you terminate your employment for Good Reason, you shall be entitled to receive any earned but unpaid annual bonus for the year prior to the year of termination and a pro rata annual bonus for the year of termination, payable in accordance with the

Company's normal payment practice for such annual bonuses. In addition, concurrent with the termination of your employment with the Company, you may (at the Company's sole discretion) be provided the opportunity to enter into a consulting agreement (the "Consulting Agreement") with the Company with a twelve (12) month term (the "Consulting Term," and the last day of the Consulting Term, the "Final Consulting Date"), which would: (x) provide for annual consulting fees equal to your annual salary as in effect on the date of your termination of your employment, (y) require that you provide, or be available to provide, services to the Company in your areas of expertise on an exclusive basis within the Company's industry during the Consulting Term, and (z) provide that the vesting of each equity award held by you will be accelerated in respect of that number of shares of Company common stock that would have vested had you remained employed for the twelve (12) months immediately following your termination date and (iv) each stock option held by you that is vested on your termination date (after giving effect to any accelerated vesting provided in connection with your termination of employment) will remain exercisable until the earlier of 90 days after the Final Consulting Date or the original expiration date thereof. All other terms and conditions of the Consulting Agreement will be mutually agreed between you and the Company.

Further notwithstanding the foregoing, if at any time during a Change in Control Period your employment with the Company is terminated by the Company without Cause (other than due to your death or disability) or you resign for Good Reason and you deliver to the Company a Release that becomes effective and irrevocable within 60 days following such termination of employment, then, in lieu of the benefits provided in the preceding paragraph, you shall be entitled to receive (i) your base salary at the rate in effect immediately prior to your date of termination during the period of time commencing on the termination date and ending on the eighteen (18) month anniversary of your date of termination plus 1.5 times your target annual bonus, paid in a single cash lump sum, less applicable withholdings, on the first payroll date following the date the Release becomes effective and irrevocable, with the first installment to include any amount that would have been paid had the Release been effective and irrevocable on your termination date, (ii) direct payment or reimbursement for premiums for continued health, vision and dental benefit coverage through COBRA for you, your spouse and dependents at the same level of coverage as in effect for you on the day immediately preceding the day of termination of employment for a period ending on the earlier of (a) eighteen (18) months after the date of termination of employment and (b) the date you are eligible to receive health, vision and dental benefits through a new employer, (iii) the vesting of each equity award held by you will be accelerated in respect of all of the shares of Company common stock subject thereto and (iv) each stock option held by you that is vested on your termination date (after giving effect to any accelerated vesting provided in connection with your termination of employment) will remain exercisable until the earlier of the 90 days after your termination date or the original expiration date thereof.

For purposes of this offer letter, the term "Cause" means: (i) a willful act of dishonesty made by you in connection with your responsibilities as an employee, (ii) your conviction of, or plea of *nolo contendere* to, a felony or any crime involving fraud, embezzlement, or a material violation of federal or state law by you, any of which that the Board reasonably determines in good faith has had or will have a material detrimental effect on the Company's reputation or business;, (iii) your willful and material unauthorized use or disclosure of any proprietary information or trade secrets of the Company or any other party to whom you owe an obligation of nondisclosure as a result of your relationship with the Company; (iv) your willful material breach of any obligations under any written agreement or covenant with the Company; or (v) your continued substantial failure to perform your employment duties (other than as a result of your physical or mental incapacity). No termination for Cause under (iv) or (v) shall be effectuated until after you have received a written demand of performance from the Board that specifically sets forth the factual basis for the Board's determination that you have not substantially performed your duties and have failed to cure such non-performance to the Board's reasonable satisfaction within thirty (30) business days after receiving such notice. For purposes of this definition, no act or failure to act shall be considered willful unless it is done in bad faith and without reasonable intent that the act or failure to act was in the best interest of the Company. Any act, or failure to act, based upon authority or instructions given to you pursuant to a resolution duly adopted by the Board or based on the advice of counsel for the Company will be conclusively presumed to be done or omitted to be done by you in good faith and in the best interest of the Company.

For purposes of this offer letter, the term "Good Reason" means your resignation within 30 days following expiration of any Cure Period (as defined below) following the occurrence of one or more of the following, without your written consent: (i) a material reduction in your base salary or target annual bonus; (ii) a material diminution of your title, duties, responsibilities or reporting lines; (iii) a change in the location of your employment of more than 50 miles; (iv) failure of the Company to timely grant the Restricted Shares; or (v) you are not elected or re-elected as, or otherwise ceasing to be a member of the Board.. No event will be considered Good Reason unless (a) you have given written notice to the Company of your intention to terminate your employment for Good Reason, describing the grounds for such action, no later than 90 days after the first occurrence of such circumstances, (b) you have provided the Company with at least 30 days in which to cure the circumstances (the "Cure Period"), and (c) if the Company is not successful in curing the circumstance, you end your employment within thirty days after the end of the Cure Period.

For purposes of this offer letter, the term "Change in Control" shall have the meaning ascribed such term in the Company's 2018 Equity Incentive Plan, provided, that such event constitutes a "change in control event" within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended (the "Code").

For purposes of this offer letter, the term "Change in Control Period" shall mean the period commencing three (3) months prior to a Change in Control and ending twelve (12) months after the Change in Control.

No amount deemed deferred compensation subject to Section 409A of the Code shall be payable pursuant to this offer letter unless your termination of employment constitutes a "separation from service" with the Company within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended, and the Department of Treasury regulations and other guidance promulgated thereunder. For purposes of Section 409A of the Code (including, without limitation, for purposes of Treasury Regulation Section 1.409A-2(b)(2)(iii)), your right to receive any installment payments under this offer letter shall be treated as a right to receive a series of separate payments and, accordingly, each such installment payment shall at all times be considered a separate and distinct payment. To the extent that any reimbursements payable pursuant to this offer letter are subject to the provisions of Section 409A of the Code, any such reimbursements payable to you pursuant to this offer letter shall be paid to you no later than December 31 of the year following the year in which the expense was incurred, the amount of expenses reimbursed in one year shall not affect the amount eligible for reimbursement in any subsequent year, and your right to reimbursement under this offer letter will not be subject to liquidation or exchange for another benefit.

You are not required to seek other employment or otherwise mitigate the value of any severance benefits contemplated by this offer letter, nor will any such benefits be reduced by any earnings or benefits that you may receive from any other source, except as otherwise expressly set forth above with respect to continued group life, health, vision and dental benefits.

In addition to any indemnification provided by the Company's organizational documents, the Company will enter into an indemnification agreement with you as an officer in the form used for other officers.

Notwithstanding anything to the contrary contained in this letter, to the extent that any of the payments and benefits provided for under this letter or any other agreement or arrangement between the Company and you (collectively, the "Payments") (i) constitute a "parachute payment" within the meaning of Section 280G of the Code and (ii) but for this paragraph, would be subject to the excise tax imposed by Section 4999 of the Code, then the Payments shall be reduced to the extent necessary so that no portion of such Payments retained by you shall be subject to excise tax under Section 4999 of the Code; provided, however, such reduction shall only occur if after taking into account the applicable federal, state and local income taxes and the excise tax imposed by Section 4999, such reduction results in your receipt on an after-tax basis, of the greatest amount of benefits under this letter, notwithstanding that all or some portion of such benefits may be taxable under Section 4999 of the Code. In the event of a determination that such reduction is to take place, reduction shall occur in the following order: first, reduction of cash payments, which shall occur in reverse chronological order such that the cash payment owed on the latest date following the occurrence of the event triggering such excise tax will be the first cash payment to be reduced; second, cancellation of accelerated vesting of equity awards, which shall occur in the reverse order of the date of grant for such stock awards (i.e., the vesting of the most recently granted stock awards will be reduced first); and third, reduction of employee benefits, which shall occur in reverse chronological order such that the benefit owed on the latest date following the occurrence of the event triggering such excise tax will be the first benefit to be reduced. If two or more equity awards are granted on the same date, each award will be reduced on a pro-rata basis. Notwithstanding the foregoing, to the extent the Company submits any payment or benefit payable to you under this letter or otherwise to the Company's stockholders for approval in accordance with Treasury Reg. Section 1.280G-1 Q&A 7, the foregoing provisions shall not apply following such submission and such payments and benefits will be treated in accordance with the results of such vote, except that any reduction in, or waiver of, such payments or benefits required by such vote will be applied without any application of discretion by you and in the order prescribed by this paragraph. In no event shall you have any discretion with respect to the ordering of payment reductions. Unless you and the Company otherwise agree in writing, any determination required under this paragraph shall be made in writing by the Company's independent public accountants (the "Accountants"), whose determination shall be conclusive and binding upon you and the Company for all purposes. For purposes of making the calculations required by this paragraph, the Accountants may make reasonable assumptions and approximations concerning applicable taxes and may rely in reasonable, good faith interpretations concerning the application of Sections 280G and 4999 of the Code. The Company and you shall furnish to the Accountants such information and documents as the Accountants may reasonably request in order to make a determination under this paragraph. The Company shall bear all costs the Accountants may reasonably incur in connection with any calculations contemplated by this paragraph. If any Payments would be subject to excise tax imposed by Section 4999 but for this paragraph, but would not be subject to such excise tax if the stockholder approval requirements of Section 280G(b)(5) of the Code are satisfied, the Company shall use its reasonable best efforts to cause such payments to be submitted for such approval prior to the event giving rise to such payments. If the limitation set forth in this paragraph is applied to reduce an amount payable to you, and the Internal Revenue Service successfully asserts that, despite the reduction, you have nonetheless received payments which are in excess of the maximum amount that could have been paid to you without being subjected to any excise tax, then, unless it would be unlawful for the Company to make such a loan or similar extension of credit to you, you may repay such excess amount to the Company as though such amount constitutes a loan to you made at the date of payment of such excess amount, bearing interest at 120% of the applicable federal rate (as determined under Section 1274(d) of the Code in respect of such loan).

If you accept this offer, this letter and the At-Will Employment Agreement shall constitute the complete agreement between you and Company with respect to the terms and conditions of your employment. Any prior or contemporaneous representations (whether oral or written) not contained in this letter or the At-Will Employment Agreement or contrary to those contained in this letter or the At-Will Employment Agreement, that may have been made to you are expressly cancelled and superseded by this offer.

This offer letter shall be interpreted and construed in accordance with the laws of the State of Washington without regard to any conflicts of laws principles. While other terms and conditions of your employment may change in the future, the at-will nature of your employment may not be changed, except in a subsequent letter or written agreement, signed by you and the Chief Financial Officer of the Company.

(*Signature Page Follows*)

Please sign and date this letter and the At-Will Employment Agreement, and return it to me by email at nate.hardy@sana.com by September 28, 2018 if you wish to accept employment at the Company under the terms described above, after which time this offer of employment will expire. If you accept our offer, we would like you to commence your employment with us as soon as practicable.

If you have any questions, regarding this letter or employment with the Company, please feel free to contact me by phone at 805-551-4137 or by email at nate.hardy@sana.com. We look forward to your favorable reply and to a productive and enjoyable work relationship.

Sincerely,

SANA BIOTECHNOLOGY, INC.

/s/ Paul Thurk
Paul Thurk
Member of the Board of Directors

Accepted by:

/s/ Steven D. Harr, M.D.
Steven D. Harr, M.D.

September 27, 2018
Date:

SANA BIOTECHNOLOGY, INC.
AT-WILL EMPLOYEE AGREEMENT

As a condition of my employment with Sana Biotechnology, Inc. (the "**Company**"), and in consideration of my employment with the Company and my receipt of the compensation paid to me by the Company now and in the future, I agree to the following:

1. AT-WILL EMPLOYMENT

MY EMPLOYMENT WITH THE COMPANY IS FOR AN UNSPECIFIED DURATION AND CONSTITUTES "AT-WILL" EMPLOYMENT. ANY REPRESENTATION TO THE CONTRARY IS UNAUTHORIZED AND NOT VALID UNLESS OBTAINED IN WRITING AND SIGNED BY THE PRESIDENT OR CEO OF COMPANY. THIS EMPLOYMENT RELATIONSHIP MAY BE TERMINATED AT ANY TIME, WITH OR WITHOUT GOOD CAUSE OR FOR ANY OR NO CAUSE, AT EITHER MY OPTION OR THE COMPANY'S OPTION, WITH OR WITHOUT NOTICE. THE AT-WILL NATURE OF MY EMPLOYMENT ALSO MEANS THAT I CAN BE TRANSFERRED OR DEMOTED, AND MY JOB TITLE, COMPENSATION, BENEFITS AND OTHER TERMS AND CONDITIONS OF EMPLOYMENT CAN BE REDUCED, WITHOUT CAUSE. NOTHING IN AN EMPLOYEE HANDBOOK OR OTHER POLICY OF THE COMPANY WILL BE CONSTRUED AS CHANGING MY AT-WILL EMPLOYMENT STATUS. THE COMPANY MAY MODIFY JOB TITLES, SALARIES, AND BENEFITS FROM TIME TO TIME AS IT DEEMS NECESSARY.

2. CONFIDENTIAL INFORMATION

2.1 Definition. "Confidential Information" means any non-public information that relates to the actual or anticipated business, research, or development of the Company and any proprietary information, technical data, trade secrets, and know-how of the Company, disclosed to me by the Company, directly or indirectly, in writing, orally, or by inspection or observation of tangible items. Confidential Information includes both Information disclosed by the Company to me, and information developed or learned by me during the course of my employment with the Company. Confidential Information includes, but is not limited to, Company research, product plans, products, services, customers, customer lists, markets, software, developments, inventions, processes, formulas, technology, designs, drawings, engineering, hardware configuration information, marketing, finances, and other business information. Confidential Information will not include any information that (a) was publicly known and made generally available in the public domain prior to the time the Company disclosed the information to me, (b) became publicly known and made generally available, after disclosure to me by the Company, through no wrongful action or inaction by me or by others who were under confidentiality obligations, or (c) was in my rightful possession, without confidentiality restrictions, at the time of disclosure by the Company, as shown by my files and records.

2.2 Use and Non-Use. At all times during the term of my employment and after my employment ends, I will hold all Confidential Information in strictest confidence and not use it for any purpose except for the benefit of the Company to fulfill my employment obligations. I will not disclose Confidential Information to any third party without the prior written authorization of the president, CEO, or the Board of Directors of the Company. Confidential Information will remain the sole property of the Company. I will take all reasonable precautions to prevent any unauthorized use or disclosure of the Confidential Information. Prior to disclosure when compelled by applicable law, I will provide written notice to the president, CEO, and general counsel of the Company, as applicable. I understand that my unauthorized use or disclosure of Confidential Information during my employment will lead to disciplinary action, up to and including immediate termination and legal action by the Company. I understand that my obligations under this Section 2.2 will continue after termination of my employment.

If I become compelled by law, regulation (including without limitation the rules of any applicable securities exchange), court order, or other governmental authority to disclose the Confidential Information, I shall, to the extent possible and permissible under applicable law, first give the Company prompt notice. I agree to cooperate reasonably with the Company in any proceeding to obtain a protective order or other remedy. If such protective order or other remedy is not obtained, I shall only disclose that portion of such Confidential Information required to be disclosed, in the opinion of my legal counsel. I shall request that confidential treatment be accorded such Confidential Information, where available. Compulsory disclosures made pursuant to this section shall not relieve me of my obligations of confidentiality and non-use with respect to non-compulsory disclosures. I understand that nothing herein is intended to or shall prevent me from communicating directly with, cooperating with, or providing information to, any federal, state or local government regulator, including, but not limited to, the U.S. Securities and Exchange Commission, the U.S. Commodity Futures Trading Commission, or the U.S. Department of Justice. I shall promptly notify my supervisor or any officer of the Company if I learn of any possible unauthorized use or disclosure of Confidential Information and shall cooperate fully with the Company to enforce its rights in such information.

2.3 Former Employer Confidential Information. I will not, during my employment with the Company, improperly use, disclose, or induce the Company to use any proprietary information or trade secrets of any former or concurrent employer or other person or entity with which I have an obligation to keep information in confidence. Furthermore, I will not bring onto the premises of the Company or transfer onto the Company's technology systems any unpublished document or proprietary information belonging to any third party unless consented to in writing by both the Company and such third party.

2.4 Third Party Information. I recognize that the Company has received and in the future will receive from third parties their confidential or proprietary information subject to a duty on the Company's part to maintain the confidentiality of this information and to use it only for certain limited purposes. I will hold all of this confidential or proprietary information in the strictest confidence and not disclose it to any third party or use it except as necessary in carrying out my work for the Company consistent with the Company's agreements with these third parties. I understand that my unauthorized use or disclosure of third parties' confidential or proprietary information during my employment will lead to disciplinary action, up to and including immediate termination and legal action by the Company.

2.5 Defend Trade Secrets Act Notice of Immunity Rights. I acknowledge that the Company has provided me with the following notice of immunity rights in compliance with the requirements of the Defend Trade Secrets Act: (a) I shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of Confidential Information that is made in confidence to a Federal, State, or local government official or to an attorney solely for the purpose of reporting or investigating a suspected violation of law, (b) I shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of Confidential Information that is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal and (c) if I file a lawsuit for retaliation by the Company for reporting a suspected violation of law, I may disclose the Confidential Information to my attorney and use the Confidential Information in the court proceeding, if I file any document containing the Confidential Information under seal, and do not disclose the Confidential Information, except pursuant to court order.

3. INVENTIONS

3.1 Inventions Defined. "**Inventions**" means inventions, original works of authorship, developments, concepts, improvements, designs, discoveries, ideas, know-how, trademarks, and trade secrets, whether or not patentable or registrable under copyright or similar laws, that I may solely or jointly author, conceive, develop, or reduce to practice.

3.2 Assignment of Inventions and Works Made for Hire. I will promptly make a full written disclosure to the Company of any and all Inventions that I create within the scope of and during the period of my employment with the Company (including without limitation during my off-duty hours) ("**Company Inventions**"). I will hold in trust for the sole right and benefit of the Company, and I hereby assign to the Company or its designee, all of my right, title, and interest (including without limitation all related intellectual property rights and the right to sue and collect payment for past, present, and future infringement) in, all Company Inventions. In addition, all original works of authorship that are made by me (solely or jointly with others) within the scope of and during the period of my employment with the Company (including without limitation during my off-duty hours) and that are protectable by copyright are "works made for hire," as that term is defined in the United States Copyright Act, and in accordance, the Company will be considered the author of these works.

3.3 Exception to Assignments. The obligations to assign Inventions set forth in Section 3.2 apply with respect to all Company Inventions (a) whether or not such Company Inventions are conceived, made, developed or worked on by me during my regular hours of employment with the Company, (b) whether or not the Company Invention was made at the suggestion of the Company, (c) whether or not the Invention was reduced to drawings, written description, documentation, models or other tangible form, and (d) whether or not the Company Invention is related to the general line of business engaged in by the Company; but do not apply to Inventions that (i) I develop entirely on my own time or after the date of this Agreement without using the Company's equipment, supplies, facilities or Confidential Information, (ii) do not relate to the Company's business, or actual or demonstrably anticipated research or development of the Company at the time of conception or reduction to practice of the Invention, and (iii) do not result from and are not related to any work performed by me for the Company.

I hereby acknowledge and agree that the Company has notified me that, if I reside in the state of Washington, assignments provided for in Section 3.2 do not apply to any Invention that qualifies fully for exemption from assignment under the provisions of the Revised Code of Washington Section 49.44.140. ("**RCW 49.44.140**"), a copy of which is attached as **Exhibit D** of this Agreement. I further understand that, to the extent this Agreement shall be construed in accordance with the laws of any State that precludes a requirement in an employee agreement to assign certain classes of inventions made by an employee, Section 3.2 shall be interpreted not to apply to any Invention that a court rules and/or the Company agrees falls within such classes.

At the Company's request, I will promptly disclose to the Company all Inventions made during and after my employment to determine the status of the Company Invention under Sections 3.2 and 3.3. The Company may disclose such Company Inventions to the department of employment security. If applicable, at the time of disclosure of an Invention that I believe qualifies under Section 2870, RCW 49.44.140, or any similar law, I shall provide to the Company, in writing, evidence to substantiate the belief that such Invention qualifies under such law.

3.4 Inventions Retained and Licensed. I have attached to this Agreement, as **Exhibit A**, a list describing all Inventions that were made by me prior to my employment with the Company, that relate to the Company's proposed business, products, or research and development, and that are not assigned to the Company under this Agreement (collectively, "**Prior Inventions**"). If no list is attached or if no Prior Inventions are listed on **Exhibit A**, I represent that there are no Prior Inventions. Furthermore, I represent and warrant that the inclusion of any Prior Inventions from **Exhibit A** of this Agreement will not

materially affect my ability to perform all obligations under this Agreement. If, in the course of my employment with the Company, I incorporate into a Company product, process, or machine an Invention owned by me or in which I have an interest, then I hereby grant to the Company a nonexclusive, royalty-free, irrevocable, perpetual, transferrable, worldwide license (with right to sublicense through multiple tiers) to make, have made, modify, use, import, offer for sale, sell, reproduce, distribute, modify, adapt, prepare derivative works of, display, perform, and otherwise exploit the Invention without restriction of any kind.

3.5 Third Party Inventions. I will not incorporate any original work of authorship, development, concept, improvement, or trade secret owned, in whole or in part, by any third party, into any Company Invention without the Company's prior written permission.

3.6 Moral Rights. Any assignment to the Company of Company Inventions includes without limitation all rights of attribution, paternity, integrity, modification, disclosure, and withdrawal and any other rights throughout the world that may be known as or referred to as "moral rights," artist's rights," or the like (collectively, "**Moral Rights**"). To the extent that Moral Rights cannot be assigned under applicable law, I hereby waive and agree not to enforce any and all Moral Rights, including without limitation any limitation on subsequent modification, to the extent permitted under applicable law.

3.7 Marketing of Company Inventions. The decision whether or not to commercialize or market any Company Invention developed by me solely or jointly with others is within the Company's sole discretion and for the Company's sole benefit. Neither the Company nor any other entity will be required to pay me a royalty as a result of the Company's efforts to commercialize or market any Company Invention.

3.8 Inventions Assigned to the United States. I will assign to the United States government all of my right, title, and interest in and to all Company Inventions whenever the full title is required to be assigned to the United States government by a contract between the Company and the United States government or any of its agencies.

3.9 Maintenance of Records. I will keep and maintain adequate and current written records of all Company Inventions. These records will be in the form of notes, sketches, drawings, electronic files, laboratory notebooks, and any other format that may be specified by the Company. At all times, the records will be available to the Company, and remain the sole property of the Company.

3.10 Further Assurances. I will assist the Company or its designee, at the Company's expense, in every proper way to secure and protect the Company's rights in Company Inventions and any related copyrights, patents, mask work rights, or other intellectual property rights in any and all countries. I will disclose to the Company all pertinent information and data. I will execute all applications, specifications, oaths, assignments, and all other instruments that the Company deems necessary in order to apply for and obtain these rights and in order to deliver, assign, and convey to the Company, its successors, assigns, and nominees the sole and exclusive rights, title, and interest in and to Company Inventions, and any related copyrights, patents, mask work rights, or other intellectual property rights. I will testify in a suit or other proceeding relating to such Company Inventions and any rights relating thereto. My obligation to execute or cause to be executed, when it is in my power to do so, any instrument or papers will continue after the termination of this Agreement. If the Company is unable because of my mental or physical incapacity or for any other reason to secure my signature to apply for or to pursue any application for any United States or foreign patents or copyright registrations covering Company Inventions assigned to the Company as above, then I hereby irrevocably designate and appoint the Company and its duly authorized officers and agents as my agent and attorney in fact. Accordingly, the Company may act for and in my behalf to execute and file any applications and to do all other lawfully permitted acts to further the prosecution and issuance of patent or copyright registrations with the same legal force and effect as if executed by me.

4. NO CONFLICTING OBLIGATIONS

4.1 Current Obligations. During the term of my employment with the Company, I will not engage in any other employment, occupation, consulting, or other business activity directly relating to the business in which the Company is now involved, becomes involved, or has plans to become involved during the term of my employment. I will also not engage in any other activities that conflict with my obligations to the Company.

4.2 Prior Relationships. Without limiting Section 4.1, I represent that I have no other agreements, relationships or commitments to any other person or entity that conflict with my obligations to the Company under this Agreement or my ability to become employed and perform the services for which I am being hired by the Company. If I have signed a confidentiality agreement or similar type of agreement with any former employer or other entity, I will comply with the terms of any such agreement to the extent that its terms are lawful under applicable law. I represent and warrant that after undertaking a careful search (including without limitation searches of my computers, cell phones, electronic devices and documents), I have returned all property and confidential information belonging to all prior employers (or other third parties I have performed services for in accordance with the terms of my applicable agreement). Moreover, if the Company or any of its employees or agents is sued based on any obligation or agreement to which I am a party or am bound, I will indemnify the Company and its employees and agents for all verdicts, judgments, settlements, and other losses that result from any breach of my obligations under this Agreement, as well as any reasonable attorneys' fees and costs if the plaintiff is the prevailing party in such an action.

5. COMPLIANCE WITH COMPANY POLICIES AND USE OF COMPANY EQUIPMENT AND FACILITIES

I will comply with all Company policies, including but not limited to policies relating to the use of the Internet and the use of Company equipment and facilities. I will not use Company equipment or facilities for any purpose except to fulfill my employment obligations for the benefit of the Company. I will follow all laws and regulations applicable to the use of Company equipment and facilities and access to or use of others' computer or communication systems. I acknowledge that the Company will maintain sole ownership of all equipment and any data stored on the equipment. I understand and consent that the Company reserves the right to view and disclose without prior notice, for any purpose, any data stored on Company equipment or passing through the Company's network, including but not limited to electronic mail and data downloaded from the Internet. I understand that I am not permitted to add any unlicensed, unauthorized or non-compliant applications to the Company's technology systems and that I shall refrain from copying unlicensed software onto the Company's technology systems or using non-licensed software or web sites.

I acknowledge that I have no expectation of privacy either in information in transit through the Company network or stored on Company equipment, including without limitation computer, email, handheld device, telephone, or voicemail. All information, data, and messages created, received, sent, or stored in these systems are, at all times, the property of the Company. As such, the Company has the right to audit and search all such items and systems, without further notice to me, to ensure that the Company is licensed to use the software on the Company's devices in compliance with the Company's software licensing policies, to ensure compliance with the Company's policies, and for any other business-related purposes in the Company's sole discretion. I am aware that Company has or may acquire software and systems that are capable of monitoring and recording all network traffic to and from any computer I may use. The Company reserves the right to access, review, copy, and

delete any of the information, data, or messages accessed through these systems with or without notice to me. This includes, but is not limited to, all e-mail messages, website visits, internet usage, chat sessions, and all file transfers into and out of the Company's internal networks. The Company may review internet and technology systems activity and analyze usage patterns, and may choose to publicize this data to assure that technology systems are devoted to legitimate business purposes.

6. RETURNING COMPANY MATERIALS

Upon leaving the employ of the Company, or upon Company's request during my employment, I will deliver to the Company (and will not keep in my possession, recreate, or deliver to anyone else) any and all Confidential Information, devices, records, data, notes, reports, proposals, lists, correspondence, specifications, drawings blueprints, sketches, materials, equipment, Company credit cards, electronically-stored information and passwords to access such property, and other documents or property, or reproductions of these items developed by me pursuant to my employment with the Company or otherwise belonging to the Company, its successors, or assigns. In addition, I will deliver those records maintained pursuant to Section 3.9 to the Company. Notwithstanding the foregoing, I may retain a copy of my Outlook Contacts or comparable contacts database and any documents of a personal nature, including without limitation diaries, calendars and personal documents relating to my employment, compensation, taxes or expenses. I consent to an exit interview to confirm my compliance with this Section 6.

7. NOTIFICATION TO NEW EMPLOYER

If my employment with the Company ends for any reason or no reason, the Company may notify my new employer about my rights and obligations under this Agreement.

8. CONFLICT OF INTEREST GUIDELINES

I will diligently adhere to the "Conflict of Interest Guidelines." A copy of the Company's current Conflict of Interest Guidelines is attached to this Agreement as **Exhibit B**, but I understand that the Conflict of Interest Guidelines may be revised from time to time during my employment.

9. TERMINATION CERTIFICATION

If my employment with the Company ends for any reason or no reason, I will sign and deliver to the Company the "Termination Certification" attached to this Agreement as **Exhibit C**. I will keep the Company advised of my home and business address for three years after termination of my employment with the Company so that the Company can contact me regarding my continuing obligations under this Agreement.

10. NON-COMPETITION

10.1 Non-Competition. In order to protect Confidential Information, I will not, during the period of my employment with the Company, and, to the extent permitted under applicable law, for a period of 12 months thereafter, whether my termination is with or without good cause or for any or no cause, and whether my termination is effected by either the Company or me, directly or indirectly, for myself or any third party other than the Company:

(a) provide services of any kind for any business (within the Geographic Area, as defined below) in connection with the development, manufacture, marketing, or sale of any product or service that I worked on in any capacity or in connection with which I had access to Confidential Information at any time during my employment with the Company, if the business's product or service (i) competes with any product or service sold or provided by the Company, (ii) competes with any product or service intended to be sold or provided by the Company at the time of the termination of my employment with the Company, or (iii) competed with any product or service sold or provided by the Company at any time during my employment with the Company;

(b) solicit sales from any of the Company's customers for any product or service that (i) competes with any product or service sold or provided by the Company, (ii) competes with any product or service intended to be sold or provided by the Company at the time of the termination of my employment with the Company, or (iii) competed with any product or service sold or provided by the Company at any time during my employment with the Company;

(c) entice any vendor, consultant, collaborator, agent, or contractor of the Company to cease its business relationship with the Company or engage in any activity that would cause them to cease their business relationship with the Company; or

(d) solicit, induce, recruit, or encourage any of the Company's employees to leave their employment, or attempt to solicit, induce, recruit, encourage, or take away Company employees.

10.2 Geographic Area Definition. "**Geographic Area**" means anywhere in the world where the Company conducts business.

10.3 Severability. The covenants contained in this Section 10 will be construed as a series of separate covenants, one for each country, city, state, or similar subdivision in any Geographic Area. If, in any judicial proceeding, a court refuses to enforce any of these separate covenants (or any part of a covenant), then the unenforceable covenant (or part) will be eliminated from this Agreement to the extent necessary to permit the remaining separate covenants (or portions) to be enforced. In the event that the provisions of this section are deemed to exceed the time, geographic, or scope limitations permitted by law, then the provisions will be reformed to the maximum time, geographic, or scope limitations permitted by law.

10.4 Reasonableness. The nature of the Company's business is such that if I were to become employed by, or substantially involved in, the business of a competitor to the Company, it would be difficult not to rely on or use Confidential Information. Therefore, I enter into this Agreement to reduce the likelihood of disclosure of Confidential Information. I acknowledge that the limitations of time, geography, and scope of activity agreed to above are reasonable because, among other things, (a) the Company is engaged in a highly competitive industry, (b) I will have access to Confidential Information, including but not limited to the Company's trade secrets, know-how, plans, and strategy (and in particular, the competitive strategy of the Company), (c) in the event my employment with the Company ends, I will be able to obtain suitable and satisfactory employment in my chosen profession without violating this Agreement, (d) these limitations are necessary to protect Confidential Information, and the goodwill of the Company, and (e) these limitations will apply even if I am transferred or demoted, or my job title, compensation, benefits and other terms and conditions of employment are reduced.

11. COMPENSATION

All compensation for services rendered to third parties during the term of my employment with the Company, including without limitation equity or equity-type payments, and consulting or advisory fees, will be paid to the Company unless otherwise unanimously approved by the Board of Directors of the Company in writing.

12. REPRESENTATIONS

I will execute any proper oath or verify any proper document required to carry out the terms of this Agreement. I represent and warrant that my performance of all the terms of this Agreement will not breach any agreement to keep in confidence proprietary information acquired by me in confidence or in trust prior to my employment by the Company. I have not entered into, and I will not enter into, any oral or written agreement in conflict with this Agreement.

13. ARBITRATION AND EQUITABLE RELIEF

13.1 Arbitration. EXCEPT AS PROVIDED IN SECTION 13.4, ANY DISPUTE OR CONTROVERSY ARISING OUT OF, RELATING TO, OR CONCERNING ANY INTERPRETATION, CONSTRUCTION, PERFORMANCE, OR BREACH OF THIS AGREEMENT, WILL BE SETTLED BY

ARBITRATION TO BE HELD IN KING COUNTY, WASHINGTON, IN ACCORDANCE WITH THE EMPLOYMENT DISPUTE RESOLUTION RULES THEN IN EFFECT OF THE AMERICAN ARBITRATION ASSOCIATION ("**RULES**"). THE ARBITRATOR MAY GRANT INJUNCTIONS OR OTHER RELIEF IN A DISPUTE OR CONTROVERSY. THE DECISION OF THE ARBITRATOR WILL BE FINAL, CONCLUSIVE, AND BINDING ON THE PARTIES TO THE ARBITRATION. JUDGMENT MAY BE ENTERED ON THE ARBITRATOR'S DECISION IN ANY COURT HAVING JURISDICTION. THE COMPANY WILL PAY ALL ARBITRATION FEES, EXCEPT AN AMOUNT EQUAL TO THE FILING FEES I WOULD HAVE PAID HAD I FILED A COMPLAINT IN A COURT OF LAW. THE COMPANY AND I WILL EACH SEPARATELY PAY OUR COUNSEL FEES AND EXPENSES.

13.2 Waiver of Right to Jury Trial. THIS ARBITRATION CLAUSE CONSTITUTES A WAIVER OF MY RIGHT TO A JURY TRIAL AND RELATES TO THE RESOLUTION OF ALL DISPUTES RELATING TO ALL ASPECTS OF MY EMPLOYMENT RELATIONSHIP WITH THE COMPANY (EXCEPT AS PROVIDED IN SECTION 13.4 BELOW), INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING CLAIMS:

(a) CLAIMS FOR WRONGFUL DISCHARGE OF EMPLOYMENT, BREACH OF CONTRACT, BOTH EXPRESS AND IMPLIED, BREACH OF THE COVENANT OF GOOD FAITH AND FAIR DEALING, BOTH EXPRESS AND IMPLIED, NEGLIGENT OR INTENTIONAL INFLICTION OF EMOTIONAL DISTRESS, NEGLIGENT OR INTENTIONAL MISREPRESENTATION, NEGLIGENT OR INTENTIONAL INTERFERENCE WITH CONTRACT OR PROSPECTIVE ECONOMIC ADVANTAGE, AND DEFAMATION;

(b) CLAIMS FOR VIOLATION OF ANY FEDERAL, STATE, OR MUNICIPAL STATUTE, INCLUDING, BUT NOT LIMITED TO, TITLE VII OF THE CIVIL RIGHTS ACT OF 1964, THE CIVIL RIGHTS ACT OF 1991, THE AGE DISCRIMINATION IN EMPLOYMENT ACT OF 1967, THE AMERICANS WITH DISABILITIES ACT OF 1990, THE FAIR LABOR STANDARDS ACT, AND REVISED CODE OF WASHINGTON SECTION 49.60.010, ET SEQ.; AND

(c) CLAIMS ARISING OUT OF ANY OTHER LAWS AND REGULATIONS RELATING TO EMPLOYMENT OR EMPLOYMENT DISCRIMINATION.

NOTHING IN THIS AGREEMENT CONSTITUTES A WAIVER OF MY RIGHTS UNDER SECTION 7 OF THE NATIONAL LABOR RELATIONS ACT.

13.3 Remedy. EXCEPT AS PROVIDED BY THE RULES AND THIS AGREEMENT, ARBITRATION SHALL BE THE SOLE, EXCLUSIVE AND FINAL REMEDY FOR ANY DISPUTE BETWEEN ME AND THE COMPANY. ACCORDINGLY, EXCEPT AS PROVIDED FOR BY THE RULES AND THIS AGREEMENT, NEITHER I NOR THE COMPANY WILL BE PERMITTED TO PURSUE COURT ACTION REGARDING CLAIMS THAT ARE SUBJECT TO ARBITRATION. NOTWITHSTANDING, THE ARBITRATOR WILL NOT HAVE THE AUTHORITY TO DISREGARD OR REFUSE TO ENFORCE ANY LAWFUL COMPANY POLICY, AND THE ARBITRATOR SHALL NOT ORDER OR REQUIRE THE COMPANY TO ADOPT A POLICY NOT OTHERWISE REQUIRED BY LAW. NOTHING IN THIS AGREEMENT OR IN THIS PROVISION IS INTENDED TO WAIVE THE PROVISIONAL RELIEF REMEDIES AVAILABLE UNDER THE RULES.

13.4 Equitable Remedies. THE COMPANY OR I MAY APPLY TO ANY COURT OF COMPETENT JURISDICTION FOR A TEMPORARY RESTRAINING ORDER, PRELIMINARY INJUNCTION, OR OTHER INTERIM OR CONSERVATORY RELIEF, AS NECESSARY, WITHOUT BREACH OF THIS AGREEMENT AND WITHOUT ABRIDGEMENT OF THE POWERS OF THE ARBITRATOR.

13.5 Administrative Relief. I UNDERSTAND THAT THIS AGREEMENT DOES NOT PROHIBIT ME FROM PURSUING AN ADMINISTRATIVE CLAIM WITH A LOCAL, STATE OR FEDERAL ADMINISTRATIVE BODY SUCH AS THE DEPARTMENT OF FAIR EMPLOYMENT AND HOUSING, THE EQUAL EMPLOYMENT OPPORTUNITY COMMISSION OR THE WORKERS' COMPENSATION BOARD. THIS AGREEMENT DOES, HOWEVER, PRECLUDE ME FROM PURSUING COURT ACTION REGARDING ANY SUCH CLAIM.

13.6 Consideration. I UNDERSTAND THAT EACH PARTY'S PROMISE TO RESOLVE CLAIMS BY ARBITRATION IN ACCORDANCE WITH THE PROVISIONS OF THIS AGREEMENT, RATHER THAN THROUGH THE COURTS, IS CONSIDERATION FOR THE OTHER PARTY'S LIKE PROMISE. I FURTHER UNDERSTAND THAT I AM OFFERED EMPLOYMENT IN CONSIDERATION OF MY PROMISE TO ARBITRATE CLAIMS.

13.7 Voluntary Nature of Agreement. I ACKNOWLEDGE THAT I AM EXECUTING THIS AGREEMENT VOLUNTARILY AND WITHOUT ANY DURESS OR UNDUE INFLUENCE BY THE COMPANY OR ANYONE ELSE. I FURTHER ACKNOWLEDGE AND AGREE THAT I HAVE CAREFULLY READ THIS AGREEMENT AND THAT I HAVE ASKED ANY QUESTIONS NEEDED FOR ME TO UNDERSTAND THE TERMS, CONSEQUENCES AND BINDING EFFECT OF THIS AGREEMENT AND FULLY UNDERSTAND IT, INCLUDING WITHOUT LIMITATION THAT ***I AM WAIVING MY RIGHT TO A JURY TRIAL***. FINALLY, I ACKNOWLEDGE THAT I HAVE BEEN PROVIDED AN OPPORTUNITY TO SEEK THE ADVICE OF AN ATTORNEY OF MY CHOICE BEFORE SIGNING THIS AGREEMENT.

14. GENERAL PROVISIONS

14.1 Governing Law and Consent to Personal Jurisdiction. The internal laws of the state of Washington, but not the choice of law rules of the state of Washington, govern this Agreement. I expressly consent to the personal jurisdiction of the state and federal courts located in King County, Washington, for any lawsuit filed there against me by the Company arising from or relating to this Agreement.

14.2 Entire Agreement. This Agreement sets forth the entire agreement and understanding between the Company and me relating to the subject matter of this Agreement. This Agreement supersedes all prior or contemporaneous discussions between us. No modification of this Agreement or amendment to it, nor any waiver of any rights under this Agreement, will be effective unless in writing signed by the party to be charged. Any subsequent change or changes in my duties, obligations, rights, salary, or compensation will not affect the validity or scope of this Agreement.

14.3 Severability. If one or more of the provisions in this Agreement is deemed void by law, then the remaining provisions will continue in full force and effect.

14.4 Successors and Assigns. This Agreement will be binding upon my heirs, executors, assigns, administrators, and other legal representatives and will be for the benefit of the Company, its successors, and its assigns. The Company may assign this Agreement to a successor to all or part of its business or assets without restriction. I may not assign this Agreement to any third party. Any assignment that is not permitted under this Section 14.4 above will be null and void. There are no intended third party beneficiaries to this Agreement except as expressly stated.

14.5 Headings. Headings are used in this Agreement for reference only and will not be considered when interpreting this Agreement.

14.6 Waiver. Waiver by the Company of a breach of any provision of this Agreement will not operate as a waiver of any other or subsequent breach.

14.7 Survivorship. The rights and obligations of the parties will survive termination of my employment with the Company.

14.8 Signatures. This Agreement may be signed in two counterparts, each of which shall be deemed an original, with the same force and effectiveness as though executed in a single document.

SANA BIOTECHNOLOGY, INC.

By: /s/ Nathan Hardy
Title: Nathan Hardy
Date: September 27, 2018

14.9 I ACKNOWLEDGE THAT I HAVE HAD THE OPPORTUNITY TO SEEK THE ADVICE OF INDEPENDENT LEGAL COUNSEL AND THAT I HAVE READ THIS AGREEMENT CAREFULLY AND I UNDERSTAND AND ACCEPT THE OBLIGATIONS WHICH IT IMPOSES UPON ME WITHOUT RESERVATION. NO PROMISES OR REPRESENTATIONS HAVE BEEN MADE TO ME TO INDUCE ME TO SIGN THIS AGREEMENT.

EMPLOYEE

/s/ Steve Harr
Print Name: Steve Harr
Date: September 27, 2018

Exhibit 10.7

April 23, 2020

Dr. Richard Mulligan
121 Cantitoe Street
Katonah, NY 10536

Sent via Email to Richard.Mulligan@sana.com

Re: Employment Terms

Dear Richard:

Sana Biotechnology, Inc. (the "Company"), is pleased to offer you fulltime employment in the position of **Head of SanaX,** effective as **April 23, 2020** (the date you actually commence employment, your "Commencement Date"), in which you will be responsible for such duties as are normally associated with such position or as otherwise determined by the Chief Executive Officer of the Company. You will initially report to Steven Harr, the Chief Executive Officer of the Company, or such other individual as the Company may designate, and will be initially headquartered in our Cambridge offices, or such other location as the Company may designate, except for such travel as may be necessary to fulfill your responsibilities. In the course of your employment with Company, you will be subject to and required to comply with all company policies, and applicable laws and regulations.

You will be paid a base salary at the bi-weekly rate of **$17,307.70** (subject to required tax withholding and other authorized deductions), equivalent to **$450,000.00** on an annualized basis. Your base salary will be payable in accordance with the Company's standard payroll policies and subject to adjustment pursuant to the Company's policies as in effect from time to time. This position is exempt from overtime.

In addition to your base salary, you will be eligible for an annual cash bonus, at the discretion of the Board of Directors of the Company (the "Board"). Your target annual bonus shall be **40%** of your base salary, but the actual amount of your annual bonus may be more or less (and may equal zero). For your initial year, you must be actively employed prior to October 1 to be bonus eligible, and any such bonus will be prorated. Any annual bonus awarded to you shall be paid within two and a half months following the year to which the annual bonus relates and will be contingent upon your continued employment through the applicable payment date. You hereby acknowledge and agree that nothing contained herein confers upon you any right to an annual bonus in any year, and that whether the Company pays you an annual bonus and the amount of any such annual bonus will be determined by the Company in its sole discretion.

In connection with entering into this offer letter following the commencement of your employment with the Company, the Company will recommend to the Board of Directors that it grant you an option to purchase **450,000** shares of the Company's common stock (the "Stock Option") at a per-share exercise price equal to the fair market value of a share of the Company's common stock on the date of grant (as determined by the Board of Directors in its sole discretion). Subject to your continued employment with the Company through the applicable vesting date, 25% of the total number of shares underlying the Stock Option will vest on the first anniversary of the Commencement Date and 1/48th of the total number of shares initially underlying the Stock Option will vest on each monthly anniversary thereafter. The Stock Option will otherwise be subject to the terms and conditions of the Company's 2018 Equity Incentive Plan and a stock option agreement to be entered into between you and the Company. You will be eligible to receive future stock options and other equity awards in the discretion of the Board.

You will be eligible to participate in all of the employee benefits and benefit plans that the Company generally makes available to its regular fulltime employees. You will be eligible for paid time off, vacation and/or paid sick leave in accordance with applicable law and Company policy. Further, you will be eligible to receive any benefits applicable to Sana employees of your job level under the terms of the Company's then-current change in control severance plan.

The Company requires that, as a full-time employee, you devote your full business time, attention, skill, and efforts to the tasks and duties of your position as assigned by the Company. If you wish to request consent to provide services (for any or no form of compensation) to any other person or business entity while employed by the Company, please discuss that with me in advance of accepting another position.

As a condition of employment, you will be required: (1) to sign and comply with an At-Will Employment Agreement, a copy of which has been sent to you with this offer, which, among other things, prohibits unauthorized use or disclosure of Company proprietary information; (2) to sign and return a satisfactory I-9 Immigration form, which will be sent to you as part of your onboarding should you accept this offer, and provide sufficient documentation establishing your employment eligibility in the United States of America; and (3) to provide satisfactory proof of your identity as required by U.S. law.

As a further express condition of employment, you must consent to and satisfactorily pass (to the Company's satisfaction) a background check. You should not rely upon the terms of this offer letter until you have been informed in writing by the Company that you have successfully satisfied such background check. You will be contacted soon by the Company's third-party background check vendor, AccurateNow. AccurateNow will provide you with a disclosure of your rights under relevant federal and state law and request your authorization to perform a background check on you for the Company and provide the results of the background check to the Company.

By signing below, you represent that your performance of services to the Company will not violate any duty which you may have to any other person or entity (such as a present or former employer), including obligations concerning providing services (whether or not competitive) to others, confidentiality of proprietary information and assignment of inventions, ideas, patents or copyrights, and you agree that you will not do anything in the performance of services hereunder that would violate any such duty.

Notwithstanding any of the above, your employment with the Company is "at will." This means that it is not for any specified period of time and can be terminated by you or by the Company at any time, with or without advance notice, and for any or no particular reason or cause. It also means that your job duties, title and responsibility and reporting level, work schedule, compensation and benefits, as well as the Company's personnel policies and procedures, may be changed with prospective effect, with or without notice, at any time in the sole discretion of the Company.

Without limiting the foregoing, if at any time other than during a Change in Control Period (as defined below) your employment with the Company is terminated by the Company without Cause (other than due to your death or disability) or you resign for Good Reason (each, as defined herein) and you deliver to the Company a general release of all claims against the Company and its affiliates in a form reasonably acceptable to the Company (a "Release") that becomes effective and irrevocable within 60 days following such termination of employment, then you shall be entitled to receive (i) continuing payments of severance pay (less applicable withholding taxes) for a period of nine (9) months to be paid periodically in

accordance with the Company's normal payroll policies at a rate equal to the sum of your monthly base salary rate and one-twelfth of your target annual bonus, in each case as in effect immediately prior to your termination (but without taking into account any reduction of your base salary or target annual bonus in breach of this letter), less applicable withholdings, with such installments to commence on the first payroll date following the date the Release becomes effective and irrevocable, with the first installment to include any amount that would have been paid had the Release been effective and irrevocable on your termination date and (ii) direct payment or reimbursement for premiums for continued health, vision and dental benefit coverage through COBRA for you, your spouse and dependents at the same level of coverage as in effect for you on the day immediately preceding the day of termination of employment for a period ending on the earlier of (a) nine (9) months after the date of termination of employment and (b) the date you are eligible to receive health, vision and dental benefits through a new employer.

For purposes of this offer letter, the term "Cause" means: (i) a willful act of dishonesty made by you in connection with your responsibilities as an employee; (ii) your conviction of, or plea of *nolo contendere* to, a felony or any crime involving fraud, embezzlement or a material violation of federal or state law by you, any of which that the Board reasonably determines in good faith has had or will have a material detrimental effect on the Company's reputation or business; (iii) your willful and material unauthorized use or disclosure of any proprietary information or trade secrets of the Company or any other party to whom you owe an obligation of nondisclosure as a result of your relationship with the Company; (iv) your willful material breach of any obligations under any written agreement or covenant with the Company; or (v) your continued substantial failure to perform your employment duties (other than as a result of your physical or mental incapacity). No termination for Cause under (iv) or (v) shall be effectuated until after you have received a written demand of performance from the CEO that specifically sets forth the factual basis for the CEO's determination that you have not substantially performed your duties and have failed to cure such non-performance to the CEO's reasonable satisfaction within thirty (30) business days after receiving such notice. For purposes of this definition, no act or failure to act shall be considered willful unless it is done in bad faith and without reasonable intent that the act or failure to act was in the best interest of the Company. Any act, or failure to act, based upon authority or instructions given to you pursuant to a resolution duly adopted by the CEO or based on the advice of counsel for the Company will be conclusively presumed to be done or omitted to be done by you in good faith and in the best interest of the Company.

For purposes of this offer letter, the term "Good Reason" means your resignation within 30 days following expiration of any Cure Period (as defined below) following the occurrence of one or more of the following, without your written consent: (i) a material reduction in your base salary or target annual bonus; (ii) a material diminution of your title, duties, responsibilities or reporting lines; or (iii) a change in the location of your employment of more than 50 miles. No event will be considered Good Reason unless (a) you have given written notice to the Company of your intention to terminate your employment for Good Reason, describing the grounds for such action, no later than 90 days after the first occurrence of such circumstances, (b) you have provided the Company with at least 30 days in which to cure the circumstances (the "Cure Period"), and (c) if the Company is not successful in curing the circumstance, you end your employment within thirty days after the end of the Cure Period.

For purposes of this offer letter, the term "Change in Control" shall have the meaning ascribed such term in the Company's 2018 Equity Incentive Plan, provided, that such event constitutes a "change in control event" within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended (the "Code").

For purposes of this offer letter, the term "Change in Control Period" shall mean the period commencing three (3) months prior to a Change in Control and ending twelve (12) months after the Change in Control.

No amount deemed deferred compensation subject to Section 409A of the Code shall be payable pursuant to this offer letter unless your termination of employment constitutes a "separation from service" with the Company within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended, and the Department of Treasury regulations and other guidance promulgated thereunder. For purposes of Section 409A of the Code (including, without limitation, for purposes of Treasury Regulation Section 1.409A-2(b)(2)(iii)), your right to receive any installment payments under this offer letter shall be treated as a right to receive a series of separate payments and, accordingly, each such installment payment shall at all times be considered a separate and distinct payment. To the extent that any reimbursements payable pursuant to this offer letter are subject to the provisions of Section 409A of the Code, any such reimbursements payable to you pursuant to this offer letter shall be paid to you no later than December 31 of the year following the year in which the expense was incurred, the amount of expenses reimbursed in one year shall not affect the amount eligible for reimbursement in any subsequent year, and your right to reimbursement under this offer letter will not be subject to liquidation or exchange for another benefit.

You are not required to seek other employment or otherwise mitigate the value of any severance benefits contemplated by this offer letter, nor will any such benefits be reduced by any earnings or benefits that you may receive from any other source, except as otherwise expressly set forth above with respect to continued group life, health, vision and dental benefits.

In addition to any indemnification provided by the Company's organizational documents, the Company will enter into an indemnification agreement with you as senior executive in the form used for other senior executives.

If you accept this offer, this letter and the At-Will Employment Agreement shall constitute the complete agreement between you and Company with respect to the terms and conditions of your employment. Any prior or contemporaneous representations (whether oral or written) not contained in this letter or the At-Will Employment Agreement or contrary to those contained in this letter or the At-Will Employment Agreement, that may have been made to you are expressly cancelled and superseded by this offer.

This offer letter shall be interpreted and construed in accordance with the laws of Commonwealth of Massachusetts without regard to any conflicts of laws principles. While other terms and conditions of your employment may change in the future, the at-will nature of your employment may not be changed, except in a subsequent letter or written agreement, signed by you and the Chief Executive Officer of the Company.

(*Signature Page Follows*)

Please sign and date this letter and the At-Will Employment Agreement by **April 23, 2020** if you wish to accept employment at the Company under the terms described above, after which time this offer of employment will expire. If you accept our offer, we would like you to commence your employment with us as soon as practicable.

If you have any questions, regarding this letter or employment with the Company, please feel free to contact your recruiter. We look forward to your favorable reply and to a productive and enjoyable work relationship.

Sincerely,

SANA BIOTECHNOLOGY, INC.

By: /s/ Robin Andrulevich
Name: Robin Andrulevich
Title: Chief People Officer
Date: April 23, 2020

Accepted by:

s/ Richard Mulligan
Richard Mulligan
Date: April 23, 2020

SANA BIOTECHNOLOGY, INC.
AT-WILL EMPLOYEE AGREEMENT

In consideration and as a condition of my employment by Sana Biotechnology, Inc., a Delaware corporation (together with any of its successors or assigns collectively, the "**Company**"), and my receipt of the compensation paid to me now and in the future by the Company in the context of that employment and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, effective as of the first day of my employment by the Company, I agree to the following:

1. AT-WILL EMPLOYMENT

MY EMPLOYMENT WITH THE COMPANY IS FOR AN UNSPECIFIED DURATION AND CONSTITUTES "AT-WILL" EMPLOYMENT. ANY REPRESENTATION TO THE CONTRARY IS UNAUTHORIZED AND NOT VALID UNLESS OBTAINED IN WRITING AND SIGNED BY THE PRESIDENT OR CEO OF COMPANY. THIS EMPLOYMENT RELATIONSHIP MAY BE TERMINATED AT ANY TIME, WITH OR WITHOUT GOOD CAUSE OR FOR ANY OR NO CAUSE, AT EITHER MY OPTION OR THE COMPANY'S OPTION, WITH OR WITHOUT NOTICE. THE AT-WILL NATURE OF MY EMPLOYMENT ALSO MEANS THAT I CAN BE TRANSFERRED OR DEMOTED, AND MY JOB TITLE, COMPENSATION, BENEFITS AND OTHER TERMS AND CONDITIONS OF EMPLOYMENT CAN BE REDUCED, WITHOUT CAUSE. NOTHING IN AN EMPLOYEE HANDBOOK OR OTHER POLICY OF THE COMPANY WILL BE CONSTRUED AS CHANGING MY AT-WILL EMPLOYMENT STATUS. THE COMPANY MAY MODIFY JOB TITLES, SALARIES, AND BENEFITS FROM TIME TO TIME AS IT DEEMS NECESSARY.

2. CONFIDENTIAL INFORMATION

2.1 Definition. "Confidential Information" means any non-public information that relates to the actual or anticipated business, research, or development of the Company and any proprietary information, technical data, trade secrets, and know-how of the Company, disclosed to me by the Company, directly or indirectly, in writing, orally, or by inspection or observation of tangible items. Confidential Information includes both Information disclosed by the Company to me, and information developed or learned by me during the course of my employment with the Company. Confidential Information includes, but is not limited to, Company research, product plans, products, services, customers, customer lists, markets, software, developments, inventions, processes, formulas, technology, designs, drawings, engineering, hardware configuration information, marketing, finances, and other business information. Confidential Information will not include any information that (a) was publicly known and made generally available in the public domain prior to the time the Company disclosed the information to me, (b) became publicly known and made generally available, after disclosure to me by the Company, through no wrongful action or inaction by me or by others who were under confidentiality obligations, or (c) was in my rightful possession, without confidentiality restrictions, at the time of disclosure by the Company, as shown by my files and records.

2.2 Use and Non-Use. At all times during the term of my employment and after my employment ends, I will hold all Confidential Information in strictest confidence and not use it for any purpose except for the benefit of the Company to fulfill my employment obligations. I will not disclose Confidential Information to any third party without the prior written authorization of the president, CEO, or the Board of Directors of the Company. Confidential Information will remain the sole property of the Company. I will take all reasonable precautions to prevent any unauthorized use or disclosure of the Confidential Information. I understand that my unauthorized use or disclosure of Confidential Information during my employment will lead to disciplinary action, up to and including immediate termination and legal action by the Company. I understand that my obligations under this Section 2.2 will continue after termination of my employment.

If I become compelled by law, regulation (including without limitation the rules of any applicable securities exchange), court order, or other governmental authority to disclose the Confidential Information, I shall, to the extent possible and permissible under applicable law, first give the Company prompt notice. I agree to cooperate reasonably with the Company in any proceeding to obtain a protective order or other remedy. If such protective order or other remedy is not obtained, I shall only disclose that portion of such Confidential Information required to be disclosed, in the opinion of my legal counsel. I shall request that confidential treatment be accorded such Confidential Information, where available. Compulsory disclosures made pursuant to this section shall not relieve me of my obligations of confidentiality and non-use with respect to non-compulsory disclosures. I understand that nothing herein is intended to or shall prevent me from communicating directly with, cooperating with, or providing information to, any federal, state or local government regulator, including, but not limited to, the U.S. Securities and Exchange Commission, the U.S. Commodity Futures Trading Commission, or the U.S. Department of Justice. I shall promptly notify my supervisor or any officer of the Company if I learn of any possible unauthorized use or disclosure of Confidential Information and shall cooperate fully with the Company to enforce its rights in such information.

2.3 Former Employer Confidential Information. I will not, during my employment with the Company, improperly use, disclose, or induce the Company to use any proprietary information or trade secrets of any former or concurrent employer or other person or entity with which I have an obligation to keep information in confidence. Furthermore, I will not bring onto the premises of the Company or transfer onto the Company's technology systems any unpublished document or proprietary information belonging to any third party unless consented to in writing by both the Company and such third party.

2.4 Third Party Information. I recognize that the Company has received and in the future will receive from third parties their confidential or proprietary information subject to a duty on the Company's part to maintain the confidentiality of this information and to use it only for certain limited purposes. I will hold all of this confidential or proprietary information in the strictest confidence and not disclose it to any third party or use it except as necessary in carrying out my work for the Company consistent with the Company's agreements with these third parties. I understand that my unauthorized use or disclosure of third parties' confidential or proprietary information during my employment will lead to disciplinary action, up to and including immediate termination and legal action by the Company.

2.5 Defend Trade Secrets Act Notice of Immunity Rights. I acknowledge that the Company has provided me with the following notice of immunity rights in compliance with the requirements of the Defend Trade Secrets Act: (a) I shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of Confidential Information that is made in confidence to a Federal, State, or local government official or to an attorney solely for the purpose of reporting or investigating a suspected violation of law, (b) I shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of Confidential Information that is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal and (c) if I file a lawsuit for retaliation by the Company for reporting a suspected violation of law, I may disclose the Confidential Information to my attorney and use the Confidential Information in the court proceeding, if I file any document containing the Confidential Information under seal, and do not disclose the Confidential Information, except pursuant to court order.

3. INVENTIONS

3.1 Inventions Defined. "**Inventions**" means inventions, original works of authorship, developments, concepts, improvements, designs, discoveries, ideas, know-how, trademarks, and trade secrets, whether or not patentable or registrable under copyright or similar laws, that I may solely or jointly author, conceive, develop, or reduce to practice.

3.2 Assignment of Inventions and Works Made for Hire. I will promptly make a full written disclosure to the Company of any and all Inventions that I create within the scope of and during the period of my employment with the Company (including without limitation during my off-duty hours) ("**Company Inventions**"). I will hold in trust for the sole right and benefit of the Company, and I hereby assign to the Company or its designee, all of my right, title, and interest (including without limitation all related intellectual property rights and the right to sue and collect payment for past, present, and future infringement) in, all Company Inventions. In addition, all original works of authorship that are made by me (solely or jointly with others) within the scope of and during the period of my employment with the Company (including without limitation during my off-duty hours) and that are protectable by copyright are "works made for hire," as that term is defined in the United States Copyright Act, and in accordance, the Company will be considered the author of these works.

3.3 Exception to Assignments. The obligations to assign Inventions set forth in Section 3.2 apply with respect to all Company Inventions (a) whether or not such Company Inventions are conceived, made, developed or worked on by me during my regular hours of employment with the Company, (b) whether or not the Company Invention was made at the suggestion of the Company, (c) whether or not the Invention was reduced to drawings, written description, documentation, models or other tangible form, and (d) whether or not the Company Invention is related to the general line of business engaged in by the Company; but do not apply to Inventions that (i) I develop entirely on my own time or after the date of this Agreement without using the Company's equipment, supplies, facilities or Confidential Information, (ii) do not relate to the Company's business, or actual or demonstrably anticipated research or development of the Company at the time of conception or reduction to practice of the Invention, and (iii) do not result from and are not related to any work performed by me for the Company.

I hereby acknowledge and agree that the Company has notified me that, if I reside in the state of Washington, assignments provided for in Section 3.2 do not apply to any Invention that qualifies fully for exemption from assignment under the provisions of the Revised Code of Washington Section 49.44.140. ("**RCW 49.44.140**"), a copy of which is attached as **Exhibit C** of this Agreement. I further understand that, to the extent this Agreement shall be construed in accordance with the laws of any State that precludes a requirement in an employee agreement to assign certain classes of inventions made by an employee, Section 3.2 shall be interpreted not to apply to any Invention that a court rules and/or the Company agrees falls within such classes.

At the Company's request, I will promptly disclose to the Company all Inventions made after my employment to determine the status of the Company Invention under Sections 3.2 and 3.3. The Company may disclose such Company Inventions to the department of employment security. If applicable, at the time of disclosure of an Invention that I believe qualifies under Section 2870, RCW 49.44.140, or any similar law, I shall provide to the Company, in writing, evidence to substantiate the belief that such Invention qualifies under such law.

3.4 Inventions Retained and Licensed. I have attached to this Agreement, as **Exhibit A**, a list describing all Inventions that were made by me prior to my employment with the Company, that relate to the Company's proposed business, products, or research and development, and that are not assigned to the Company under this Agreement (collectively, "**Prior Inventions**"). If no list is attached or if no Prior Inventions are listed on **Exhibit A**, I represent that there are no Prior Inventions. Furthermore, I represent and warrant that the inclusion of any Prior Inventions from **Exhibit A** of this Agreement will not materially affect my ability to perform all

obligations under this Agreement. If, in the course of my employment with the Company, I incorporate into a Company product, process, or machine an Invention owned by me or in which I have an interest, then I hereby grant to the Company a nonexclusive, royalty-free, irrevocable, perpetual, transferrable, worldwide license (with right to sublicense through multiple tiers) to make, have made, modify, use, import, offer for sale, sell, reproduce, distribute, modify, adapt, prepare derivative works of, display, perform, and otherwise exploit the Invention without restriction of any kind.

3.5 Third Party Inventions. I will not incorporate any original work of authorship, development, concept, improvement, or trade secret owned, in whole or in part, by any third party, into any Company Invention without the Company's prior written permission.

3.6 Moral Rights. Any assignment to the Company of Company Inventions includes without limitation all rights of attribution, paternity, integrity, modification, disclosure, and withdrawal and any other rights throughout the world that may be known as or referred to as "moral rights," artist's rights," or the like (collectively, "**Moral Rights**"). To the extent that Moral Rights cannot be assigned under applicable law, I hereby waive and agree not to enforce any and all Moral Rights, including without limitation any limitation on subsequent modification, to the extent permitted under applicable law.

3.7 Marketing of Company Inventions. The decision whether or not to commercialize or market any Company Invention developed by me solely or jointly with others is within the Company's sole discretion and for the Company's sole benefit. Neither the Company nor any other entity will be required to pay me a royalty as a result of the Company's efforts to commercialize or market any Company Invention.

3.8 Inventions Assigned to the United States. I will assign to the United States government all of my right, title, and interest in and to all Company Inventions whenever the full title is required to be assigned to the United States government by a contract between the Company and the United States government or any of its agencies.

3.9 Maintenance of Records. I will keep and maintain adequate and current written records of all Company Inventions. These records will be in the form of notes, sketches, drawings, electronic files, laboratory notebooks, and any other format that may be specified by the Company. At all times, the records will be available to the Company, and remain the sole property of the Company.

3.10 Further Assurances. I will assist the Company or its designee, at the Company's expense, in every proper way to secure and protect the Company's rights in Company Inventions and any related copyrights, patents, mask work rights, or other intellectual property rights in any and all countries. I will disclose to the Company all pertinent information and data. I will execute all applications, specifications, oaths, assignments, and all other instruments that the Company deems necessary in order to apply for and obtain these rights and in order to deliver, assign, and convey to the Company and its nominees the sole and exclusive rights, title, and interest in and to Company Inventions, and any related copyrights, patents, mask work rights, or other intellectual property rights. I will testify in a suit or other proceeding relating to such Company Inventions and any rights relating thereto. My obligation to execute or cause to be executed, when it is in my power to do so, any instrument or papers will continue after the termination of this Agreement. If the Company is unable because of my mental or physical incapacity or for any other reason to secure my signature to apply for or to pursue any application for any United States or foreign patents or copyright registrations covering Company Inventions assigned to the Company as above, then I hereby irrevocably designate and appoint the Company and its duly authorized officers and agents as my agent and attorney in fact. Accordingly, the Company may act for and in my behalf to execute and file any applications and to do all other lawfully permitted acts to further the prosecution and issuance of patent or copyright registrations with the same legal force and effect as if executed by me.

4. NO CONFLICTING OBLIGATIONS

4.1 Current Obligations. During the term of my employment with the Company, I will not engage in any other employment, occupation, consulting, or other business activity directly relating to the business in which the Company is now involved, becomes involved, or has plans to become involved during the term of my employment. I will also not engage in any other activities that conflict with my obligations to the Company.

4.2 Prior Relationships. Without limiting Section 4.1, I represent that I have no other agreements, relationships or commitments to any other person or entity that conflict with my obligations to the Company under this Agreement or my ability to become employed and perform the services for which I am being hired by the Company. If I have signed a confidentiality agreement or similar type of agreement with any former employer or other entity, I will comply with the terms of any such agreement to the extent that its terms are lawful under applicable law. I represent and warrant that after undertaking a careful search (including without limitation searches of my computers, cell phones, electronic devices and documents), I have returned all property and confidential information belonging to all prior employers (or other third parties I have performed services for in accordance with the terms of my applicable agreement). Moreover, if the Company or any of its employees or agents is sued based on any obligation or agreement to which I am a party or am bound, I will indemnify the Company and its employees and agents for all verdicts, judgments, settlements, and other losses that result from any breach of my obligations under this Agreement, as well as any reasonable attorneys' fees and costs if the plaintiff is the prevailing party in such an action.

5. COMPLIANCE WITH COMPANY POLICIES AND USE OF COMPANY EQUIPMENT AND FACILITIES

I will comply with all Company policies, including but not limited to policies relating to the use of the Internet and the use of Company equipment and facilities. I will not use Company equipment or facilities for any purpose except to fulfill my employment obligations for the benefit of the Company. I will follow all laws and regulations applicable to the use of Company equipment and facilities and access to or use of others' computer or communication systems. I acknowledge that the Company will maintain sole ownership of all equipment and any data stored on the equipment. I understand and consent that the Company reserves the right to view and disclose without prior notice, for any purpose, any data stored on Company equipment or passing through the Company's network, including but not limited to electronic mail and data downloaded from the Internet. I understand that I am not permitted to add any unlicensed, unauthorized or non-compliant applications to the Company's technology systems and that I shall refrain from copying unlicensed software onto the Company's technology systems or using non-licensed software or web sites.

I acknowledge that I have no expectation of privacy either in information in transit through the Company network or stored on Company equipment, including without limitation computer, email, handheld device, telephone, or voicemail. All information, data, and messages created, received, sent, or stored in these systems are, at all times, the property of the Company. As such, the Company has the right to audit and search all such items and systems, without further notice to me, to ensure that the Company is licensed to use the software on the Company's devices in compliance with the Company's software licensing policies, to ensure compliance with the Company's policies, and for any other business-related purposes in the Company's sole discretion. I am aware that Company has or may acquire software and systems that are capable of monitoring and recording all network traffic to and from any computer I may use. The Company reserves the right to access, review, copy, and

delete any of the information, data, or messages accessed through these systems with or without notice to me. This includes, but is not limited to, all e-mail messages, website visits, internet usage, chat sessions, and all file transfers into and out of the Company's internal networks. The Company may review internet and technology systems activity and analyze usage patterns, and may choose to publicize this data to assure that technology systems are devoted to legitimate business purposes.

6. RETURNING COMPANY MATERIALS

Upon leaving the employ of the Company, or upon Company's request during my employment, I will deliver to the Company (and will not keep in my possession, recreate, or deliver to anyone else) any and all Confidential Information, devices, records, data, notes, reports, proposals, lists, correspondence, specifications, drawings blueprints, sketches, materials, equipment, Company credit cards, electronically-stored information and passwords to access such property, and other documents or property, or reproductions of these items developed by me pursuant to my employment with the Company or otherwise belonging to the Company. In addition, I will deliver those records maintained pursuant to Section 3.9 to the Company. Notwithstanding the foregoing, I may retain a copy of my Outlook Contacts or comparable contacts database and any documents of a personal nature, including without limitation diaries, calendars and personal documents relating to my employment, compensation, taxes or expenses. I consent to an exit interview to confirm my compliance with this Section 6.

7. NOTIFICATION TO NEW EMPLOYER

If my employment with the Company ends for any reason or no reason, the Company may notify my new employer about my rights and obligations under this Agreement.

8. TERMINATION CERTIFICATION

If my employment with the Company ends for any reason or no reason, I will sign and deliver to the Company the "Termination Certification" attached to this Agreement as **Exhibit B**. I will keep the Company advised of my home and business address for three years after termination of my employment with the Company so that the Company can contact me regarding my continuing obligations under this Agreement.

9. NON-COMPETITION

9.1 Non-Competition. In order to protect Confidential Information, I will not, during the period of my employment with the Company, and for a period of 12 months after my employment is terminated for any reason other than a termination by the Company without Cause (the "Non-Competition Restricted Period") , directly or indirectly, for myself or any third party other than the Company, provide services of any kind for any person or entity engaged in or planning to engage in the Business (within the Geographic Area, as defined below) in any capacity (whether as a partner, advisor, consultant, employee, contractor or otherwise) (a) which involves the same or similar types of services I performed for the Company at any time during the last two years of my employment with the Company or (b) in which I could reasonably be expected to use or disclose Confidential Information. In the event the Company determines at any time that I engaged in conduct constituting Cause during or after my employment has ended, then the Company may retroactively designate my termination as a termination with Cause, and the non-competition covenants set forth in this Section 9 shall remain in full force and effect pursuant to their terms. Notwithstanding the foregoing, if I am (x) classified as non-exempt under the Fair Labor Standards Act or (y) an undergraduate or graduate student partaking in an internship or short-term employment with the Company while enrolled in a full-time or part-time undergraduate or graduate educational institution, then Section 9 shall not apply to me after the termination of my employment or engagement with the Company for any reason.

9.2 Extension of Non-Competition Restricted Period. In the event I breach my fiduciary duty to the Company or unlawfully take, physically or electronically, property belonging to the Company as reasonably

determined by the Company, the Non-Competition Restricted Period as defined above shall be extended for one (1) additional year, for a maximum period of two (2) years immediately following my termination of employment or engagement from the Company.

9.3 Waiver. At any time, the Company may in its sole discretion elect to waive any or part of my covenants in Section 9.1, provided any such waiver is expressly agreed to in writing by an executive officer of the Company, or, if I am an executive officer of the Company, by the Board of Directors of the Company.

9.4 Garden Leave. The Company agrees to pay me during the Non-Competition Restricted Period at a rate that equals fifty (50) percent of my highest annualized base salary within the two (2) years prior to my termination, less applicable taxes and withholdings, in accordance with the Company's regular payroll procedure; *provided, however*, the Company shall not be required to provide such pay (i) if to the extent the Company elects in writing pursuant to Section 9.3 to expressly waive any of my non-competition covenants set forth in Section 9.1; (ii) if, for either reason set forth in clauses (x) or (y) of Section 9.1, the post-termination non-competition covenants set forth in Section 9.1 shall not apply to me; (iii) if I violate any of my non-competition covenants set forth in Section 9.1 as reasonably determined by the Company; or (iv) during any Non-Competition Restricted Period that has been increased beyond one (1) year post-termination for the reasons set forth in Section 9.2. I expressly acknowledge and agree that, in the event the Company reasonably determines that I have breached any of my non-competition covenants set forth in Section 9.1, the Company may refuse to make any payments, and I shall immediately return to the Company any payments already received, pursuant to this Section 9.4, in addition to and without limiting any other legal or equitable relief available to the Company.

9.5 Definitions. As used in this Agreement:

(a) The term "Business" means any business or part thereof that develops, manufactures, markets, licenses, sells or provides any product or service that competes with any product or service developed, manufactured, marketed, licensed, sold or provided, or planned to be developed, manufactured, marketed, licensed, sold or provided, by the Company, in each case at any time during my employment with the Company;

(b) The term "Cause" means (i) a material breach of this Agreement or any other agreement I may have entered into with the Company; (ii) the commission of fraud, embezzlement, or other intentional act that could reasonably harm the Company or third parties; (iii) a material violation of the Company's personnel policies, my ethical obligations, or applicable laws or regulations; or (iv) willful or gross negligence in the performance of my job duties that could reasonably harm the Company or third parties, in each case as reasonably determined by the Company.

(c) The term "Geographic Area" means each city, county, state, territory, and country in which (i) I provided services or had a material presence or influence at any time during the last two years of my employment or engagement with the Company or (ii) the Company operates, is engaged in or has plans to engage in the Business as of the termination of my employment or engagement with the Company.

10. NON-SOLICITATION

10.1 Non-Solicitation. I will not, during the period of my employment with the Company, and for a period of 12 months after my employment is terminated for any (the "Non-Solicitation Restricted Period"), directly or indirectly, for myself or any third party other than the Company:

(a) solicit sales from any of the Company's customers for any product or service that (i) competes with any product or service sold or provided by the Company, (ii) competes with any product or service intended to be sold or provided by the Company at the time of the termination of my employment with the Company, or (iii) competed with any product or service sold or provided by the Company at any time during my employment with the Company;

(b) entice any vendor, consultant, collaborator, agent, or contractor of the Company to cease its business relationship with the Company or engage in any activity that would cause them to cease their business relationship with the Company; or

(c) solicit, induce, recruit, or encourage any of the Company's employees to leave their employment, or attempt to solicit, induce, recruit, encourage, or take away Company employees.

10.2 Tolling. Without limiting the Company's ability to seek other remedies available in law or equity, if I violate any of the provisions of Section 10.1, the Non-Solicitation Restricted Period shall be extended by one day for each day that I am in violation of such provisions, up to a maximum extension equal to the length of the Non-Solicitation Restricted Period, so as to give the Company the full benefit of the bargained-for length of forbearance.

11. COMPENSATION

All compensation for services rendered to third parties during the term of my employment with the Company, including without limitation equity or equity-type payments, and consulting or advisory fees, will be paid to the Company unless otherwise unanimously approved by the Board of Directors of the Company in writing.

12. REPRESENTATIONS

12.1 Reasonableness. I acknowledge that the limitations of time, geography, and scope of activity agreed to in the covenants set forth in Sections 9 and 10 above are reasonable because, among other things, (a) the Company is engaged in a highly competitive industry, (b) I will have access to Confidential Information, including but not limited to the Company's trade secrets, know-how, plans, and strategy (and in particular, the competitive strategy of the Company), (c) in the event my employment with the Company ends, I will be able to obtain suitable and satisfactory employment in my chosen profession without violating this Agreement, (d) these limitations are necessary to protect Confidential Information, and the goodwill of the Company, and (e) these limitations will apply even if I am transferred or demoted, or my job title, compensation, benefits and other terms and conditions of employment are reduced.

I will execute any proper oath or verify any proper document required to carry out the terms of this Agreement. I represent and warrant that my performance of all the terms of this Agreement will not breach any agreement to keep in confidence proprietary information acquired by me in confidence or in trust prior to my employment by the Company. I have not entered into, and I will not enter into, any oral or written agreement in conflict with this Agreement.

13. ARBITRATION AND EQUITABLE RELIEF

13.1 Arbitration. EXCEPT AS PROVIDED IN SECTION 13.2 AND 13.4, ANY DISPUTE OR CONTROVERSY ARISING OUT OF, RELATING TO, OR CONCERNING ANY INTERPRETATION, CONSTRUCTION, PERFORMANCE, OR BREACH OF THIS AGREEMENT, WILL BE SETTLED BY ARBITRATION TO BE HELD IN SUFFOLK COUNTY, MASSACHUSETTS, IN ACCORDANCE WITH THE EMPLOYMENT DISPUTE RESOLUTION RULES THEN IN EFFECT OF THE AMERICAN ARBITRATION ASSOCIATION ("**RULES**"). THE ARBITRATOR MAY GRANT INJUNCTIONS OR OTHER RELIEF IN A DISPUTE OR CONTROVERSY. THE DECISION OF THE ARBITRATOR WILL BE FINAL, CONCLUSIVE, AND BINDING ON THE PARTIES TO THE ARBITRATION. JUDGMENT MAY BE ENTERED ON THE ARBITRATOR'S DECISION IN ANY COURT HAVING JURISDICTION. THE COMPANY WILL PAY ALL ARBITRATION FEES, EXCEPT AN AMOUNT EQUAL TO THE FILING FEES I WOULD HAVE PAID HAD I FILED A COMPLAINT IN A COURT OF LAW. THE COMPANY AND I WILL EACH SEPARATELY PAY OUR COUNSEL FEES AND EXPENSES.

13.2 Waiver of Right to Jury Trial. THIS ARBITRATION CLAUSE CONSTITUTES A WAIVER OF MY RIGHT TO A JURY TRIAL AND RELATES TO THE RESOLUTION OF ALL DISPUTES RELATING TO ALL ASPECTS OF MY EMPLOYMENT RELATIONSHIP WITH THE COMPANY (EXCEPT AS PROVIDED IN SECTION 13.4 BELOW), INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING CLAIMS:

(a) CLAIMS FOR WRONGFUL DISCHARGE OF EMPLOYMENT, BREACH OF CONTRACT, BOTH EXPRESS AND IMPLIED, BREACH OF THE COVENANT OF GOOD FAITH AND FAIR DEALING, BOTH EXPRESS AND IMPLIED, NEGLIGENT OR INTENTIONAL INFLICTION OF EMOTIONAL DISTRESS, NEGLIGENT OR INTENTIONAL MISREPRESENTATION, NEGLIGENT OR INTENTIONAL INTERFERENCE WITH CONTRACT OR PROSPECTIVE ECONOMIC ADVANTAGE, AND DEFAMATION;

(b) CLAIMS FOR VIOLATION OF ANY FEDERAL, STATE, OR MUNICIPAL STATUTE, INCLUDING, BUT NOT LIMITED TO, TITLE VII OF THE CIVIL RIGHTS ACT OF 1964, THE CIVIL RIGHTS ACT OF 1991, THE AGE DISCRIMINATION IN EMPLOYMENT ACT OF 1967, THE AMERICANS WITH DISABILITIES ACT OF 1990; AND

(c) CLAIMS ARISING OUT OF ANY OTHER LAWS AND REGULATIONS RELATING TO EMPLOYMENT OR EMPLOYMENT DISCRIMINATION.

NOTHING IN THIS AGREEMENT CONSTITUTES A WAIVER OF MY RIGHTS UNDER SECTION 7 OF THE NATIONAL LABOR RELATIONS ACT. MOREOVER, NOTHING IN THIS AGREEMENT SERVES TO REQUIRE ARBITRATION OF ANY CLAIMS THAT ARE EXCLUDED FROM ARBITRATION AS A MATTER OF LAW (SUCH CLAIMS MAY CONTINUE TO BE PURSUED IN ANY APPROPRIATE FORUM, CONSISTENT WITH SUCH APPLICABLE LAWS AS MAY THEN BE IN EFFECT.

13.3 Remedy. EXCEPT AS PROVIDED BY THE RULES AND THIS AGREEMENT, ARBITRATION SHALL BE THE SOLE, EXCLUSIVE AND FINAL REMEDY FOR ANY DISPUTE BETWEEN ME AND THE COMPANY. ACCORDINGLY, EXCEPT AS PROVIDED FOR BY THE RULES AND THIS AGREEMENT, NEITHER I NOR THE COMPANY WILL BE PERMITTED TO PURSUE COURT ACTION REGARDING CLAIMS THAT ARE SUBJECT TO ARBITRATION. NOTWITHSTANDING, THE ARBITRATOR WILL NOT HAVE THE AUTHORITY TO DISREGARD OR REFUSE TO ENFORCE ANY LAWFUL COMPANY POLICY, AND THE ARBITRATOR SHALL NOT ORDER OR REQUIRE THE COMPANY TO ADOPT A POLICY NOT OTHERWISE REQUIRED BY LAW. NOTHING IN THIS AGREEMENT OR IN THIS PROVISION IS INTENDED TO WAIVE THE PROVISIONAL RELIEF REMEDIES AVAILABLE UNDER THE RULES.

13.4 Equitable Remedies. THE COMPANY OR I MAY APPLY TO ANY COURT OF COMPETENT JURISDICTION FOR A TEMPORARY RESTRAINING ORDER, PRELIMINARY INJUNCTION, OR OTHER INTERIM OR CONSERVATORY RELIEF, AS NECESSARY, WITHOUT BREACH OF THIS AGREEMENT AND WITHOUT ABRIDGEMENT OF THE POWERS OF THE ARBITRATOR.

13.5 Administrative Relief. I UNDERSTAND THAT THIS AGREEMENT DOES NOT PROHIBIT ME FROM PURSUING AN ADMINISTRATIVE CLAIM WITH A LOCAL, STATE OR FEDERAL ADMINISTRATIVE BODY SUCH AS THE DEPARTMENT OF FAIR EMPLOYMENT AND HOUSING, THE EQUAL EMPLOYMENT OPPORTUNITY COMMISSION OR THE WORKERS' COMPENSATION BOARD. THIS AGREEMENT DOES, HOWEVER, PRECLUDE ME FROM PURSUING COURT ACTION REGARDING ANY SUCH CLAIM.

13.6 Consideration. I UNDERSTAND THAT EACH PARTY'S PROMISE TO RESOLVE CLAIMS BY ARBITRATION IN ACCORDANCE WITH THE PROVISIONS OF THIS AGREEMENT, RATHER THAN THROUGH THE COURTS, IS CONSIDERATION FOR THE OTHER PARTY'S LIKE PROMISE. I FURTHER UNDERSTAND THAT I AM OFFERED EMPLOYMENT IN CONSIDERATION OF MY PROMISE TO ARBITRATE CLAIMS.

13.7 Voluntary Nature of Agreement. I ACKNOWLEDGE THAT I AM EXECUTING THIS AGREEMENT VOLUNTARILY AND WITHOUT ANY DURESS OR UNDUE INFLUENCE BY THE COMPANY OR ANYONE ELSE. I FURTHER ACKNOWLEDGE AND AGREE THAT I HAVE CAREFULLY READ THIS AGREEMENT AND THAT I HAVE ASKED ANY QUESTIONS NEEDED FOR ME TO UNDERSTAND THE TERMS, CONSEQUENCES AND BINDING EFFECT OF THIS AGREEMENT AND FULLY UNDERSTAND IT, INCLUDING WITHOUT LIMITATION THAT ***I AM WAIVING MY RIGHT TO A JURY TRIAL***. FINALLY, I ACKNOWLEDGE THAT I HAVE A RIGHT TO SEEK THE ADVICE OF AN ATTORNEY OF MY CHOICE BEFORE SIGNING THIS AGREEMENT, AND THAT I HAVE BEEN PROVIDED A REASONABLE OPPORTUNITY TO DO SO.

14. GENERAL PROVISIONS

14.1 Governing Law and Consent to Personal Jurisdiction. The internal laws of the Commonwealth of Massachusetts govern this Agreement. I expressly consent to the personal jurisdiction of the superior court, or the business litigation session of the superior court, in Suffolk County, Massachusetts, for any lawsuit filed there against me by the Company arising from or relating to this Agreement.

14.2 Entire Agreement. This Agreement sets forth the entire agreement and understanding between the Company and me relating to the subject matter of this Agreement. This Agreement supersedes all prior or contemporaneous discussions between us. No modification of this Agreement or amendment to it, nor any waiver of any rights under this Agreement, will be effective unless in writing signed by the party to be charged. Any subsequent change or changes in my duties, obligations, rights, salary, or compensation will not affect the validity or scope of this Agreement.

14.3 Judicial Modification. The covenants contained in Sections 9 and 10 will be construed as a series of separate covenants, one for each country, city, state, or similar subdivision in any Geographic Area. If, in any judicial proceeding, a court refuses to enforce any of these separate covenants (or any part of a covenant), then the unenforceable covenant (or part) will be eliminated from this Agreement to the extent necessary to permit the remaining separate covenants (or portions) to be enforced. In the event that the provisions of this section are deemed to exceed the time, geographic, or scope limitations permitted by law, then the provisions will be reformed to the maximum time, geographic, or scope limitations permitted by law

14.4 Severability. If one or more of the provisions in this Agreement is deemed void by law, then the remaining provisions will continue in full force and effect.

14.5 Successors and Assigns. This Agreement will be binding upon my heirs, executors, assigns, administrators, and other legal representatives and will be for the benefit of the Company, its successors, and its assigns. The Company may assign this Agreement to a successor to all or part of its business or assets without restriction. I may not assign this Agreement to any third party. Any assignment that is not permitted under this Section 14.5 above will be null and void. There are no intended third party beneficiaries to this Agreement except as expressly stated.

14.6 Headings. Headings are used in this Agreement for reference only and will not be considered when interpreting this Agreement.

14.7 Waiver. Waiver by the Company of a breach of any provision of this Agreement will not operate as a waiver of any other or subsequent breach.

14.8 Survivorship. The rights and obligations of the parties will survive termination of my employment with the Company.

14.9 Counterparts. This Agreement may be signed in two counterparts, each of which shall be deemed an original, with the same force and effectiveness as though executed in a single document. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, *e.g.*, www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

14.10 **I ACKNOWLEDGE THAT I HAVE THE RIGHT, AND THAT I HAVE HAD A REASONABLE OPPORTUNITY, TO SEEK THE ADVICE OF INDEPENDENT LEGAL COUNSEL AND THAT I HAVE READ THIS AGREEMENT CAREFULLY AND I UNDERSTAND AND ACCEPT THE OBLIGATIONS WHICH IT IMPOSES UPON ME WITHOUT RESERVATION. NO PROMISES OR REPRESENTATIONS HAVE BEEN MADE TO ME TO INDUCE ME TO SIGN THIS AGREEMENT.**

SANA BIOTECHNOLOGY, INC.

By: /s/ Robin Andrulevich
Printe Printed Name: Robin Andrulevich
Title: Chief People Officer
Date: April 23, 2020

EMPLOYEE

/s/ Richard Mulligan
Printed Name: Richard Mulligan
Date: April 23, 2020
Address: 121 Cantitoe Street Katonah, N.Y. 10536

Exhibit 10.8

SANA BIOTECHNOLOGY, INC.
1616 Eastlake Avenue East, Suite 360
Seattle, Washington 98102

October 19, 2018

Mr. Christian Hordo
Sent via email

Re: Employment Terms

Dear Christian:

Sana Biotechnology, Inc. (the "Company"), is pleased to offer you fulltime employment in the exempt position of SVP, Chief Business Officer, effective as of November 16, 2018 (the date you actually commence employment, your "Commencement Date"), in which you will be responsible for such duties as are normally associated with such position or as otherwise determined by the Chief Executive Officer of the Company. You will report to Steven Harr, the Chief Executive Officer of the Company, or such other individual as the Company may designate, and will be initially headquartered in our Seattle offices, or such other location as the Company may designate, except for such travel as may be necessary to fulfill your responsibilities. In the course of your employment with Company, you will be subject to and required to comply with all company policies, and applicable laws and regulations.

You will be paid a base salary at the monthly rate of $28,333.34 (subject to required tax withholding and other authorized deductions), equivalent to $340,000 on an annualized basis. Your base salary will be payable in accordance with the Company's standard payroll policies and subject to adjustment pursuant to the Company's policies as in effect from time to time.

In addition to your base salary, you will be eligible for an annual cash bonus, at the discretion of the Board of Directors of the Company (the "Board"). Your target annual bonus shall be 35% of your base salary, but the actual amount of your annual bonus may be more or less (and may equal zero). Any annual bonus awarded to you shall be paid within two and a half months following the year to which the annual bonus relates and will be contingent upon your continued employment through the applicable payment date. You hereby acknowledge and agree that nothing contained herein confers upon you any right to an annual bonus in any year, and that whether the Company pays you an annual bonus and the amount of any such annual bonus will be determined by the Company in its sole discretion.

In contemplation of you entering into this offer letter, on November 1, 2018 the Company issued you 3,900,000 shares of the Company's common stock (the "Restricted Shares"), all of which are subject to a risk of forfeiture in the event you terminate employment with the Company. The Restricted Shares will vest, and the risk of forfeiture thereon lapse, in respect of 25% of the total number of Restricted Shares on the first anniversary of November 1, 2018 and 1/48th of the total number of Restricted Shares will vest, and the risk of forfeiture thereon lapse, on each monthly anniversary thereafter, in each case, subject to your continued employment through the vesting date. The Restricted Shares remain subject to the restricted stock agreement entered into between you and the Company.

You will be eligible to receive future stock options and other equity awards in the discretion of the Board.

You will be eligible to participate in all of the employee benefits and benefit plans that the Company generally makes available to its regular fulltime employees. You will be eligible for paid time off, vacation and/or paid sick leave in accordance with applicable law and Company policy.

The Company requires that, as a full-time employee, you devote your full business time, attention, skill, and efforts to the tasks and duties of your position as assigned by the Company. If you wish to request consent to provide services (for any or no form of compensation) to any other person or business entity while employed by the Company, please discuss that with me in advance of accepting another position.

As a condition of employment, you will be required (1) to sign and comply with an At- Will Employment Agreement, a copy of which is attached hereto as Exhibit A, which, among other things, prohibits unauthorized use or disclosure of Company proprietary information; (2) to sign and return a satisfactory I-9 Immigration form attached hereto as Exhibit B and provide sufficient documentation establishing your employment eligibility in the United States of America (enclosed is a list of acceptable INS Form 1-9 documentation); and (3) to provide satisfactory proof of your identity as required by U.S. law.

By signing below, you represent that your performance of services to the Company will not violate any duty which you may have to any other person or entity (such as a present or former employer), including obligations concerning providing services (whether or not competitive) to others, confidentiality of proprietary information and assignment of inventions, ideas, patents or copyrights, and you agree that you will not do anything in the performance of services hereunder that would violate any such duty.

Notwithstanding any of the above, your employment with the Company is “at will.” This means that it is not for any specified period of time and can be terminated by you or by the Company at any time, with or without advance notice, and for any or no particular reason or cause. It also means that your job duties, title and responsibility and reporting level, work schedule, compensation and benefits, as well as the Company’s personnel policies and procedures, may be changed with prospective effect, with or without notice, at any time in the sole discretion of the Company.

Without limiting the foregoing, if at any time other than during a Change in Control Period (as defined below) your employment with the Company is terminated by the Company without Cause (other than due to your death or disability) or you resign for Good Reason (each, as defined herein) and you deliver to the Company a general release of all claims against the Company and its affiliates in a form reasonably acceptable to the Company (a “Release”) that becomes effective and irrevocable within 60 days following such termination of employment, then you shall be entitled to receive (i) continuing payments of severance pay (less applicable withholding taxes)

for a period of nine (9) months to be paid periodically in accordance with the Company's normal payroll policies at a rate equal to the sum of your monthly base salary rate and one-twelfth of your target annual bonus, in each case as in effect immediately prior to your termination (but without taking into account any reduction of your base salary or target annual bonus in breach of this letter), less applicable withholdings, with such installments to commence on the first payroll date following the date the Release becomes effective and irrevocable, with the first installment to include any amount that would have been paid had the Release been effective and irrevocable on your termination date and (ii) direct payment or reimbursement for premiums for continued health, vision and dental benefit coverage through COBRA for you, your spouse and dependents at the same level of coverage as in effect for you on the day immediately preceding the day of termination of employment for a period ending on the earlier of (a) nine (9) months after the date of termination of employment and (b) the date you are eligible to receive health, vision and dental benefits through a new employer. In addition, concurrent with the termination of your employment with the Company, you may (at the Company's sole discretion) be provided the opportunity to enter into a consulting agreement (the "Consulting Agreement") with the Company with a nine (9) month term (the "Consulting Term," and the last day of the Consulting Term, the "Final Consulting Date"), which would: (x) provide for annual consulting fees equal to your annual salary as in effect on the date of your termination of your employment, (y) require that you provide, or be available to provide, services to the Company in your areas of expertise on an exclusive basis within the Company's industry during the Consulting Term, and (z) provide that the vesting of each equity award held by you will be accelerated in respect of that number of shares of Company common stock that would have vested had you remained employed for the nine (9) months immediately following your termination date and (iv) each stock option held by you that is vested on your termination date (after giving effect to any accelerated vesting provided in connection with your termination of employment) will remain exercisable until the earlier of 90 days after the Final Consulting Date or the original expiration date thereof. All other terms and conditions of the Consulting Agreement will be mutually agreed between you and the Company.

Further notwithstanding the foregoing, if at any time during a Change in Control Period your employment with the Company is terminated by the Company without Cause (other than due to your death or disability) or you resign for Good Reason and you deliver to the Company a Release that becomes effective and irrevocable within 60 days following such termination of employment, then, in lieu of the benefits provided in the preceding paragraph, you shall be entitled to receive (i) your base salary at the rate in effect immediately prior to your date of termination during the period of time commencing on the termination date and ending on the twelve (12) month anniversary of your date of termination plus your target annual bonus, paid in a single cash lump sum, less applicable withholdings, on the first payroll date following the date the Release becomes effective and irrevocable, with the first installment to include any amount that would have been paid had the Release been effective and irrevocable on your termination date, (ii) direct payment or reimbursement for up to twelve (12) months of premiums for continued health, vision and dental benefit coverage through COBRA for you, your spouse and dependents at the same level of coverage as in effect for you on the day immediately preceding the day of termination of employment for a period ending on the earlier of (a) twelve (12) months after the date of termination of employment and (b) the date you are eligible to receive health, vision and dental benefits through a new employer, (iii) the vesting of each equity award held by you will be accelerated in respect of all of the shares of Company common stock subject thereto and (iv) each stock option held by you that is vested on your termination date (after giving effect to any accelerated vesting provided in connection with your termination of employment) will remain exercisable until the earlier of the 90 days after your termination date or the original expiration date thereof.

For purposes of this offer letter, the term "Cause" means: (i) a willful act of dishonesty made by you in connection with your responsibilities as an employee; (ii) your conviction of, or plea of *nolo contendere* to, a felony or any crime involving fraud, embezzlement or a material violation of federal or state law by you, any of which that the Board reasonably determines in good faith has had or will have a material detrimental

effect on the Company's reputation or business; (iii) your willful and material unauthorized use or disclosure of any proprietary information or trade secrets of the Company or any other party to whom you owe an obligation of nondisclosure as a result of your relationship with the Company; (iv) your willful material breach of any obligations under any written agreement or covenant with the Company; or (v) your continued substantial failure to perform your employment duties (other than as a result of your physical or mental incapacity). No termination for Cause under (iv) or (v) shall be effectuated until after you have received a written demand of performance from the CEO that specifically sets forth the factual basis for the CEO's determination that you have not substantially performed your duties and have failed to cure such non-performance to the CEO's reasonable satisfaction within thirty (30) business days after receiving such notice. For purposes of this definition, no act or failure to act shall be considered willful unless it is done in bad faith and without reasonable intent that the act or failure to act was in the best interest of the Company. Any act, or failure to act, based upon authority or instructions given to you pursuant to a resolution duly adopted by the Board or based on the advice of counsel for the Company will be conclusively presumed to be done or omitted to be done by you in good faith and in the best interest of the Company.

For purposes of this offer letter, the term "Good Reason" means your resignation within 30 days following expiration of any Cure Period (as defined below) following the occurrence of one or more of the following, without your written consent: (i) a material reduction in your base salary or target annual bonus; (ii) a material diminution of your title, duties, responsibilities or reporting lines; (iii) a change in the location of your employment of more than 50 miles; or (iv) failure of the Company to timely grant the Restricted Shares. No event will be considered Good Reason unless (a) you have given written notice to the Company of your intention to terminate your employment for Good Reason, describing the grounds for such action, no later than 90 days after the first occurrence of such circumstances, (b) you have provided the Company with at least 30 days in which to cure the circumstances (the "Cure Period"), and (c) if the Company is not successful in curing the circumstance, you end your employment within thirty days after the end of the Cure Period.

For purposes of this offer letter, the term "Change in Control" shall have the meaning ascribed such term in the Company's 2018 Equity Incentive Plan, provided, that such event constitutes a "change in control event" within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended (the "Code").

For purposes of this offer letter, the term "Change in Control Period" shall mean the period commencing three (3) months prior to a Change in Control and ending twelve (12) months after the Change in Control.

No amount deemed deferred compensation subject to Section 409A of the Code shall be payable pursuant to this offer letter unless your termination of employment constitutes a "separation from service" with the Company within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended, and the Department of Treasury regulations and other guidance promulgated thereunder. For purposes of Section 409A of the Code (including, without limitation, for purposes of Treasury Regulation Section 1.409A-2(b)(2)(iii)), your right to receive any installment payments under this offer letter shall be treated as a right to receive a series of separate payments and, accordingly, each such installment payment shall at all times be considered a separate and distinct payment. To the extent that any reimbursements payable pursuant to this offer letter are subject to the provisions of Section 409A of the Code, any such reimbursements payable to you pursuant to this offer letter shall be paid to you no later than December 31 of the year following the year in which the expense was incurred, the amount of expenses reimbursed in one year shall not affect the amount eligible for reimbursement in any subsequent year, and your right to reimbursement under this offer letter will not be subject to liquidation or exchange for another benefit.

You are not required to seek other employment or otherwise mitigate the value of any severance benefits contemplated by this offer letter, nor will any such benefits be reduced by any earnings or benefits that you may receive from any other source, except as otherwise expressly set forth above with respect to continued group life, health, vision and dental benefits.

In addition to any indemnification provided by the Company's organizational documents, the Company will enter into an indemnification agreement with you as an officer in the form used for other officers.

If you accept this offer, this letter and the At-Will Employment Agreement shall constitute the complete agreement between you and Company with respect to the terms and conditions of your employment. Any prior or contemporaneous representations (whether oral or written) not contained in this letter or the At-Will Employment Agreement or contrary to those contained in this letter or the At-Will Employment Agreement, that may have been made to you are expressly cancelled and superseded by this offer.

This offer letter shall be interpreted and construed in accordance with the laws of the State of Washington without regard to any conflicts of laws principles. While other terms and conditions of your employment may change in the future, the at-will nature of your employment may not be changed, except in a subsequent letter or written agreement, signed by you and the Chief Executive Officer of the Company.

(*Signature Page Follows*)

Please sign and date this letter and the At-Will Employment Agreement, and return it to me by email at Robin.Andrulevich@sana.com by November 9, 2018 if you wish to accept employment at the Company under the terms described above, after which time this offer of employment will expire. If you accept our offer, we would like you to commence your employment with us as soon as practicable.

If you have any questions, regarding this letter or employment with the Company, please feel free to contact me by phone at 206-898-3871 or by email at robin.andrulevich@sana.com. We look forward to your favorable reply and to a productive and enjoyable work relationship.

Sincerely,

SANA BIOTECHNOLOGY, INC.

By: Robin Andrulevich
Name: Robin Andrulevich
Title: Chief People Officer

Accepted by:

/s/ Christian Hordo
Christian Hordo

November 9, 2018
Date

SANA BIOTECHNOLOGY, INC.
AT-WILL EMPLOYEE AGREEMENT

As a condition of my employment with Sana Biotechnology, Inc. (the "**Company**"), and in consideration of my employment with the Company and my receipt of the compensation paid to me by the Company now and in the future, I agree to the following:

1. AT-WILL EMPLOYMENT

MY EMPLOYMENT WITH THE COMPANY IS FOR AN UNSPECIFIED DURATION AND CONSTITUTES "AT-WILL" EMPLOYMENT. ANY REPRESENTATION TO THE CONTRARY IS UNAUTHORIZED AND NOT VALID UNLESS OBTAINED IN WRITING AND SIGNED BY THE PRESIDENT OR CEO OF COMPANY. THIS EMPLOYMENT RELATIONSHIP MAY BE TERMINATED AT ANY TIME, WITH OR WITHOUT GOOD CAUSE OR FOR ANY OR NO CAUSE, AT EITHER MY OPTION OR THE COMPANY'S OPTION, WITH OR WITHOUT NOTICE. THE AT-WILL NATURE OF MY EMPLOYMENT ALSO MEANS THAT I CAN BE TRANSFERRED OR DEMOTED, AND MY JOB TITLE, COMPENSATION, BENEFITS AND OTHER TERMS AND CONDITIONS OF EMPLOYMENT CAN BE REDUCED, WITHOUT CAUSE. NOTHING IN AN EMPLOYEE HANDBOOK OR OTHER POLICY OF THE COMPANY WILL BE CONSTRUED AS CHANGING MY AT-WILL EMPLOYMENT STATUS. THE COMPANY MAY MODIFY JOB TITLES, SALARIES, AND BENEFITS FROM TIME TO TIME AS IT DEEMS NECESSARY.

2. CONFIDENTIAL INFORMATION

2.1 Definition. "Confidential Information" means any non-public information that relates to the actual or anticipated business, research, or development of the Company and any proprietary information, technical data, trade secrets, and know-how of the Company, disclosed to me by the Company, directly or indirectly, in writing, orally, or by inspection or observation of tangible items. Confidential Information includes both Information disclosed by the Company to me, and information developed or learned by me during the course of my employment with the Company. Confidential Information includes, but is not limited to, Company research, product plans, products, services, customers, customer lists, markets, software, developments, inventions, processes, formulas, technology, designs, drawings, engineering, hardware configuration information, marketing, finances, and other business information. Confidential Information will not include any information that (a) was publicly known and made generally available in the public domain prior to the time the Company disclosed the information to me, (b) became publicly known and made generally available, after disclosure to me by the Company, through no wrongful action or inaction by me or by others who were under confidentiality obligations, or (c) was in my rightful possession, without confidentiality restrictions, at the time of disclosure by the Company, as shown by my files and records.

2.2 Use and Non-Use. At all times during the term of my employment and after my employment ends, I will hold all Confidential Information in strictest confidence and not use it for any purpose except for the benefit of the Company to fulfill my employment obligations. I will not disclose Confidential Information to any third party without the prior written authorization of the president, CEO, or the Board of Directors of the Company. Confidential Information will remain the sole property of the Company. I will take all reasonable precautions to prevent any unauthorized use or disclosure of the Confidential Information. Prior to disclosure when compelled by applicable law, I will provide written notice to the president, CEO, and general counsel of the Company, as applicable. I understand that my unauthorized use or disclosure of Confidential Information during my employment will lead to disciplinary action, up to and including immediate termination and legal action by the Company. I understand that my obligations under this Section 2.2 will continue after termination of my employment.

If I become compelled by law, regulation (including without limitation the rules of any applicable securities exchange), court order, or other governmental authority to disclose the Confidential Information, I shall, to the extent possible and permissible under applicable law, first give the Company prompt notice. I agree to cooperate reasonably with the Company in any proceeding to obtain a protective order or other remedy. If such protective order or other remedy is not obtained, I shall only disclose that portion of such Confidential Information required to be disclosed, in the opinion of my legal counsel. I shall request that confidential treatment be accorded such Confidential Information, where available. Compulsory disclosures made pursuant to this section shall not relieve me of my obligations of confidentiality and non-use with respect to non-compulsory disclosures. I understand that nothing herein is intended to or shall prevent me from communicating directly with, cooperating with, or providing information to, any federal, state or local government regulator, including, but not limited to, the U.S. Securities and Exchange Commission, the U.S. Commodity Futures Trading Commission, or the U.S. Department of Justice. I shall promptly notify my supervisor or any officer of the Company if I learn of any possible unauthorized use or disclosure of Confidential Information and shall cooperate fully with the Company to enforce its rights in such information.

2.3 Former Employer Confidential Information. I will not, during my employment with the Company, improperly use, disclose, or induce the Company to use any proprietary information or trade secrets of any former or concurrent employer or other person or entity with which I have an obligation to keep information in confidence. Furthermore, I will not bring onto the premises of the Company or transfer onto the Company's technology systems any unpublished document or proprietary information belonging to any third party unless consented to in writing by both the Company and such third party.

2.4 Third Party Information. I recognize that the Company has received and in the future will receive from third parties their confidential or proprietary information subject to a duty on the Company's part to maintain the confidentiality of this information and to use it only for certain limited purposes. I will hold all of this confidential or proprietary information in the strictest confidence and not disclose it to any third party or use it except as necessary in carrying out my work for the Company consistent with the Company's agreements with these third parties. I understand that my unauthorized use or disclosure of third parties' confidential or proprietary information during my employment will lead to disciplinary action, up to and including immediate termination and legal action by the Company.

2.5 Defend Trade Secrets Act Notice of Immunity Rights. I acknowledge that the Company has provided me with the following notice of immunity rights in compliance with the requirements of the Defend Trade Secrets Act: (a) I shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of Confidential Information that is made in confidence to a Federal, State, or local government official or to an attorney solely for the purpose of reporting or investigating a suspected violation of law, (b) I shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of Confidential Information that is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal and (c) if I file a lawsuit for retaliation by the Company for reporting a suspected violation of law, I may disclose the Confidential Information to my attorney and use the Confidential Information in the court proceeding, if I file any document containing the Confidential Information under seal, and do not disclose the Confidential Information, except pursuant to court order.

3. INVENTIONS

3.1 Inventions Defined. "**Inventions**" means inventions, original works of authorship, developments, concepts, improvements, designs, discoveries, ideas, know-how, trademarks, and trade secrets, whether or not patentable or registrable under copyright or similar laws, that I may solely or jointly author, conceive, develop, or reduce to practice.

3.2 Assignment of Inventions and Works Made for Hire. I will promptly make a full written disclosure to the Company of any and all Inventions that I create within the scope of and during the period of my employment with the Company (including without limitation during my off-duty hours) ("**Company Inventions**"). I will hold in trust for the sole right and benefit of the Company, and I hereby assign to the Company or its designee, all of my right, title, and interest (including without limitation all related intellectual property rights and the right to sue and collect payment for past, present, and future infringement) in, all Company Inventions. In addition, all original works of authorship that are made by me (solely or jointly with others) within the scope of and during the period of my employment with the Company (including without limitation during my off-duty hours) and that are protectable by copyright are "works made for hire," as that term is defined in the United States Copyright Act, and in accordance, the Company will be considered the author of these works.

3.3 Exception to Assignments. The obligations to assign Inventions set forth in Section 3.2 apply with respect to all Company Inventions (a) whether or not such Company Inventions are conceived, made, developed or worked on by me during my regular hours of employment with the Company, (b) whether or not the Company Invention was made at the suggestion of the Company, (c) whether or not the Invention was reduced to drawings, written description, documentation, models or other tangible form, and (d) whether or not the Company Invention is related to the general line of business engaged in by the Company; but do not apply to Inventions that (i) I develop entirely on my own time or after the date of this Agreement without using the Company's equipment, supplies, facilities or Confidential Information, (ii) do not relate to the Company's business, or actual or demonstrably anticipated research or development of the Company at the time of conception or reduction to practice of the Invention, and (iii) do not result from and are not related to any work performed by me for the Company.

I hereby acknowledge and agree that the Company has notified me that, if I reside in the state of Washington, assignments provided for in Section 3.2 do not apply to any Invention that qualifies fully for exemption from assignment under the provisions of the Revised Code of Washington Section 49.44.140. ("**RCW 49.44.140**"), a copy of which is attached as **Exhibit D** of this Agreement. I further understand that, to the extent this Agreement shall be construed in accordance with the laws of any State that precludes a requirement in an employee agreement to assign certain classes of inventions made by an employee, Section 3.2 shall be interpreted not to apply to any Invention that a court rules and/or the Company agrees falls within such classes.

At the Company's request, I will promptly disclose to the Company all Inventions made during and after my employment to determine the status of the Company Invention under Sections 3.2 and 3.3. The Company may disclose such Company Inventions to the department of employment security. If applicable, at the time of disclosure of an Invention that I believe qualifies under Section 2870, RCW 49.44.140, or any similar law, I shall provide to the Company, in writing, evidence to substantiate the belief that such Invention qualifies under such law.

3.4 Inventions Retained and Licensed. I have attached to this Agreement, as **Exhibit A**, a list describing all Inventions that were made by me prior to my employment with the Company, that relate to the Company's proposed business, products, or research and development, and that are not assigned to the Company under this Agreement (collectively, "**Prior Inventions**"). If no list is attached or if no Prior Inventions are listed on **Exhibit A**, I represent that there are no Prior Inventions. Furthermore, I represent and warrant that the inclusion of any Prior Inventions from **Exhibit A** of this Agreement will not

materially affect my ability to perform all obligations under this Agreement. If, in the course of my employment with the Company, I incorporate into a Company product, process, or machine an Invention owned by me or in which I have an interest, then I hereby grant to the Company a nonexclusive, royalty-free, irrevocable, perpetual, transferrable, worldwide license (with right to sublicense through multiple tiers) to make, have made, modify, use, import, offer for sale, sell, reproduce, distribute, modify, adapt, prepare derivative works of, display, perform, and otherwise exploit the Invention without restriction of any kind.

3.5 Third Party Inventions. I will not incorporate any original work of authorship, development, concept, improvement, or trade secret owned, in whole or in part, by any third party, into any Company Invention without the Company's prior written permission.

3.6 Moral Rights. Any assignment to the Company of Company Inventions includes without limitation all rights of attribution, paternity, integrity, modification, disclosure, and withdrawal and any other rights throughout the world that may be known as or referred to as "moral rights," artist's rights," or the like (collectively, "**Moral Rights**"). To the extent that Moral Rights cannot be assigned under applicable law, I hereby waive and agree not to enforce any and all Moral Rights, including without limitation any limitation on subsequent modification, to the extent permitted under applicable law.

3.7 Marketing of Company Inventions. The decision whether or not to commercialize or market any Company Invention developed by me solely or jointly with others is within the Company's sole discretion and for the Company's sole benefit. Neither the Company nor any other entity will be required to pay me a royalty as a result of the Company's efforts to commercialize or market any Company Invention.

3.8 Inventions Assigned to the United States. I will assign to the United States government all of my right, title, and interest in and to all Company Inventions whenever the full title is required to be assigned to the United States government by a contract between the Company and the United States government or any of its agencies.

3.9 Maintenance of Records. I will keep and maintain adequate and current written records of all Company Inventions. These records will be in the form of notes, sketches, drawings, electronic files, laboratory notebooks, and any other format that may be specified by the Company. At all times, the records will be available to the Company, and remain the sole property of the Company.

3.10 Further Assurances. I will assist the Company or its designee, at the Company's expense, in every proper way to secure and protect the Company's rights in Company Inventions and any related copyrights, patents, mask work rights, or other intellectual property rights in any and all countries. I will disclose to the Company all pertinent information and data. I will execute all applications, specifications, oaths, assignments, and all other instruments that the Company deems necessary in order to apply for and obtain these rights and in order to deliver, assign, and convey to the Company, its successors, assigns, and nominees the sole and exclusive rights, title, and interest in and to Company Inventions, and any related copyrights, patents, mask work rights, or other intellectual property rights. I will testify in a suit or other proceeding relating to such Company Inventions and any rights relating thereto. My obligation to execute or cause to be executed, when it is in my power to do so, any instrument or papers will continue after the termination of this Agreement. If the Company is unable because of my mental or physical incapacity or for any other reason to secure my signature to apply for or to pursue any application for any United States or foreign patents or copyright registrations covering Company Inventions assigned to the Company as above, then I hereby irrevocably designate and appoint the Company and its duly authorized officers and agents as my agent and attorney in fact. Accordingly, the Company may act for and in my behalf to execute and file any applications and to do all other lawfully permitted acts to further the prosecution and issuance of patent or copyright registrations with the same legal force and effect as if executed by me.

4. NO CONFLICTING OBLIGATIONS

4.1 Current Obligations. During the term of my employment with the Company, I will not engage in any other employment, occupation, consulting, or other business activity directly relating to the business in which the Company is now involved, becomes involved, or has plans to become involved during the term of my employment. I will also not engage in any other activities that conflict with my obligations to the Company.

4.2 Prior Relationships. Without limiting Section 4.1, I represent that I have no other agreements, relationships or commitments to any other person or entity that conflict with my obligations to the Company under this Agreement or my ability to become employed and perform the services for which I am being hired by the Company. If I have signed a confidentiality agreement or similar type of agreement with any former employer or other entity, I will comply with the terms of any such agreement to the extent that its terms are lawful under applicable law. I represent and warrant that after undertaking a careful search (including without limitation searches of my computers, cell phones, electronic devices and documents), I have returned all property and confidential information belonging to all prior employers (or other third parties I have performed services for in accordance with the terms of my applicable agreement). Moreover, if the Company or any of its employees or agents is sued based on any obligation or agreement to which I am a party or am bound, I will indemnify the Company and its employees and agents for all verdicts, judgments, settlements, and other losses that result from any breach of my obligations under this Agreement, as well as any reasonable attorneys' fees and costs if the plaintiff is the prevailing party in such an action.

5. COMPLIANCE WITH COMPANY POLICIES AND USE OF COMPANY EQUIPMENT AND FACILITIES

I will comply with all Company policies, including but not limited to policies relating to the use of the Internet and the use of Company equipment and facilities. I will not use Company equipment or facilities for any purpose except to fulfill my employment obligations for the benefit of the Company. I will follow all laws and regulations applicable to the use of Company equipment and facilities and access to or use of others' computer or communication systems. I acknowledge that the Company will maintain sole ownership of all equipment and any data stored on the equipment. I understand and consent that the Company reserves the right to view and disclose without prior notice, for any purpose, any data stored on Company equipment or passing through the Company's network, including but not limited to electronic mail and data downloaded from the Internet. I understand that I am not permitted to add any unlicensed, unauthorized or non-compliant applications to the Company's technology systems and that I shall refrain from copying unlicensed software onto the Company's technology systems or using non-licensed software or web sites.

I acknowledge that I have no expectation of privacy either in information in transit through the Company network or stored on Company equipment, including without limitation computer, email, handheld device, telephone, or voicemail. All information, data, and messages created, received, sent, or stored in these systems are, at all times, the property of the Company. As such, the Company has the right to audit and search all such items and systems, without further notice to me, to ensure that the Company is licensed to use the software on the Company's devices in compliance with the Company's software licensing policies, to ensure compliance with the Company's policies, and for any other business-related purposes in the Company's sole discretion. I am aware that Company has or may acquire software and systems that are capable of monitoring and recording all network traffic to and from any computer I may use. The Company reserves the right to access, review, copy, and

delete any of the information, data, or messages accessed through these systems with or without notice to me. This includes, but is not limited to, all e-mail messages, website visits, internet usage, chat sessions, and all file transfers into and out of the Company's internal networks. The Company may review internet and technology systems activity and analyze usage patterns, and may choose to publicize this data to assure that technology systems are devoted to legitimate business purposes.

6. RETURNING COMPANY MATERIALS

Upon leaving the employ of the Company, or upon Company's request during my employment, I will deliver to the Company (and will not keep in my possession, recreate, or deliver to anyone else) any and all Confidential Information, devices, records, data, notes, reports, proposals, lists, correspondence, specifications, drawings blueprints, sketches, materials, equipment, Company credit cards, electronically-stored information and passwords to access such property, and other documents or property, or reproductions of these items developed by me pursuant to my employment with the Company or otherwise belonging to the Company, its successors, or assigns. In addition, I will deliver those records maintained pursuant to Section 3.9 to the Company. Notwithstanding the foregoing, I may retain a copy of my Outlook Contacts or comparable contacts database and any documents of a personal nature, including without limitation diaries, calendars and personal documents relating to my employment, compensation, taxes or expenses. I consent to an exit interview to confirm my compliance with this Section 6.

7. NOTIFICATION TO NEW EMPLOYER

If my employment with the Company ends for any reason or no reason, the Company may notify my new employer about my rights and obligations under this Agreement.

8. CONFLICT OF INTEREST GUIDELINES

I will diligently adhere to the "Conflict of Interest Guidelines." A copy of the Company's current Conflict of Interest Guidelines is attached to this Agreement as **Exhibit B**, but I understand that the Conflict of Interest Guidelines may be revised from time to time during my employment.

9. TERMINATION CERTIFICATION

If my employment with the Company ends for any reason or no reason, I will sign and deliver to the Company the "Termination Certification" attached to this Agreement as **Exhibit C**. I will keep the Company advised of my home and business address for three years after termination of my employment with the Company so that the Company can contact me regarding my continuing obligations under this Agreement.

10. NON-COMPETITION

10.1 Non-Competition. In order to protect Confidential Information, I will not, during the period of my employment with the Company, and, to the extent permitted under applicable law, for a period of 12 months thereafter, whether my termination is with or without good cause or for any or no cause, and whether my termination is effected by either the Company or me, directly or indirectly, for myself or any third party other than the Company:

(a) provide services of any kind for any business (within the Geographic Area, as defined below) in connection with the development, manufacture, marketing, or sale of any product or service that I worked on in any capacity or in connection with which I had access to Confidential Information at any time during my employment with the Company, if the business's product or service (i) competes with any product or service sold or provided by the Company, (ii) competes with any product or service intended to be sold or provided by the Company at the time of the termination of my employment with the Company, or (iii) competed with any product or service sold or provided by the Company at any time during my employment with the Company;

(b) solicit sales from any of the Company's customers for any product or service that (i) competes with any product or service sold or provided by the Company, (ii) competes with any product or service intended to be sold or provided by the Company at the time of the termination of my employment with the Company, or (iii) competed with any product or service sold or provided by the Company at any time during my employment with the Company;

(c) entice any vendor, consultant, collaborator, agent, or contractor of the Company to cease its business relationship with the Company or engage in any activity that would cause them to cease their business relationship with the Company; or

(d) solicit, induce, recruit, or encourage any of the Company's employees to leave their employment, or attempt to solicit, induce, recruit, encourage, or take away Company employees.

10.2 Geographic Area Definition. "**Geographic Area**" means anywhere in the world where the Company conducts business.

10.3 Severability. The covenants contained in this Section 10 will be construed as a series of separate covenants, one for each country, city, state, or similar subdivision in any Geographic Area. If, in any judicial proceeding, a court refuses to enforce any of these separate covenants (or any part of a covenant), then the unenforceable covenant (or part) will be eliminated from this Agreement to the extent necessary to permit the remaining separate covenants (or portions) to be enforced. In the event that the provisions of this section are deemed to exceed the time, geographic, or scope limitations permitted by law, then the provisions will be reformed to the maximum time, geographic, or scope limitations permitted by law.

10.4 Reasonableness. The nature of the Company's business is such that if I were to become employed by, or substantially involved in, the business of a competitor to the Company, it would be difficult not to rely on or use Confidential Information. Therefore, I enter into this Agreement to reduce the likelihood of disclosure of Confidential Information. I acknowledge that the limitations of time, geography, and scope of activity agreed to above are reasonable because, among other things, (a) the Company is engaged in a highly competitive industry, (b) I will have access to Confidential Information, including but not limited to the Company's trade secrets, know-how, plans, and strategy (and in particular, the competitive strategy of the Company), (c) in the event my employment with the Company ends, I will be able to obtain suitable and satisfactory employment in my chosen profession without violating this Agreement, (d) these limitations are necessary to protect Confidential Information, and the goodwill of the Company, and (e) these limitations will apply even if I am transferred or demoted, or my job title, compensation, benefits and other terms and conditions of employment are reduced.

11. COMPENSATION

All compensation for services rendered to third parties during the term of my employment with the Company, including without limitation equity or equity-type payments, and consulting or advisory fees, will be paid to the Company unless otherwise unanimously approved by the Board of Directors of the Company in writing.

12. REPRESENTATIONS

I will execute any proper oath or verify any proper document required to carry out the terms of this Agreement. I represent and warrant that my performance of all the terms of this Agreement will not breach any agreement to keep in confidence proprietary information acquired by me in confidence or in trust prior to my employment by the Company. I have not entered into, and I will not enter into, any oral or written agreement in conflict with this Agreement.

13. ARBITRATION AND EQUITABLE RELIEF

13.1 Arbitration. EXCEPT AS PROVIDED IN SECTION 13.4, ANY DISPUTE OR CONTROVERSY ARISING OUT OF, RELATING TO, OR CONCERNING ANY INTERPRETATION, CONSTRUCTION, PERFORMANCE, OR BREACH OF THIS AGREEMENT, WILL BE SETTLED BY

ARBITRATION TO BE HELD IN KING COUNTY, WASHINGTON, IN ACCORDANCE WITH THE EMPLOYMENT DISPUTE RESOLUTION RULES THEN IN EFFECT OF THE AMERICAN ARBITRATION ASSOCIATION ("**RULES**"). THE ARBITRATOR MAY GRANT INJUNCTIONS OR OTHER RELIEF IN A DISPUTE OR CONTROVERSY. THE DECISION OF THE ARBITRATOR WILL BE FINAL, CONCLUSIVE, AND BINDING ON THE PARTIES TO THE ARBITRATION. JUDGMENT MAY BE ENTERED ON THE ARBITRATOR'S DECISION IN ANY COURT HAVING JURISDICTION. THE COMPANY WILL PAY ALL ARBITRATION FEES, EXCEPT AN AMOUNT EQUAL TO THE FILING FEES I WOULD HAVE PAID HAD I FILED A COMPLAINT IN A COURT OF LAW. THE COMPANY AND I WILL EACH SEPARATELY PAY OUR COUNSEL FEES AND EXPENSES.

13.2 Waiver of Right to Jury Trial. THIS ARBITRATION CLAUSE CONSTITUTES A WAIVER OF MY RIGHT TO A JURY TRIAL AND RELATES TO THE RESOLUTION OF ALL DISPUTES RELATING TO ALL ASPECTS OF MY EMPLOYMENT RELATIONSHIP WITH THE COMPANY (EXCEPT AS PROVIDED IN SECTION 13.4 BELOW), INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING CLAIMS:

(a) CLAIMS FOR WRONGFUL DISCHARGE OF EMPLOYMENT, BREACH OF CONTRACT, BOTH EXPRESS AND IMPLIED, BREACH OF THE COVENANT OF GOOD FAITH AND FAIR DEALING, BOTH EXPRESS AND IMPLIED, NEGLIGENT OR INTENTIONAL INFLICTION OF EMOTIONAL DISTRESS, NEGLIGENT OR INTENTIONAL MISREPRESENTATION, NEGLIGENT OR INTENTIONAL INTERFERENCE WITH CONTRACT OR PROSPECTIVE ECONOMIC ADVANTAGE, AND DEFAMATION;

(b) CLAIMS FOR VIOLATION OF ANY FEDERAL, STATE, OR MUNICIPAL STATUTE, INCLUDING, BUT NOT LIMITED TO, TITLE VII OF THE CIVIL RIGHTS ACT OF 1964, THE CIVIL RIGHTS ACT OF 1991, THE AGE DISCRIMINATION IN EMPLOYMENT ACT OF 1967, THE AMERICANS WITH DISABILITIES ACT OF 1990, THE FAIR LABOR STANDARDS ACT, AND REVISED CODE OF WASHINGTON SECTION 49.60.010, ET SEQ.; AND

(c) CLAIMS ARISING OUT OF ANY OTHER LAWS AND REGULATIONS RELATING TO EMPLOYMENT OR EMPLOYMENT DISCRIMINATION.

NOTHING IN THIS AGREEMENT CONSTITUTES A WAIVER OF MY RIGHTS UNDER SECTION 7 OF THE NATIONAL LABOR RELATIONS ACT.

13.3 Remedy. EXCEPT AS PROVIDED BY THE RULES AND THIS AGREEMENT, ARBITRATION SHALL BE THE SOLE, EXCLUSIVE AND FINAL REMEDY FOR ANY DISPUTE BETWEEN ME AND THE COMPANY. ACCORDINGLY, EXCEPT AS PROVIDED FOR BY THE RULES AND THIS AGREEMENT, NEITHER I NOR THE COMPANY WILL BE PERMITTED TO PURSUE COURT ACTION REGARDING CLAIMS THAT ARE SUBJECT TO ARBITRATION. NOTWITHSTANDING, THE ARBITRATOR WILL NOT HAVE THE AUTHORITY TO DISREGARD OR REFUSE TO ENFORCE ANY LAWFUL COMPANY POLICY, AND THE ARBITRATOR SHALL NOT ORDER OR REQUIRE THE COMPANY TO ADOPT A POLICY NOT OTHERWISE REQUIRED BY LAW. NOTHING IN THIS AGREEMENT OR IN THIS PROVISION IS INTENDED TO WAIVE THE PROVISIONAL RELIEF REMEDIES AVAILABLE UNDER THE RULES.

13.4 Equitable Remedies. THE COMPANY OR I MAY APPLY TO ANY COURT OF COMPETENT JURISDICTION FOR A TEMPORARY RESTRAINING ORDER, PRELIMINARY INJUNCTION, OR OTHER INTERIM OR CONSERVATORY RELIEF, AS NECESSARY, WITHOUT BREACH OF THIS AGREEMENT AND WITHOUT ABRIDGEMENT OF THE POWERS OF THE ARBITRATOR.

13.5 Administrative Relief. I UNDERSTAND THAT THIS AGREEMENT DOES NOT PROHIBIT ME FROM PURSUING AN ADMINISTRATIVE CLAIM WITH A LOCAL, STATE OR FEDERAL ADMINISTRATIVE BODY SUCH AS THE DEPARTMENT OF FAIR EMPLOYMENT AND HOUSING, THE EQUAL EMPLOYMENT OPPORTUNITY COMMISSION OR THE WORKERS' COMPENSATION BOARD. THIS AGREEMENT DOES, HOWEVER, PRECLUDE ME FROM PURSUING COURT ACTION REGARDING ANY SUCH CLAIM.

13.6 Consideration. I UNDERSTAND THAT EACH PARTY'S PROMISE TO RESOLVE CLAIMS BY ARBITRATION IN ACCORDANCE WITH THE PROVISIONS OF THIS AGREEMENT, RATHER THAN THROUGH THE COURTS, IS CONSIDERATION FOR THE OTHER PARTY'S LIKE PROMISE. I FURTHER UNDERSTAND THAT I AM OFFERED EMPLOYMENT IN CONSIDERATION OF MY PROMISE TO ARBITRATE CLAIMS.

13.7 Voluntary Nature of Agreement. I ACKNOWLEDGE THAT I AM EXECUTING THIS AGREEMENT VOLUNTARILY AND WITHOUT ANY DURESS OR UNDUE INFLUENCE BY THE COMPANY OR ANYONE ELSE. I FURTHER ACKNOWLEDGE AND AGREE THAT I HAVE CAREFULLY READ THIS AGREEMENT AND THAT I HAVE ASKED ANY QUESTIONS NEEDED FOR ME TO UNDERSTAND THE TERMS, CONSEQUENCES AND BINDING EFFECT OF THIS AGREEMENT AND FULLY UNDERSTAND IT, INCLUDING WITHOUT LIMITATION THAT ***I AM WAIVING MY RIGHT TO A JURY TRIAL***. FINALLY, I ACKNOWLEDGE THAT I HAVE BEEN PROVIDED AN OPPORTUNITY TO SEEK THE ADVICE OF AN ATTORNEY OF MY CHOICE BEFORE SIGNING THIS AGREEMENT.

14. GENERAL PROVISIONS

14.1 Governing Law and Consent to Personal Jurisdiction. The internal laws of the state of Washington, but not the choice of law rules of the state of Washington, govern this Agreement. I expressly consent to the personal jurisdiction of the state and federal courts located in King County, Washington, for any lawsuit filed there against me by the Company arising from or relating to this Agreement.

14.2 Entire Agreement. This Agreement sets forth the entire agreement and understanding between the Company and me relating to the subject matter of this Agreement. This Agreement supersedes all prior or contemporaneous discussions between us. No modification of this Agreement or amendment to it, nor any waiver of any rights under this Agreement, will be effective unless in writing signed by the party to be charged. Any subsequent change or changes in my duties, obligations, rights, salary, or compensation will not affect the validity or scope of this Agreement.

14.3 Severability. If one or more of the provisions in this Agreement is deemed void by law, then the remaining provisions will continue in full force and effect.

14.4 Successors and Assigns. This Agreement will be binding upon my heirs, executors, assigns, administrators, and other legal representatives and will be for the benefit of the Company, its successors, and its assigns. The Company may assign this Agreement to a successor to all or part of its business or assets without restriction. I may not assign this Agreement to any third party. Any assignment that is not permitted under this Section 14.4 above will be null and void. There are no intended third party beneficiaries to this Agreement except as expressly stated.

14.5 Headings. Headings are used in this Agreement for reference only and will not be considered when interpreting this Agreement.

14.6 Waiver. Waiver by the Company of a breach of any provision of this Agreement will not operate as a waiver of any other or subsequent breach.

14.7 Survivorship. The rights and obligations of the parties will survive termination of my employment with the Company.

14.8 Signatures. This Agreement may be signed in two counterparts, each of which shall be deemed an original, with the same force and effectiveness as though executed in a single document.

14.9 I ACKNOWLEDGE THAT I HAVE HAD THE OPPORTUNITY TO SEEK THE ADVICE OF INDEPENDENT LEGAL COUNSEL AND THAT I HAVE READ THIS AGREEMENT CAREFULLY AND I UNDERSTAND AND ACCEPT THE OBLIGATIONS WHICH IT IMPOSES UPON ME WITHOUT RESERVATION. NO PROMISES OR REPRESENTATIONS HAVE BEEN MADE TO ME TO INDUCE ME TO SIGN THIS AGREEMENT.

SANA BIOTECHNOLOGY, INC.

By: /s/ Robin Andrulevich
Title: Chief People Officer
Date: November 10, 2018

EMPLOYEE

/s/ Christian Hordo
Print Name:Christian Hordo
Date: November 9, 2018

Exhibit 10.9

SANA BIOTECHNOLOGY, INC.
1616 Eastlake Avenue East, Suite 360
Seattle, Washington 98102

September 26, 2018

Nathan Hardy
123 7th Avenue
Kirkland, WA 98033

Re: Employment Terms

Dear Nate:

Sana Biotechnology, Inc. (the "Company"), is pleased to offer you fulltime employment in the exempt position of SVP, Chief Financial Officer, effective as of September 4, 2018 (the date you actually commence employment, your "Commencement Date"), in which you will be responsible for such duties as are normally associated with such position or as otherwise determined by the Chief Executive Officer of the Company. You will report to Steven Harr, the Chief Executive Officer of the Company, or such other individual as the Company may designate, and will be initially headquartered in our Seattle offices, or such other location as the Company may designate, except for such travel as may be necessary to fulfill your responsibilities. In the course of your employment with Company, you will be subject to and required to comply with all company policies, and applicable laws and regulations.

You will be paid a base salary at the monthly rate of $28,333.33 (subject to required tax withholding and other authorized deductions), equivalent to $340,000.00 on an annualized basis. Your base salary will be payable in accordance with the Company's standard payroll policies and subject to adjustment pursuant to the Company's policies as in effect from time to time.

In addition to your base salary, you will be eligible for an annual cash bonus, at the discretion of the Board of Directors of the Company (the "Board"). Your target annual bonus shall be 35% of your base salary, but the actual amount of your annual bonus may be more or less (and may equal zero). Any annual bonus awarded to you shall be paid within two and a half months following the year to which the annual bonus relates and will be contingent upon your continued employment through the applicable payment date. You hereby acknowledge and agree that nothing contained herein confers upon you any right to an annual bonus in any year, and that whether the Company pays you an annual bonus and the amount of any such annual bonus will be determined by the Company in its sole discretion.

In contemplation of you entering into this offer letter, on August 30, 2018 and September 24, 2018, the Company issued you 1,950,000 shares (on a post-split basis) and 95,000 shares, respectively, of the Company's common stock (the "Restricted Shares"), all of which are subject to a risk of forfeiture in the event you terminate employment with the Company. The Restricted Shares will vest, and the risk of forfeiture thereon lapse, in respect of 25% of the total number of Restricted Shares on the first anniversary of July 23, 2018 and l/48th of the total number of Restricted Shares will vest, and the risk of forfeiture thereon lapse, on each monthly anniversary thereafter, in each case, subject to your continued employment through the vesting date. The Restricted Shares remain subject to the restricted stock agreement entered into between you and the Company.

You will be eligible to receive future stock options and other equity awards in the discretion of the Board.

You will be eligible to participate in all of the employee benefits and benefit plans that the Company generally makes available to its regular fulltime employees. You will be eligible for paid time off, vacation and/or paid sick leave in accordance with applicable law and Company policy.

The Company requires that, as a full-time employee, you devote your full business time, attention, skill, and efforts to the tasks and duties of your position as assigned by the Company. If you wish to request consent to provide services (for any or no form of compensation) to any other person or business entity while employed by the Company, please discuss that with me in advance of accepting another position.

As a condition of employment, you will be required (1) to sign and comply with an At- Will Employment Agreement, a copy of which is attached hereto as Exhibit A, which, among other things, prohibits unauthorized use or disclosure of Company proprietary information; (2) to sign and return a satisfactory I-9 Immigration form attached hereto as Exhibit B and provide sufficient documentation establishing your employment eligibility in the United States of America (enclosed is a list of acceptable INS Form I-9 documentation); and (3) to provide satisfactory proof of your identity as required by U.S. law.

By signing below, you represent that your performance of services to the Company will not violate any duty which you may have to any other person or entity (such as a present or former employer), including obligations concerning providing services (whether or not competitive) to others, confidentiality of proprietary information and assignment of inventions, ideas, patents or copyrights, and you agree that you will not do anything in the performance of services hereunder that would violate any such duty.

Notwithstanding any of the above, your employment with the Company is "at will." This means that it is not for any specified period of time and can be terminated by you or by the Company at any time, with or without advance notice, and for any or no particular reason or cause. It also means that your job duties, title and responsibility and reporting level, work schedule, compensation and benefits, as well as the Company's personnel policies and procedures, may be changed with prospective effect, with or without notice, at any time in the sole discretion of the Company.

Without limiting the foregoing, if at any time other than during a Change in Control Period (as defined below) your employment with the Company is terminated by the Company without Cause (other than due to your death or disability) or you resign for Good Reason (each, as defined herein) and you deliver to the Company a general release of all claims against the Company and its affiliates in a form reasonably acceptable to the Company (a "Release") that becomes effective and irrevocable within 60 days following such termination of employment, then you shall be entitled to receive (i) continuing payments of severance pay (less applicable withholding taxes) for a period of nine (9) months to be paid periodically in accordance with the Company's normal payroll policies at a rate equal to the sum of your monthly base salary rate and one-twelfth of your target annual bonus, in each case as in effect immediately prior to your termination (but without taking into account any reduction of your base salary or target annual bonus in breach of this letter), less applicable withholdings, with such installments to commence on the first payroll date following the date the Release becomes effective and irrevocable, with the first installment to include any amount that would have been paid had the Release been effective and irrevocable on your termination date and (ii) direct payment or reimbursement for premiums for continued health, vision and dental benefit coverage through COBRA for you, your spouse and dependents at the same level of coverage as in effect for you on the day immediately preceding the day of termination of employment for a period ending on the earlier of (a) nine (9) months after the date of termination of employment and (b) the date you are eligible to receive health, vision and dental benefits through a new employer. In addition, concurrent with the termination of your employment with the Company, you may (at the Company's sole discretion) be provided the opportunity to enter into a consulting agreement (the "Consulting Agreement") with the Company with a nine (9) month term (the "Consulting Term," and the last day of the Consulting Term, the "Final Consulting Date"), which

would: (x) provide for annual consulting fees equal to your annual salary as in effect on the date of your termination of your employment, (y) require that you provide, or be available to provide, services to the Company in your areas of expertise on an exclusive basis within the Company's industry during the Consulting Term, and (z) provide that the vesting of each equity award held by you will be accelerated in respect of that number of shares of Company common stock that would have vested had you remained employed for the nine (9) months immediately following your termination date and (iv) each stock option held by you that is vested on your termination date (after giving effect to any accelerated vesting provided in connection with your termination of employment) will remain exercisable until the earlier of 90 days after the Final Consulting Date or the original expiration date thereof. All other terms and conditions of the Consulting Agreement will be mutually agreed between you and the Company.

Further notwithstanding the foregoing, if at any time during a Change in Control Period your employment with the Company is terminated by the Company without Cause (other than due to your death or disability) or you resign for Good Reason and you deliver to the Company a Release that becomes effective and irrevocable within 60 days following such termination of employment, then, in lieu of the benefits provided in the preceding paragraph, you shall be entitled to receive (i) your base salary at the rate in effect immediately prior to your date of termination during the period of time commencing on the termination date and ending on the twelve (12) months anniversary of your date of termination plus your target annual bonus, paid in a single cash lump sum, less applicable withholdings, on the first payroll date following the date the Release becomes effective and irrevocable, with the first installment to include any amount that would have been paid had the Release been effective and irrevocable on your termination date, (ii) direct payment or reimbursement for up to twelve (12) months of premiums for continued health, vision and dental benefit coverage through COBRA for you, your spouse and dependents at the same level of coverage as in effect for you on the day immediately preceding the day of termination of employment for a period ending on the earlier of (a) twelve (12) months after the date of termination of employment and (b) the date you are eligible to receive health, vision and dental benefits through a new employer, (iii) the vesting of each equity award held by you will be accelerated in respect of all of the shares of Company common stock subject thereto and (iv) each stock option held by you that is vested on your termination date (after giving effect to any accelerated vesting provided in connection with your termination of employment) will remain exercisable until the earlier of the 90 days after your termination date or the original expiration date thereof.

For purposes of this offer letter, the term "Cause" means: (i) a willful act of dishonesty made by you in connection with your responsibilities as an employee; (ii) your conviction of, or plea of *nolo contendere* to, a felony or any crime involving fraud, embezzlement or a material violation of federal or state law by you, any of which that the Board reasonably determines in good faith has had or will have a material detrimental effect on the Company's reputation or business; (iii) your willful and material unauthorized use or disclosure of any proprietary information or trade secrets of the Company or any other party to whom you owe an obligation of nondisclosure as a result of your relationship with the Company; (iv) your willful material breach of any obligations under any written agreement or covenant with the Company; or (v) your continued substantial failure to perform your employment duties (other than as a result of your physical or mental incapacity). No termination for Cause under (iv) or (v) shall be effectuated until after you have received a written demand of performance from the CEO that specifically sets forth the factual basis for the CEO's determination that you have not substantially performed your duties and have failed to cure such non-performance to the CEO's reasonable satisfaction within thirty (30) business days after receiving such notice. For purposes of this definition, no act or failure to act shall be considered willful unless it is done in bad faith and without reasonable intent that the act or failure to act was in the best interest of the Company. Any act, or failure to act, based upon authority or instructions given to you pursuant to a resolution duly adopted by the Board or based on the advice of counsel for the Company will be conclusively presumed to be done or omitted to be done by you in good faith and in the best interest of the Company.

For purposes of this offer letter, the term "Good Reason" means your resignation within 30 days following expiration of any Cure Period (as defined below) following the occurrence of one or more of the following, without your written consent: (i) a material reduction in your base salary or target annual bonus; (ii) a material diminution of your title, duties, responsibilities or reporting lines; or (iii) a change in the location of your employment of more than 50 miles. No event will be considered Good Reason unless (a) you have given written notice to the Company of your intention to terminate your employment for Good Reason, describing the grounds for such action, no later than 90 days after the first occurrence of such circumstances, (b) you have provided the Company with at least 30 days in which to cure the circumstances (the "Cure Period"), and (c) if the Company is not successful in curing the circumstance, you end your employment within thirty days after the end of the Cure Period.

For purposes of this offer letter, the term "Change in Control" shall have the meaning ascribed such term in the Company's 2018 Equity Incentive Plan, provided, that such event constitutes a "change in control event" within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended (the "Code").

For purposes of this offer letter, the term "Change in Control Period" shall mean the period commencing three (3) months prior to a Change in Control and ending twelve (12) months after the Change in Control.

No amount deemed deferred compensation subject to Section 409A of the Code shall be payable pursuant to this offer letter unless your termination of employment constitutes a "separation from service" with the Company within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended, and the Department of Treasury regulations and other guidance promulgated thereunder. For purposes of Section 409A of the Code (including, without limitation, for purposes of Treasury Regulation Section 1.409A-2(b)(2)(iii)), your right to receive any installment payments under this offer letter shall be treated as a right to receive a series of separate payments and, accordingly, each such installment payment shall at all times be considered a separate and distinct payment. To the extent that any reimbursements payable pursuant to this offer letter are subject to the provisions of Section 409A of the Code, any such reimbursements payable to you pursuant to this offer letter shall be paid to you no later than December 31 of the year following the year in which the expense was incurred, the amount of expenses reimbursed in one year shall not affect the amount eligible for reimbursement in any subsequent year, and your right to reimbursement under this offer letter will not be subject to liquidation or exchange for another benefit.

You are not required to seek other employment or otherwise mitigate the value of any severance benefits contemplated by this offer letter, nor will any such benefits be reduced by any earnings or benefits that you may receive from any other source, except as otherwise expressly set forth above with respect to continued group life, health, vision and dental benefits.

In addition to any indemnification provided by the Company's organizational documents, the Company will enter into an indemnification agreement with you as an officer in the form used for other officers.

If you accept this offer, this letter and the At-Will Employment Agreement shall constitute the complete agreement between you and Company with respect to the terms and conditions of your employment. Any prior or contemporaneous representations (whether oral or written) not contained in this letter or the At-Will Employment Agreement or contrary to those contained in this letter or the At-Will Employment Agreement, that may have been made to you are expressly cancelled and superseded by this offer.

This offer letter shall be interpreted and construed in accordance with the laws of the State of Washington without regard to any conflicts of laws principles. While other terms and conditions of your employment may change in the future, the at-will nature of your employment may not be changed, except in a subsequent letter or written agreement, signed by you and the Chief Executive Officer of the Company.

(*Signature Page Follows*)

Please sign and date this letter and the At-Will Employment Agreement, and return it to me by email at Robin.Andrulevich@sana.com by September 28, 2018 if you wish to accept employment at the Company under the terms described above, after which time this offer of employment will expire. If you accept our offer, we would like you to commence your employment with us as soon as practicable.

If you have any questions, regarding this letter or employment with the Company, please feel free to contact me by phone at 206-898-3871 or by email at robin.andrulevich@sana.com. We look forward to your favorable reply and to a productive and enjoyable work relationship.

Sincerely,

SANA BIOTECHNOLOGY, INC.

By: /s/ Robin Andrulevich
Name: Robin Andrulevich
Title: Chief People Officer

Accepted by:

s/ Nathan Hardy
Nathan Hardy

September 27, 2018
Date

SANA BIOTECHNOLOGY, INC.
AT-WILL EMPLOYEE AGREEMENT

As a condition of my employment with Sana Biotechnology, Inc. (the "**Company**"), and in consideration of my employment with the Company and my receipt of the compensation paid to me by the Company now and in the future, I agree to the following:

1. AT-WILL EMPLOYMENT

MY EMPLOYMENT WITH THE COMPANY IS FOR AN UNSPECIFIED DURATION AND CONSTITUTES "AT-WILL" EMPLOYMENT. ANY REPRESENTATION TO THE CONTRARY IS UNAUTHORIZED AND NOT VALID UNLESS OBTAINED IN WRITING AND SIGNED BY THE PRESIDENT OR CEO OF COMPANY. THIS EMPLOYMENT RELATIONSHIP MAY BE TERMINATED AT ANY TIME, WITH OR WITHOUT GOOD CAUSE OR FOR ANY OR NO CAUSE, AT EITHER MY OPTION OR THE COMPANY'S OPTION, WITH OR WITHOUT NOTICE. THE AT-WILL NATURE OF MY EMPLOYMENT ALSO MEANS THAT I CAN BE TRANSFERRED OR DEMOTED, AND MY JOB TITLE, COMPENSATION, BENEFITS AND OTHER TERMS AND CONDITIONS OF EMPLOYMENT CAN BE REDUCED, WITHOUT CAUSE. NOTHING IN AN EMPLOYEE HANDBOOK OR OTHER POLICY OF THE COMPANY WILL BE CONSTRUED AS CHANGING MY AT-WILL EMPLOYMENT STATUS. THE COMPANY MAY MODIFY JOB TITLES, SALARIES, AND BENEFITS FROM TIME TO TIME AS IT DEEMS NECESSARY.

2. CONFIDENTIAL INFORMATION

2.1 Definition. "Confidential Information" means any non-public information that relates to the actual or anticipated business, research, or development of the Company and any proprietary information, technical data, trade secrets, and know-how of the Company, disclosed to me by the Company, directly or indirectly, in writing, orally, or by inspection or observation of tangible items. Confidential Information includes both Information disclosed by the Company to me, and information developed or learned by me during the course of my employment with the Company. Confidential Information includes, but is not limited to, Company research, product plans, products, services, customers, customer lists, markets, software, developments, inventions, processes, formulas, technology, designs, drawings, engineering, hardware configuration information, marketing, finances, and other business information. Confidential Information will not include any information that (a) was publicly known and made generally available in the public domain prior to the time the Company disclosed the information to me, (b) became publicly known and made generally available, after disclosure to me by the Company, through no wrongful action or inaction by me or by others who were under confidentiality obligations, or (c) was in my rightful possession, without confidentiality restrictions, at the time of disclosure by the Company, as shown by my files and records.

2.2 Use and Non-Use. At all times during the term of my employment and after my employment ends, I will hold all Confidential Information in strictest confidence and not use it for any purpose except for the benefit of the Company to fulfill my employment obligations. I will not disclose Confidential Information to any third party without the prior written authorization of the president, CEO, or the Board of Directors of the Company. Confidential Information will remain the sole property of the Company. I will take all reasonable precautions to prevent any unauthorized use or disclosure of the Confidential Information. Prior to disclosure when compelled by applicable law, I will provide written notice to the president, CEO, and general counsel of the Company, as applicable. I understand that my unauthorized use or disclosure of Confidential Information during my employment will lead to disciplinary action, up to and including immediate termination and legal action by the Company. I understand that my obligations under this Section 2.2 will continue after termination of my employment.

If I become compelled by law, regulation (including without limitation the rules of any applicable securities exchange), court order, or other governmental authority to disclose the Confidential Information, I shall, to the extent possible and permissible under applicable law, first give the Company prompt notice. I agree to cooperate reasonably with the Company in any proceeding to obtain a protective order or other remedy. If such protective order or other remedy is not obtained, I shall only disclose that portion of such Confidential Information required to be disclosed, in the opinion of my legal counsel. I shall request that confidential treatment be accorded such Confidential Information, where available. Compulsory disclosures made pursuant to this section shall not relieve me of my obligations of confidentiality and non-use with respect to non-compulsory disclosures. I understand that nothing herein is intended to or shall prevent me from communicating directly with, cooperating with, or providing information to, any federal, state or local government regulator, including, but not limited to, the U.S. Securities and Exchange Commission, the U.S. Commodity Futures Trading Commission, or the U.S. Department of Justice. I shall promptly notify my supervisor or any officer of the Company if I learn of any possible unauthorized use or disclosure of Confidential Information and shall cooperate fully with the Company to enforce its rights in such information.

2.3 Former Employer Confidential Information. I will not, during my employment with the Company, improperly use, disclose, or induce the Company to use any proprietary information or trade secrets of any former or concurrent employer or other person or entity with which I have an obligation to keep information in confidence. Furthermore, I will not bring onto the premises of the Company or transfer onto the Company's technology systems any unpublished document or proprietary information belonging to any third party unless consented to in writing by both the Company and such third party.

2.4 Third Party Information. I recognize that the Company has received and in the future will receive from third parties their confidential or proprietary information subject to a duty on the Company's part to maintain the confidentiality of this information and to use it only for certain limited purposes. I will hold all of this confidential or proprietary information in the strictest confidence and not disclose it to any third party or use it except as necessary in carrying out my work for the Company consistent with the Company's agreements with these third parties. I understand that my unauthorized use or disclosure of third parties' confidential or proprietary information during my employment will lead to disciplinary action, up to and including immediate termination and legal action by the Company.

2.5 Defend Trade Secrets Act Notice of Immunity Rights. I acknowledge that the Company has provided me with the following notice of immunity rights in compliance with the requirements of the Defend Trade Secrets Act: (a) I shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of Confidential Information that is made in confidence to a Federal, State, or local government official or to an attorney solely for the purpose of reporting or investigating a suspected violation of law, (b) I shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of Confidential Information that is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal and (c) if I file a lawsuit for retaliation by the Company for reporting a suspected violation of law, I may disclose the Confidential Information to my attorney and use the Confidential Information in the court proceeding, if I file any document containing the Confidential Information under seal, and do not disclose the Confidential Information, except pursuant to court order.

3. INVENTIONS

3.1 Inventions Defined. "**Inventions**" means inventions, original works of authorship, developments, concepts, improvements, designs, discoveries, ideas, know-how, trademarks, and trade secrets, whether or not patentable or registrable under copyright or similar laws, that I may solely or jointly author, conceive, develop, or reduce to practice.

3.2 Assignment of Inventions and Works Made for Hire. I will promptly make a full written disclosure to the Company of any and all Inventions that I create within the scope of and during the period of my employment with the Company (including without limitation during my off-duty hours) ("**Company Inventions**"). I will hold in trust for the sole right and benefit of the Company, and I hereby assign to the Company or its designee, all of my right, title, and interest (including without limitation all related intellectual property rights and the right to sue and collect payment for past, present, and future infringement) in, all Company Inventions. In addition, all original works of authorship that are made by me (solely or jointly with others) within the scope of and during the period of my employment with the Company (including without limitation during my off-duty hours) and that are protectable by copyright are "works made for hire," as that term is defined in the United States Copyright Act, and in accordance, the Company will be considered the author of these works.

3.3 Exception to Assignments. The obligations to assign Inventions set forth in Section 3.2 apply with respect to all Company Inventions (a) whether or not such Company Inventions are conceived, made, developed or worked on by me during my regular hours of employment with the Company, (b) whether or not the Company Invention was made at the suggestion of the Company, (c) whether or not the Invention was reduced to drawings, written description, documentation, models or other tangible form, and (d) whether or not the Company Invention is related to the general line of business engaged in by the Company; but do not apply to Inventions that (i) I develop entirely on my own time or after the date of this Agreement without using the Company's equipment, supplies, facilities or Confidential Information, (ii) do not relate to the Company's business, or actual or demonstrably anticipated research or development of the Company at the time of conception or reduction to practice of the Invention, and (iii) do not result from and are not related to any work performed by me for the Company.

I hereby acknowledge and agree that the Company has notified me that, if I reside in the state of Washington, assignments provided for in Section 3.2 do not apply to any Invention that qualifies fully for exemption from assignment under the provisions of the Revised Code of Washington Section 49.44.140. ("**RCW 49.44.140**"), a copy of which is attached as **Exhibit D** of this Agreement. I further understand that, to the extent this Agreement shall be construed in accordance with the laws of any State that precludes a requirement in an employee agreement to assign certain classes of inventions made by an employee, Section 3.2 shall be interpreted not to apply to any Invention that a court rules and/or the Company agrees falls within such classes.

At the Company's request, I will promptly disclose to the Company all Inventions made during and after my employment to determine the status of the Company Invention under Sections 3.2 and 3.3. The Company may disclose such Company Inventions to the department of employment security. If applicable, at the time of disclosure of an Invention that I believe qualifies under Section 2870, RCW 49.44.140, or any similar law, I shall provide to the Company, in writing, evidence to substantiate the belief that such Invention qualifies under such law.

3.4 Inventions Retained and Licensed. I have attached to this Agreement, as **Exhibit A**, a list describing all Inventions that were made by me prior to my employment with the Company, that relate to the Company's proposed business, products, or research and development, and that are not assigned to the Company under this Agreement (collectively, "**Prior Inventions**"). If no list is attached or if no Prior Inventions are listed on **Exhibit A**, I represent that there are no Prior Inventions. Furthermore, I represent and warrant that the inclusion of any Prior Inventions from **Exhibit A** of this Agreement will not

materially affect my ability to perform all obligations under this Agreement. If, in the course of my employment with the Company, I incorporate into a Company product, process, or machine an Invention owned by me or in which I have an interest, then I hereby grant to the Company a nonexclusive, royalty-free, irrevocable, perpetual, transferrable, worldwide license (with right to sublicense through multiple tiers) to make, have made, modify, use, import, offer for sale, sell, reproduce, distribute, modify, adapt, prepare derivative works of, display, perform, and otherwise exploit the Invention without restriction of any kind.

3.5 Third Party Inventions. I will not incorporate any original work of authorship, development, concept, improvement, or trade secret owned, in whole or in part, by any third party, into any Company Invention without the Company's prior written permission.

3.6 Moral Rights. Any assignment to the Company of Company Inventions includes without limitation all rights of attribution, paternity, integrity, modification, disclosure, and withdrawal and any other rights throughout the world that may be known as or referred to as "moral rights," artist's rights," or the like (collectively, "**Moral Rights**"). To the extent that Moral Rights cannot be assigned under applicable law, I hereby waive and agree not to enforce any and all Moral Rights, including without limitation any limitation on subsequent modification, to the extent permitted under applicable law.

3.7 Marketing of Company Inventions. The decision whether or not to commercialize or market any Company Invention developed by me solely or jointly with others is within the Company's sole discretion and for the Company's sole benefit. Neither the Company nor any other entity will be required to pay me a royalty as a result of the Company's efforts to commercialize or market any Company Invention.

3.8 Inventions Assigned to the United States. I will assign to the United States government all of my right, title, and interest in and to all Company Inventions whenever the full title is required to be assigned to the United States government by a contract between the Company and the United States government or any of its agencies.

3.9 Maintenance of Records. I will keep and maintain adequate and current written records of all Company Inventions. These records will be in the form of notes, sketches, drawings, electronic files, laboratory notebooks, and any other format that may be specified by the Company. At all times, the records will be available to the Company, and remain the sole property of the Company.

3.10 Further Assurances. I will assist the Company or its designee, at the Company's expense, in every proper way to secure and protect the Company's rights in Company Inventions and any related copyrights, patents, mask work rights, or other intellectual property rights in any and all countries. I will disclose to the Company all pertinent information and data. I will execute all applications, specifications, oaths, assignments, and all other instruments that the Company deems necessary in order to apply for and obtain these rights and in order to deliver, assign, and convey to the Company, its successors, assigns, and nominees the sole and exclusive rights, title, and interest in and to Company Inventions, and any related copyrights, patents, mask work rights, or other intellectual property rights. I will testify in a suit or other proceeding relating to such Company Inventions and any rights relating thereto. My obligation to execute or cause to be executed, when it is in my power to do so, any instrument or papers will continue after the termination of this Agreement. If the Company is unable because of my mental or physical incapacity or for any other reason to secure my signature to apply for or to pursue any application for any United States or foreign patents or copyright registrations covering Company Inventions assigned to the Company as above, then I hereby irrevocably designate and appoint the Company and its duly authorized officers and agents as my agent and attorney in fact. Accordingly, the Company may act for and in my behalf to execute and file any applications and to do all other lawfully permitted acts to further the prosecution and issuance of patent or copyright registrations with the same legal force and effect as if executed by me.

4. NO CONFLICTING OBLIGATIONS

4.1 Current Obligations. During the term of my employment with the Company, I will not engage in any other employment, occupation, consulting, or other business activity directly relating to the business in which the Company is now involved, becomes involved, or has plans to become involved during the term of my employment. I will also not engage in any other activities that conflict with my obligations to the Company.

4.2 Prior Relationships. Without limiting Section 4.1, I represent that I have no other agreements, relationships or commitments to any other person or entity that conflict with my obligations to the Company under this Agreement or my ability to become employed and perform the services for which I am being hired by the Company. If I have signed a confidentiality agreement or similar type of agreement with any former employer or other entity, I will comply with the terms of any such agreement to the extent that its terms are lawful under applicable law. I represent and warrant that after undertaking a careful search (including without limitation searches of my computers, cell phones, electronic devices and documents), I have returned all property and confidential information belonging to all prior employers (or other third parties I have performed services for in accordance with the terms of my applicable agreement). Moreover, if the Company or any of its employees or agents is sued based on any obligation or agreement to which I am a party or am bound, I will indemnify the Company and its employees and agents for all verdicts, judgments, settlements, and other losses that result from any breach of my obligations under this Agreement, as well as any reasonable attorneys' fees and costs if the plaintiff is the prevailing party in such an action.

5. COMPLIANCE WITH COMPANY POLICIES AND USE OF COMPANY EQUIPMENT AND FACILITIES

I will comply with all Company policies, including but not limited to policies relating to the use of the Internet and the use of Company equipment and facilities. I will not use Company equipment or facilities for any purpose except to fulfill my employment obligations for the benefit of the Company. I will follow all laws and regulations applicable to the use of Company equipment and facilities and access to or use of others' computer or communication systems. I acknowledge that the Company will maintain sole ownership of all equipment and any data stored on the equipment. I understand and consent that the Company reserves the right to view and disclose without prior notice, for any purpose, any data stored on Company equipment or passing through the Company's network, including but not limited to electronic mail and data downloaded from the Internet. I understand that I am not permitted to add any unlicensed, unauthorized or non-compliant applications to the Company's technology systems and that I shall refrain from copying unlicensed software onto the Company's technology systems or using non-licensed software or web sites.

I acknowledge that I have no expectation of privacy either in information in transit through the Company network or stored on Company equipment, including without limitation computer, email, handheld device, telephone, or voicemail. All information, data, and messages created, received, sent, or stored in these systems are, at all times, the property of the Company. As such, the Company has the right to audit and search all such items and systems, without further notice to me, to ensure that the Company is licensed to use the software on the Company's devices in compliance with the Company's software licensing policies, to ensure compliance with the Company's policies, and for any other business-related purposes in the Company's sole discretion. I am aware that Company has or may acquire software and systems that are capable of monitoring and recording all network traffic to and from any computer I may use. The Company reserves the right to access, review, copy, and

delete any of the information, data, or messages accessed through these systems with or without notice to me. This includes, but is not limited to, all e-mail messages, website visits, internet usage, chat sessions, and all file transfers into and out of the Company's internal networks. The Company may review internet and technology systems activity and analyze usage patterns, and may choose to publicize this data to assure that technology systems are devoted to legitimate business purposes.

6. RETURNING COMPANY MATERIALS

Upon leaving the employ of the Company, or upon Company's request during my employment, I will deliver to the Company (and will not keep in my possession, recreate, or deliver to anyone else) any and all Confidential Information, devices, records, data, notes, reports, proposals, lists, correspondence, specifications, drawings blueprints, sketches, materials, equipment, Company credit cards, electronically-stored information and passwords to access such property, and other documents or property, or reproductions of these items developed by me pursuant to my employment with the Company or otherwise belonging to the Company, its successors, or assigns. In addition, I will deliver those records maintained pursuant to Section 3.9 to the Company. Notwithstanding the foregoing, I may retain a copy of my Outlook Contacts or comparable contacts database and any documents of a personal nature, including without limitation diaries, calendars and personal documents relating to my employment, compensation, taxes or expenses. I consent to an exit interview to confirm my compliance with this Section 6.

7. NOTIFICATION TO NEW EMPLOYER

If my employment with the Company ends for any reason or no reason, the Company may notify my new employer about my rights and obligations under this Agreement.

8. CONFLICT OF INTEREST GUIDELINES

I will diligently adhere to the "Conflict of Interest Guidelines." A copy of the Company's current Conflict of Interest Guidelines is attached to this Agreement as **Exhibit B**, but I understand that the Conflict of Interest Guidelines may be revised from time to time during my employment.

9. TERMINATION CERTIFICATION

If my employment with the Company ends for any reason or no reason, I will sign and deliver to the Company the "Termination Certification" attached to this Agreement as **Exhibit C**. I will keep the Company advised of my home and business address for three years after termination of my employment with the Company so that the Company can contact me regarding my continuing obligations under this Agreement.

10. NON-COMPETITION

10.1 Non-Competition. In order to protect Confidential Information, I will not, during the period of my employment with the Company, and, to the extent permitted under applicable law, for a period of 12 months thereafter, whether my termination is with or without good cause or for any or no cause, and whether my termination is effected by either the Company or me, directly or indirectly, for myself or any third party other than the Company:

(a) provide services of any kind for any business (within the Geographic Area, as defined below) in connection with the development, manufacture, marketing, or sale of any product or service that I worked on in any capacity or in connection with which I had access to Confidential Information at any time during my employment with the Company, if the business's product or service (i) competes with any product or service sold or provided by the Company, (ii) competes with any product or service intended to be sold or provided by the Company at the time of the termination of my employment with the Company, or (iii) competed with any product or service sold or provided by the Company at any time during my employment with the Company;

(b) solicit sales from any of the Company's customers for any product or service that (i) competes with any product or service sold or provided by the Company, (ii) competes with any product or service intended to be sold or provided by the Company at the time of the termination of my employment with the Company, or (iii) competed with any product or service sold or provided by the Company at any time during my employment with the Company;

(c) entice any vendor, consultant, collaborator, agent, or contractor of the Company to cease its business relationship with the Company or engage in any activity that would cause them to cease their business relationship with the Company; or

(d) solicit, induce, recruit, or encourage any of the Company's employees to leave their employment, or attempt to solicit, induce, recruit, encourage, or take away Company employees.

10.2 Geographic Area Definition. "**Geographic Area**" means anywhere in the world where the Company conducts business.

10.3 Severability. The covenants contained in this Section 10 will be construed as a series of separate covenants, one for each country, city, state, or similar subdivision in any Geographic Area. If, in any judicial proceeding, a court refuses to enforce any of these separate covenants (or any part of a covenant), then the unenforceable covenant (or part) will be eliminated from this Agreement to the extent necessary to permit the remaining separate covenants (or portions) to be enforced. In the event that the provisions of this section are deemed to exceed the time, geographic, or scope limitations permitted by law, then the provisions will be reformed to the maximum time, geographic, or scope limitations permitted by law.

10.4 Reasonableness. The nature of the Company's business is such that if I were to become employed by, or substantially involved in, the business of a competitor to the Company, it would be difficult not to rely on or use Confidential Information. Therefore, I enter into this Agreement to reduce the likelihood of disclosure of Confidential Information. I acknowledge that the limitations of time, geography, and scope of activity agreed to above are reasonable because, among other things, (a) the Company is engaged in a highly competitive industry, (b) I will have access to Confidential Information, including but not limited to the Company's trade secrets, know-how, plans, and strategy (and in particular, the competitive strategy of the Company), (c) in the event my employment with the Company ends, I will be able to obtain suitable and satisfactory employment in my chosen profession without violating this Agreement, (d) these limitations are necessary to protect Confidential Information, and the goodwill of the Company, and (e) these limitations will apply even if I am transferred or demoted, or my job title, compensation, benefits and other terms and conditions of employment are reduced.

11. COMPENSATION

All compensation for services rendered to third parties during the term of my employment with the Company, including without limitation equity or equity-type payments, and consulting or advisory fees, will be paid to the Company unless otherwise unanimously approved by the Board of Directors of the Company in writing.

12. REPRESENTATIONS

I will execute any proper oath or verify any proper document required to carry out the terms of this Agreement. I represent and warrant that my performance of all the terms of this Agreement will not breach any agreement to keep in confidence proprietary information acquired by me in confidence or in trust prior to my employment by the Company. I have not entered into, and I will not enter into, any oral or written agreement in conflict with this Agreement.

13. ARBITRATION AND EQUITABLE RELIEF

13.1 Arbitration. EXCEPT AS PROVIDED IN SECTION 13.4, ANY DISPUTE OR CONTROVERSY ARISING OUT OF, RELATING TO, OR CONCERNING ANY INTERPRETATION, CONSTRUCTION, PERFORMANCE, OR BREACH OF THIS AGREEMENT, WILL BE SETTLED BY

ARBITRATION TO BE HELD IN KING COUNTY, WASHINGTON, IN ACCORDANCE WITH THE EMPLOYMENT DISPUTE RESOLUTION RULES THEN IN EFFECT OF THE AMERICAN ARBITRATION ASSOCIATION ("**RULES**"). THE ARBITRATOR MAY GRANT INJUNCTIONS OR OTHER RELIEF IN A DISPUTE OR CONTROVERSY. THE DECISION OF THE ARBITRATOR WILL BE FINAL, CONCLUSIVE, AND BINDING ON THE PARTIES TO THE ARBITRATION. JUDGMENT MAY BE ENTERED ON THE ARBITRATOR'S DECISION IN ANY COURT HAVING JURISDICTION. THE COMPANY WILL PAY ALL ARBITRATION FEES, EXCEPT AN AMOUNT EQUAL TO THE FILING FEES I WOULD HAVE PAID HAD I FILED A COMPLAINT IN A COURT OF LAW. THE COMPANY AND I WILL EACH SEPARATELY PAY OUR COUNSEL FEES AND EXPENSES.

13.2 Waiver of Right to Jury Trial. THIS ARBITRATION CLAUSE CONSTITUTES A WAIVER OF MY RIGHT TO A JURY TRIAL AND RELATES TO THE RESOLUTION OF ALL DISPUTES RELATING TO ALL ASPECTS OF MY EMPLOYMENT RELATIONSHIP WITH THE COMPANY (EXCEPT AS PROVIDED IN SECTION 13.4 BELOW), INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING CLAIMS:

(a) CLAIMS FOR WRONGFUL DISCHARGE OF EMPLOYMENT, BREACH OF CONTRACT, BOTH EXPRESS AND IMPLIED, BREACH OF THE COVENANT OF GOOD FAITH AND FAIR DEALING, BOTH EXPRESS AND IMPLIED, NEGLIGENT OR INTENTIONAL INFLICTION OF EMOTIONAL DISTRESS, NEGLIGENT OR INTENTIONAL MISREPRESENTATION, NEGLIGENT OR INTENTIONAL INTERFERENCE WITH CONTRACT OR PROSPECTIVE ECONOMIC ADVANTAGE, AND DEFAMATION;

(b) CLAIMS FOR VIOLATION OF ANY FEDERAL, STATE, OR MUNICIPAL STATUTE, INCLUDING, BUT NOT LIMITED TO, TITLE VII OF THE CIVIL RIGHTS ACT OF 1964, THE CIVIL RIGHTS ACT OF 1991, THE AGE DISCRIMINATION IN EMPLOYMENT ACT OF 1967, THE AMERICANS WITH DISABILITIES ACT OF 1990, THE FAIR LABOR STANDARDS ACT, AND REVISED CODE OF WASHINGTON SECTION 49.60.010, ET SEQ.; AND

(c) CLAIMS ARISING OUT OF ANY OTHER LAWS AND REGULATIONS RELATING TO EMPLOYMENT OR EMPLOYMENT DISCRIMINATION.

NOTHING IN THIS AGREEMENT CONSTITUTES A WAIVER OF MY RIGHTS UNDER SECTION 7 OF THE NATIONAL LABOR RELATIONS ACT.

13.3 Remedy. EXCEPT AS PROVIDED BY THE RULES AND THIS AGREEMENT, ARBITRATION SHALL BE THE SOLE, EXCLUSIVE AND FINAL REMEDY FOR ANY DISPUTE BETWEEN ME AND THE COMPANY. ACCORDINGLY, EXCEPT AS PROVIDED FOR BY THE RULES AND THIS AGREEMENT, NEITHER I NOR THE COMPANY WILL BE PERMITTED TO PURSUE COURT ACTION REGARDING CLAIMS THAT ARE SUBJECT TO ARBITRATION. NOTWITHSTANDING, THE ARBITRATOR WILL NOT HAVE THE AUTHORITY TO DISREGARD OR REFUSE TO ENFORCE ANY LAWFUL COMPANY POLICY, AND THE ARBITRATOR SHALL NOT ORDER OR REQUIRE THE COMPANY TO ADOPT A POLICY NOT OTHERWISE REQUIRED BY LAW. NOTHING IN THIS AGREEMENT OR IN THIS PROVISION IS INTENDED TO WAIVE THE PROVISIONAL RELIEF REMEDIES AVAILABLE UNDER THE RULES.

13.4 Equitable Remedies. THE COMPANY OR I MAY APPLY TO ANY COURT OF COMPETENT JURISDICTION FOR A TEMPORARY RESTRAINING ORDER, PRELIMINARY INJUNCTION, OR OTHER INTERIM OR CONSERVATORY RELIEF, AS NECESSARY, WITHOUT BREACH OF THIS AGREEMENT AND WITHOUT ABRIDGEMENT OF THE POWERS OF THE ARBITRATOR.

13.5 Administrative Relief. I UNDERSTAND THAT THIS AGREEMENT DOES NOT PROHIBIT ME FROM PURSUING AN ADMINISTRATIVE CLAIM WITH A LOCAL, STATE OR FEDERAL ADMINISTRATIVE BODY SUCH AS THE DEPARTMENT OF FAIR EMPLOYMENT AND HOUSING, THE EQUAL EMPLOYMENT OPPORTUNITY COMMISSION OR THE WORKERS' COMPENSATION BOARD. THIS AGREEMENT DOES, HOWEVER, PRECLUDE ME FROM PURSUING COURT ACTION REGARDING ANY SUCH CLAIM.

13.6 Consideration. I UNDERSTAND THAT EACH PARTY'S PROMISE TO RESOLVE CLAIMS BY ARBITRATION IN ACCORDANCE WITH THE PROVISIONS OF THIS AGREEMENT, RATHER THAN THROUGH THE COURTS, IS CONSIDERATION FOR THE OTHER PARTY'S LIKE PROMISE. I FURTHER UNDERSTAND THAT I AM OFFERED EMPLOYMENT IN CONSIDERATION OF MY PROMISE TO ARBITRATE CLAIMS.

13.7 Voluntary Nature of Agreement. I ACKNOWLEDGE THAT I AM EXECUTING THIS AGREEMENT VOLUNTARILY AND WITHOUT ANY DURESS OR UNDUE INFLUENCE BY THE COMPANY OR ANYONE ELSE. I FURTHER ACKNOWLEDGE AND AGREE THAT I HAVE CAREFULLY READ THIS AGREEMENT AND THAT I HAVE ASKED ANY QUESTIONS NEEDED FOR ME TO UNDERSTAND THE TERMS, CONSEQUENCES AND BINDING EFFECT OF THIS AGREEMENT AND FULLY UNDERSTAND IT, INCLUDING WITHOUT LIMITATION THAT ***I AM WAIVING MY RIGHT TO A JURY TRIAL***. FINALLY, I ACKNOWLEDGE THAT I HAVE BEEN PROVIDED AN OPPORTUNITY TO SEEK THE ADVICE OF AN ATTORNEY OF MY CHOICE BEFORE SIGNING THIS AGREEMENT.

14. GENERAL PROVISIONS

14.1 Governing Law and Consent to Personal Jurisdiction. The internal laws of the state of Washington, but not the choice of law rules of the state of Washington, govern this Agreement. I expressly consent to the personal jurisdiction of the state and federal courts located in King County, Washington, for any lawsuit filed there against me by the Company arising from or relating to this Agreement.

14.2 Entire Agreement. This Agreement sets forth the entire agreement and understanding between the Company and me relating to the subject matter of this Agreement. This Agreement supersedes all prior or contemporaneous discussions between us. No modification of this Agreement or amendment to it, nor any waiver of any rights under this Agreement, will be effective unless in writing signed by the party to be charged. Any subsequent change or changes in my duties, obligations, rights, salary, or compensation will not affect the validity or scope of this Agreement.

14.3 Severability. If one or more of the provisions in this Agreement is deemed void by law, then the remaining provisions will continue in full force and effect.

14.4 Successors and Assigns. This Agreement will be binding upon my heirs, executors, assigns, administrators, and other legal representatives and will be for the benefit of the Company, its successors, and its assigns. The Company may assign this Agreement to a successor to all or part of its business or assets without restriction. I may not assign this Agreement to any third party. Any assignment that is not permitted under this Section 14.4 above will be null and void. There are no intended third party beneficiaries to this Agreement except as expressly stated.

14.5 Headings. Headings are used in this Agreement for reference only and will not be considered when interpreting this Agreement.

14.6 Waiver. Waiver by the Company of a breach of any provision of this Agreement will not operate as a waiver of any other or subsequent breach.

14.7 Survivorship. The rights and obligations of the parties will survive termination of my employment with the Company.

14.8 Signatures. This Agreement may be signed in two counterparts, each of which shall be deemed an original, with the same force and effectiveness as though executed in a single document.

14.9 I ACKNOWLEDGE THAT I HAVE HAD THE OPPORTUNITY TO SEEK THE ADVICE OF INDEPENDENT LEGAL COUNSEL AND THAT I HAVE READ THIS AGREEMENT CAREFULLY AND I UNDERSTAND AND ACCEPT THE OBLIGATIONS WHICH IT IMPOSES UPON ME WITHOUT RESERVATION. NO PROMISES OR REPRESENTATIONS HAVE BEEN MADE TO ME TO INDUCE ME TO SIGN THIS AGREEMENT.

SANA BIOTECHNOLOGY, INC.

By: /s/ Robin Andrulevich
Title: Chief People Officer
Date: October 8, 2018

EMPLOYEE

/s/ Nathan Hardy
Print Name: Nathan Hardy
Date: September 27, 2018

Exhibit 10.10

SANA BIOTECHNOLOGY, INC.
1616 Eastlake Avenue East, Suite 360
Seattle, Washington 98102

September 26, 2018

James J. MacDonald
1711 106th Place NE
Bellevue, WA 98004

Re: Employment Terms

Dear Jim:

Sana Biotechnology, Inc. (the "Company"), is pleased to offer you full time employment in the exempt position of EVP, General Counsel, effective as of September 4, 2018 (the date you actually commence employment, your "Commencement Date"), in which you will be responsible for such duties as are normally associated with such position or as otherwise determined by the Chief Executive Officer of the Company. You will report to Steven Harr, the Chief Executive Officer of the Company, or such other individual as the Company may designate, and will be initially headquartered in our Seattle offices, or such other location as the Company may designate, except for such travel as may be necessary to fulfill your responsibilities. In the course of your employment with Company, you will be subject to and required to comply with all company policies, and applicable laws and regulations.

You will be paid a base salary at the monthly rate of $32,083.33 (subject to required tax withholding and other authorized deductions), equivalent to $385,000.00 on an annualized basis. Your base salary will be payable in accordance with the Company's standard payroll policies and subject to adjustment pursuant to the Company's policies as in effect from time to time.

In addition to your base salary, you will be eligible for an annual cash bonus, at the discretion of the Board of Directors of the Company (the "Board"). Your target annual bonus shall be 40% of your base salary, but the actual amount, of your annual bonus may be more or less (and may equal zero). Any annual bonus awarded to you shall be paid within two and a half months following the year to which the annual bonus relates and will be contingent upon your continued employment through the applicable payment date. You hereby acknowledge and agree that nothing contained herein confers upon you any right to an annual bonus in any year, and that whether the Company pays you an annual bonus and the amount of any such annual bonus will be determined by the Company in its sole discretion.

In contemplation of you entering into this offer letter, on August 30, 2018 and September 24, 2018, the Company issued you 2,150,000 shares (on a post-split basis) and 190,000 shares, respectively, of the Company's common stock (the "Restricted Shares"), all of which are subject to a risk of forfeiture in the event you terminate employment with the Company. The Restricted Shares will vest, and the risk of forfeiture thereon lapse, in respect of 25% of the total number of Restricted Shares on the first anniversary of July 23, 2018 and 1/48th of the total number of Restricted Shares will vest, and the risk of forfeiture thereon lapse, on each monthly anniversary thereafter, in each case, subject to your continued employment through the vesting date. The Restricted Shares remain subject to the restricted stock agreement entered into between you and the Company.

You will be eligible to receive future stock options and other equity awards in the discretion of the Board.

You will be eligible to participate in all of the employee benefits and benefit plans that the Company generally makes available to its regular fulltime employees. You will be eligible for paid time off vacation and/or paid sick leave in accordance with applicable law and Company policy.

The Company requires that, as a full-time employee, you devote your full business time, attention, skill, and efforts to the tasks and duties of your position as assigned by the Company. If you wish to request consent to provide services (for any or no form of compensation) to any other person or business entity while employed by the Company, please discuss that with me in advance of accepting another position.

As a condition of employment, you will be required (1) to sign and comply with an At- Will Employment Agreement, a copy of which is attached hereto as Exhibit A, which, among other things, prohibits unauthorized use or disclosure of Company proprietary information; (2) to sign and return a satisfactory I-9 Immigration form attached hereto as Exhibit B and provide sufficient documentation establishing your employment eligibility in the United States of America (enclosed is a. list of acceptable INS Form I-9 documentation); and (3) to provide satisfactory proof of your identity as required by U.S. law.

By signing below, you represent that your performance of services to the Company will not violate any duty which you may have to any other person or entity (such as a present or former employer), including obligations concerning providing services (whether or not competitive) to others, confidentiality of proprietary information and assignment of inventions, ideas, patents or copyrights, and you agree that you will not do anything in the performance of services hereunder that would violate any such duty.

Notwithstanding any of the above, your employment with the Company is “at will.” This means that it is not for any specified period of time and can be terminated by you or by the Company at any time, with or without advance notice, and for any or no particular reason or cause. It also means that your job duties, title and responsibility and reporting level, work schedule, compensation and benefits, as well as the Company’s personnel policies and procedures, may be changed with prospective effect, with or without notice, at any time in the sole discretion of the Company.

Without limiting the foregoing, if at any time other than during a Change in Control Period (as defined below) your employment with the Company is terminated by the Company without Cause (other than due to your death or disability) or you resign for Good Reason (each, as defined herein) and you deliver to the Company a general release of all claims against the Company and its affiliates in a form reasonably acceptable to the Company (a “Release”) that becomes effective and irrevocable within 60 days following such termination of employment, then you shall be entitled to receive (i) continuing payments of severance pay (less applicable withholding taxes) for a period of nine (9) months to be paid periodically in accordance with the Company’s normal payroll policies at a rate equal to the sum of your monthly base salary rate and one-twelfth of your target annual bonus, in each case as in effect immediately prior to your termination (but without taking into account any reduction of your base salary or target annual bonus in breach of this letter), less applicable withholdings, with such installments to commence on the first payroll date following the date the Release becomes effective and irrevocable, with the first installment to include any amount that would have been paid had the Release been effective and irrevocable on your termination date and (ii) direct payment or reimbursement for premiums for continued health, vision and dental benefit coverage through COBRA for you, your spouse and dependents at the same level of coverage as in effect for you on the day immediately preceding the day of termination of employment for a period ending on the earlier of (a) nine (9) months after the date of termination of employment and (b) the date you are eligible to receive health, vision and dental benefits through a new employer. In addition, concurrent with the termination of your

employment with the Company, you may (at the Company's sole discretion) be provided the opportunity to enter into a consulting agreement (the "Consulting Agreement") with the Company with a nine (9) month term (the "Consulting Term," and the last day of the Consulting Term, the "Final Consulting Date"), which would: (x) provide for annual consulting fees equal to your annual salary as in effect on the date of your termination of your employment, (y) require that you provide, or be available to provide, services to the Company in your areas of expertise on an exclusive basis within the Company's industry during the Consulting Term, and (z) provide that the vesting of each equity award held by you will be accelerated in respect of that number of shares of Company common stock that would have vested had you remained employed for the nine (9) months immediately following your termination date and (iv) each stock option held by you that is vested on your termination date (after giving effect to any accelerated vesting provided in connection with your termination of employment) will remain exercisable until the earlier of 90 days after the Final Consulting Date or the original expiration date thereof All other terms and conditions of the Consulting Agreement will be mutually agreed between you and the Company.

Further notwithstanding the foregoing, if at any time during a Change in Control Period your employment with the Company is terminated by the Company without Cause (other than due to your death or disability) or you resign for Good Reason and you deliver to the Company a Release that becomes effective and irrevocable within 60 days following such termination of employment, then, in lieu of the benefits provided in the preceding paragraph, you shall be entitled to receive (i) your base salary at the rate in effect immediately prior to your date of termination during the period of time commencing on the termination date and ending on the twelve (12) month anniversary of your date of termination plus your target annual bonus, paid in a single cash lump sum, less applicable withholdings, on the first payroll date following the date the Release becomes effective and irrevocable, with the first installment to include any amount that would have been paid had the Release been effective and irrevocable on your termination date, (ii) direct payment or reimbursement for up to twelve (12) months of premiums for continued health, vision and dental benefit coverage through COBRA for you, your spouse and dependents at the same level of coverage as in effect for you on the day immediately preceding the day of termination of employment for a period ending on the earlier of (a) twelve (12) months after the date of termination of employment and (b) the date you are eligible to receive health, vision and dental benefits through a new employer, (iii) the vesting of each equity award held by you will be accelerated in respect of all of the shares of Company common stock subject thereto and (iv) each stock option held by you that is vested on your termination date (after giving effect to any accelerated vesting provided in connection with your termination of employment) will remain exercisable until the earlier of the 90 days after your termination date or the original expiration date thereof.

For purposes of this offer letter, the term "Cause" means: (i) a willful act of dishonesty made by you in connection with your responsibilities as an employee; (ii) your conviction of, or plea of *nolo contendere* to, a felony or any crime involving fraud, embezzlement or a material violation of federal or state law by you, any of which that the Board reasonably determines in good faith has had or will have a material detrimental effect on the Company's reputation or business; (iii) your willful and material unauthorized use or disclosure of any proprietary information or trade secrets of the Company or any other party to whom you owe an obligation of nondisclosure as a result of your relationship with the Company; (iv) your willful material breach of any obligations under any written agreement or covenant with the Company; or (v) your continued substantial failure to perform your employment duties (other than as a result of your physical or mental incapacity). No termination for Cause under (iv) or (v) shall be effectuated until after you have received a written demand of performance from the CEO that specifically sets forth the factual basis for the CEO's determination that you have not substantially performed your duties and have failed to cure such non-performance to the CEO's reasonable satisfaction within thirty (30) business days after receiving such notice. For purposes of this definition, no act or failure to act shall be considered willful unless it is done in bad faith and without reasonable intent that the act or failure to act was in the best interest of the Company. Any act, or failure to act, based upon authority or instructions given to you pursuant to a resolution duly adopted by the Board will be conclusively presumed to be done or omitted to be done by you in good faith and in the best interest of the Company.

For purposes of this offer letter, the term "Good Reason" means your resignation within 30 days following expiration of any Cure Period (as defined below) following the occurrence of one or more of the following, without your written consent: (i) a material reduction in your base salary or target annual bonus; (ii) a material diminution of your title, duties, responsibilities or reporting lines; or (iii) a change in the location of your employment of more than 50 miles. No event will be considered Good Reason unless (a) you have given written notice to the Company of your intention to terminate your employment for Good Reason, describing the grounds for such action, no later than 90 days after the first occurrence of such circumstances, (b) you have provided the Company with at least 30 days in which to cure the circumstances (the "Cure Period"), and (c) if the Company is not successful in curing the circumstance, you end your employment within thirty days after the end of the Cure Period.

For purposes of this offer letter, the term "Change in Control" shall have the meaning ascribed such term in the Company's 2018 Equity Incentive Plan, provided, that such event constitutes a "change in control event" within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended (the "Code").

For purposes of this offer letter, the term "Change in Control Period" shall mean the period commencing three (3) months prior to a Change in Control and ending twelve (12) months after the Change in Control.

No amount deemed deferred compensation subject to Section 409A of the Code shall be payable pursuant to this offer letter unless your termination of employment constitutes a "separation from service" with the Company within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended, and the Department of Treasury regulations and other guidance promulgated thereunder. For purposes of Section 409A of the Code (including, without limitation, for purposes of Treasury Regulation Section 1.409A-2(b)(2)(iii)), your right to receive any installment payments under this offer letter shall be treated as a right to receive a series of separate payments and, accordingly, each such installment payment shall at all times be considered a separate and distinct payment. To the extent that any reimbursements payable pursuant to this offer letter are subject to the provisions of Section 409A of the Code, any such reimbursements payable to you pursuant to this offer letter shall be paid to you no later than December 31 of the year following the year in which the expense was incurred, the amount of expenses reimbursed in one year shall not affect the amount eligible for reimbursement in any subsequent year, and your right to reimbursement under this offer letter will not be subject to liquidation or exchange for another benefit.

You are not required to seek other employment or otherwise mitigate the value of any severance benefits contemplated by this offer letter, nor will any such benefits be reduced by any earnings or benefits that you may receive from any other source, except as otherwise expressly set forth above with respect to continued group life, health, vision and dental benefits.

In addition to any indemnification provided by the Company's organizational documents, the Company will enter into an indemnification agreement with you as an officer in the form used for other officers.

If you accept this offer, this letter and the At-Will Employment Agreement shall constitute the complete agreement between you and Company with respect to the terms and conditions of your employment. Any prior or contemporaneous representations (whether oral or written) not contained in this letter or the At-Will Employment Agreement or contrary to those contained in this letter or the At-Will Employment Agreement, that may have been made to you are expressly cancelled and superseded by this offer.

This offer letter shall be interpreted and construed in accordance with the laws of the State of Washington without regard to any conflicts of laws principles. While other terms and conditions of your employment may change in the future, the at-will nature of your employment may not be changed, except in a subsequent letter or written agreement, signed by you and the Chief Executive Officer of the Company.

(*Signature Page Follows*)

Please sign and date this letter and the At-Will Employment Agreement, and return it to me by email at Robin.Andrulevich@sana.com by September 28, 2018 if you wish to accept employment at the Company under the terms described above, after which time this offer of employment will expire. If you accept our offer, we would like you to commence your employment with us as soon as practicable.

If you have any questions, regarding this letter or employment with the Company, please feel free to contact me by phone at 206-898-3871 or by email at robin.andmlevich@sana.com. We look forward to your favorable reply and to a productive and enjoyable work relationship.

Sincerely,

SANA BIOTECHNOLOGY, INC.

By: /s/ Robin Andrulevich
Name: Robin Andrulevich
Title: Chief People Officer

Accepted by:

/s/ James J. MacDonald
James J. MacDonald

September 28, 2018
Date

SANA BIOTECHNOLOGY, INC.
AT-WILL EMPLOYEE AGREEMENT

As a condition of my employment with Sana Biotechnology, Inc. (the "**Company**"), and in consideration of my employment with the Company and my receipt of the compensation paid to me by the Company now and in the future, I agree to the following:

1. AT-WILL EMPLOYMENT

MY EMPLOYMENT WITH THE COMPANY IS FOR AN UNSPECIFIED DURATION AND CONSTITUTES "AT-WILL" EMPLOYMENT. ANY REPRESENTATION TO THE CONTRARY IS UNAUTHORIZED AND NOT VALID UNLESS OBTAINED IN WRITING AND SIGNED BY THE PRESIDENT OR CEO OF COMPANY. THIS EMPLOYMENT RELATIONSHIP MAY BE TERMINATED AT ANY TIME, WITH OR WITHOUT GOOD CAUSE OR FOR ANY OR NO CAUSE, AT EITHER MY OPTION OR THE COMPANY'S OPTION, WITH OR WITHOUT NOTICE. THE AT-WILL NATURE OF MY EMPLOYMENT ALSO MEANS THAT I CAN BE TRANSFERRED OR DEMOTED, AND MY JOB TITLE, COMPENSATION, BENEFITS AND OTHER TERMS AND CONDITIONS OF EMPLOYMENT CAN BE REDUCED, WITHOUT CAUSE. NOTHING IN AN EMPLOYEE HANDBOOK OR OTHER POLICY OF THE COMPANY WILL BE CONSTRUED AS CHANGING MY AT-WILL EMPLOYMENT STATUS. THE COMPANY MAY MODIFY JOB TITLES, SALARIES, AND BENEFITS FROM TIME TO TIME AS IT DEEMS NECESSARY.

2. CONFIDENTIAL INFORMATION

2.1 Definition. "Confidential Information" means any non-public information that relates to the actual or anticipated business, research, or development of the Company and any proprietary information, technical data, trade secrets, and know-how of the Company, disclosed to me by the Company, directly or indirectly, in writing, orally, or by inspection or observation of tangible items. Confidential Information includes both Information disclosed by the Company to me, and information developed or learned by me during the course of my employment with the Company. Confidential Information includes, but is not limited to, Company research, product plans, products, services, customers, customer lists, markets, software, developments, inventions, processes, formulas, technology, designs, drawings, engineering, hardware configuration information, marketing, finances, and other business information. Confidential Information will not include any information that (a) was publicly known and made generally available in the public domain prior to the time the Company disclosed the information to me, (b) became publicly known and made generally available, after disclosure to me by the Company, through no wrongful action or inaction by me or by others who were under confidentiality obligations, or (c) was in my rightful possession, without confidentiality restrictions, at the time of disclosure by the Company, as shown by my files and records.

2.2 Use and Non-Use. At all times during the term of my employment and after my employment ends, I will hold all Confidential Information in strictest confidence and not use it for any purpose except for the benefit of the Company to fulfill my employment obligations. I will not disclose Confidential Information to any third party without the prior written authorization of the president, CEO, or the Board of Directors of the Company. Confidential Information will remain the sole property of the Company. I will take all reasonable precautions to prevent any unauthorized use or disclosure of the Confidential Information. Prior to disclosure when compelled by applicable law, I will provide written notice to the president, CEO, and general counsel of the Company, as applicable. I understand that my unauthorized use or disclosure of Confidential Information during my employment will lead to disciplinary action, up to and including immediate termination and legal action by the Company. I understand that my obligations under this Section 2.2 will continue after termination of my employment.

If I become compelled by law, regulation (including without limitation the rules of any applicable securities exchange), court order, or other governmental authority to disclose the Confidential Information, I shall, to the extent possible and permissible under applicable law, first give the Company prompt notice. I agree to cooperate reasonably with the Company in any proceeding to obtain a protective order or other remedy. If such protective order or other remedy is not obtained, I shall only disclose that portion of such Confidential Information required to be disclosed, in the opinion of my legal counsel. I shall request that confidential treatment be accorded such Confidential Information, where available. Compulsory disclosures made pursuant to this section shall not relieve me of my obligations of confidentiality and non-use with respect to non-compulsory disclosures. I understand that nothing herein is intended to or shall prevent me from communicating directly with, cooperating with, or providing information to, any federal, state or local government regulator, including, but not limited to, the U.S. Securities and Exchange Commission, the U.S. Commodity Futures Trading Commission, or the U.S. Department of Justice. I shall promptly notify my supervisor or any officer of the Company if I learn of any possible unauthorized use or disclosure of Confidential Information and shall cooperate fully with the Company to enforce its rights in such information.

2.3 Former Employer Confidential Information. I will not, during my employment with the Company, improperly use, disclose, or induce the Company to use any proprietary information or trade secrets of any former or concurrent employer or other person or entity with which I have an obligation to keep information in confidence. Furthermore, I will not bring onto the premises of the Company or transfer onto the Company's technology systems any unpublished document or proprietary information belonging to any third party unless consented to in writing by both the Company and such third party.

2.4 Third Party Information. I recognize that the Company has received and in the future will receive from third parties their confidential or proprietary information subject to a duty on the Company's part to maintain the confidentiality of this information and to use it only for certain limited purposes. I will hold all of this confidential or proprietary information in the strictest confidence and not disclose it to any third party or use it except as necessary in carrying out my work for the Company consistent with the Company's agreements with these third parties. I understand that my unauthorized use or disclosure of third parties' confidential or proprietary information during my employment will lead to disciplinary action, up to and including immediate termination and legal action by the Company.

2.5 Defend Trade Secrets Act Notice of Immunity Rights. I acknowledge that the Company has provided me with the following notice of immunity rights in compliance with the requirements of the Defend Trade Secrets Act: (a) I shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of Confidential Information that is made in confidence to a Federal, State, or local government official or to an attorney solely for the purpose of reporting or investigating a suspected violation of law, (b) I shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of Confidential Information that is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal and (c) if I file a lawsuit for retaliation by the Company for reporting a suspected violation of law, I may disclose the Confidential Information to my attorney and use the Confidential Information in the court proceeding, if I file any document containing the Confidential Information under seal, and do not disclose the Confidential Information, except pursuant to court order.

3. INVENTIONS

3.1 Inventions Defined. "**Inventions**" means inventions, original works of authorship, developments, concepts, improvements, designs, discoveries, ideas, know-how, trademarks, and trade secrets, whether or not patentable or registrable under copyright or similar laws, that I may solely or jointly author, conceive, develop, or reduce to practice.

3.2 Assignment of Inventions and Works Made for Hire. I will promptly make a full written disclosure to the Company of any and all Inventions that I create within the scope of and during the period of my employment with the Company (including without limitation during my off-duty hours) ("**Company Inventions**"). I will hold in trust for the sole right and benefit of the Company, and I hereby assign to the Company or its designee, all of my right, title, and interest (including without limitation all related intellectual property rights and the right to sue and collect payment for past, present, and future infringement) in, all Company Inventions. In addition, all original works of authorship that are made by me (solely or jointly with others) within the scope of and during the period of my employment with the Company (including without limitation during my off-duty hours) and that are protectable by copyright are "works made for hire," as that term is defined in the United States Copyright Act, and in accordance, the Company will be considered the author of these works.

3.3 Exception to Assignments. The obligations to assign Inventions set forth in Section 3.2 apply with respect to all Company Inventions (a) whether or not such Company Inventions are conceived, made, developed or worked on by me during my regular hours of employment with the Company, (b) whether or not the Company Invention was made at the suggestion of the Company, (c) whether or not the Invention was reduced to drawings, written description, documentation, models or other tangible form, and (d) whether or not the Company Invention is related to the general line of business engaged in by the Company; but do not apply to Inventions that (i) I develop entirely on my own time or after the date of this Agreement without using the Company's equipment, supplies, facilities or Confidential Information, (ii) do not relate to the Company's business, or actual or demonstrably anticipated research or development of the Company at the time of conception or reduction to practice of the Invention, and (iii) do not result from and are not related to any work performed by me for the Company.

I hereby acknowledge and agree that the Company has notified me that, if I reside in the state of Washington, assignments provided for in Section 3.2 do not apply to any Invention that qualifies fully for exemption from assignment under the provisions of the Revised Code of Washington Section 49.44.140. ("**RCW 49.44.140**"), a copy of which is attached as **Exhibit D** of this Agreement. I further understand that, to the extent this Agreement shall be construed in accordance with the laws of any State that precludes a requirement in an employee agreement to assign certain classes of inventions made by an employee, Section 3.2 shall be interpreted not to apply to any Invention that a court rules and/or the Company agrees falls within such classes.

At the Company's request, I will promptly disclose to the Company all Inventions made during and after my employment to determine the status of the Company Invention under Sections 3.2 and 3.3. The Company may disclose such Company Inventions to the department of employment security. If applicable, at the time of disclosure of an Invention that I believe qualifies under Section 2870, RCW 49.44.140, or any similar law, I shall provide to the Company, in writing, evidence to substantiate the belief that such Invention qualifies under such law.

3.4 Inventions Retained and Licensed. I have attached to this Agreement, as **Exhibit A**, a list describing all Inventions that were made by me prior to my employment with the Company, that relate to the Company's proposed business, products, or research and development, and that are not assigned to the Company under this Agreement (collectively, "**Prior Inventions**"). If no list is attached or if no Prior Inventions are listed on **Exhibit A**, I represent that there are no Prior Inventions. Furthermore, I represent and warrant that the inclusion of any Prior Inventions from **Exhibit A** of this Agreement will not

materially affect my ability to perform all obligations under this Agreement. If, in the course of my employment with the Company, I incorporate into a Company product, process, or machine an Invention owned by me or in which I have an interest, then I hereby grant to the Company a nonexclusive, royalty-free, irrevocable, perpetual, transferrable, worldwide license (with right to sublicense through multiple tiers) to make, have made, modify, use, import, offer for sale, sell, reproduce, distribute, modify, adapt, prepare derivative works of, display, perform, and otherwise exploit the Invention without restriction of any kind.

3.5 Third Party Inventions. I will not incorporate any original work of authorship, development, concept, improvement, or trade secret owned, in whole or in part, by any third party, into any Company Invention without the Company's prior written permission.

3.6 Moral Rights. Any assignment to the Company of Company Inventions includes without limitation all rights of attribution, paternity, integrity, modification, disclosure, and withdrawal and any other rights throughout the world that may be known as or referred to as "moral rights," artist's rights," or the like (collectively, "**Moral Rights**"). To the extent that Moral Rights cannot be assigned under applicable law, I hereby waive and agree not to enforce any and all Moral Rights, including without limitation any limitation on subsequent modification, to the extent permitted under applicable law.

3.7 Marketing of Company Inventions. The decision whether or not to commercialize or market any Company Invention developed by me solely or jointly with others is within the Company's sole discretion and for the Company's sole benefit. Neither the Company nor any other entity will be required to pay me a royalty as a result of the Company's efforts to commercialize or market any Company Invention.

3.8 Inventions Assigned to the United States. I will assign to the United States government all of my right, title, and interest in and to all Company Inventions whenever the full title is required to be assigned to the United States government by a contract between the Company and the United States government or any of its agencies.

3.9 Maintenance of Records. I will keep and maintain adequate and current written records of all Company Inventions. These records will be in the form of notes, sketches, drawings, electronic files, laboratory notebooks, and any other format that may be specified by the Company. At all times, the records will be available to the Company, and remain the sole property of the Company.

3.10 Further Assurances. I will assist the Company or its designee, at the Company's expense, in every proper way to secure and protect the Company's rights in Company Inventions and any related copyrights, patents, mask work rights, or other intellectual property rights in any and all countries. I will disclose to the Company all pertinent information and data. I will execute all applications, specifications, oaths, assignments, and all other instruments that the Company deems necessary in order to apply for and obtain these rights and in order to deliver, assign, and convey to the Company, its successors, assigns, and nominees the sole and exclusive rights, title, and interest in and to Company Inventions, and any related copyrights, patents, mask work rights, or other intellectual property rights. I will testify in a suit or other proceeding relating to such Company Inventions and any rights relating thereto. My obligation to execute or cause to be executed, when it is in my power to do so, any instrument or papers will continue after the termination of this Agreement. If the Company is unable because of my mental or physical incapacity or for any other reason to secure my signature to apply for or to pursue any application for any United States or foreign patents or copyright registrations covering Company Inventions assigned to the Company as above, then I hereby irrevocably designate and appoint the Company and its duly authorized officers and agents as my agent and attorney in fact. Accordingly, the Company may act for and in my behalf to execute and file any applications and to do all other lawfully permitted acts to further the prosecution and issuance of patent or copyright registrations with the same legal force and effect as if executed by me.

4. NO CONFLICTING OBLIGATIONS

4.1 Current Obligations. During the term of my employment with the Company, I will not engage in any other employment, occupation, consulting, or other business activity directly relating to the business in which the Company is now involved, becomes involved, or has plans to become involved during the term of my employment. I will also not engage in any other activities that conflict with my obligations to the Company.

4.2 Prior Relationships. Without limiting Section 4.1, I represent that I have no other agreements, relationships or commitments to any other person or entity that conflict with my obligations to the Company under this Agreement or my ability to become employed and perform the services for which I am being hired by the Company. If I have signed a confidentiality agreement or similar type of agreement with any former employer or other entity, I will comply with the terms of any such agreement to the extent that its terms are lawful under applicable law. I represent and warrant that after undertaking a careful search (including without limitation searches of my computers, cell phones, electronic devices and documents), I have returned all property and confidential information belonging to all prior employers (or other third parties I have performed services for in accordance with the terms of my applicable agreement). Moreover, if the Company or any of its employees or agents is sued based on any obligation or agreement to which I am a party or am bound, I will indemnify the Company and its employees and agents for all verdicts, judgments, settlements, and other losses that result from any breach of my obligations under this Agreement, as well as any reasonable attorneys' fees and costs if the plaintiff is the prevailing party in such an action.

5. COMPLIANCE WITH COMPANY POLICIES AND USE OF COMPANY EQUIPMENT AND FACILITIES

I will comply with all Company policies, including but not limited to policies relating to the use of the Internet and the use of Company equipment and facilities. I will not use Company equipment or facilities for any purpose except to fulfill my employment obligations for the benefit of the Company. I will follow all laws and regulations applicable to the use of Company equipment and facilities and access to or use of others' computer or communication systems. I acknowledge that the Company will maintain sole ownership of all equipment and any data stored on the equipment. I understand and consent that the Company reserves the right to view and disclose without prior notice, for any purpose, any data stored on Company equipment or passing through the Company's network, including but not limited to electronic mail and data downloaded from the Internet. I understand that I am not permitted to add any unlicensed, unauthorized or non-compliant applications to the Company's technology systems and that I shall refrain from copying unlicensed software onto the Company's technology systems or using non-licensed software or web sites.

I acknowledge that I have no expectation of privacy either in information in transit through the Company network or stored on Company equipment, including without limitation computer, email, handheld device, telephone, or voicemail. All information, data, and messages created, received, sent, or stored in these systems are, at all times, the property of the Company. As such, the Company has the right to audit and search all such items and systems, without further notice to me, to ensure that the Company is licensed to use the software on the Company's devices in compliance with the Company's software licensing policies, to ensure compliance with the Company's policies, and for any other business-related purposes in the Company's sole discretion. I am aware that Company has or may acquire software and systems that are capable of monitoring and recording all network traffic to and from any computer I may use. The Company reserves the right to access, review, copy, and

delete any of the information, data, or messages accessed through these systems with or without notice to me. This includes, but is not limited to, all e-mail messages, website visits, internet usage, chat sessions, and all file transfers into and out of the Company's internal networks. The Company may review internet and technology systems activity and analyze usage patterns, and may choose to publicize this data to assure that technology systems are devoted to legitimate business purposes.

6. RETURNING COMPANY MATERIALS

Upon leaving the employ of the Company, or upon Company's request during my employment, I will deliver to the Company (and will not keep in my possession, recreate, or deliver to anyone else) any and all Confidential Information, devices, records, data, notes, reports, proposals, lists, correspondence, specifications, drawings blueprints, sketches, materials, equipment, Company credit cards, electronically-stored information and passwords to access such property, and other documents or property, or reproductions of these items developed by me pursuant to my employment with the Company or otherwise belonging to the Company, its successors, or assigns. In addition, I will deliver those records maintained pursuant to Section 3.9 to the Company. Notwithstanding the foregoing, I may retain a copy of my Outlook Contacts or comparable contacts database and any documents of a personal nature, including without limitation diaries, calendars and personal documents relating to my employment, compensation, taxes or expenses. I consent to an exit interview to confirm my compliance with this Section 6.

7. NOTIFICATION TO NEW EMPLOYER

If my employment with the Company ends for any reason or no reason, the Company may notify my new employer about my rights and obligations under this Agreement.

8. CONFLICT OF INTEREST GUIDELINES

I will diligently adhere to the "Conflict of Interest Guidelines." A copy of the Company's current Conflict of Interest Guidelines is attached to this Agreement as **Exhibit B**, but I understand that the Conflict of Interest Guidelines may be revised from time to time during my employment.

9. TERMINATION CERTIFICATION

If my employment with the Company ends for any reason or no reason, I will sign and deliver to the Company the "Termination Certification" attached to this Agreement as **Exhibit C**. I will keep the Company advised of my home and business address for three years after termination of my employment with the Company so that the Company can contact me regarding my continuing obligations under this Agreement.

10. NON-COMPETITION

10.1 Non-Competition. In order to protect Confidential Information, I will not, during the period of my employment with the Company, and, to the extent permitted under applicable law, for a period of 12 months thereafter, whether my termination is with or without good cause or for any or no cause, and whether my termination is effected by either the Company or me, directly or indirectly, for myself or any third party other than the Company:

(a) provide services of any kind for any business (within the Geographic Area, as defined below) in connection with the development, manufacture, marketing, or sale of any product or service that I worked on in any capacity or in connection with which I had access to Confidential Information at any time during my employment with the Company, if the business's product or service (i) competes with any product or service sold or provided by the Company, (ii) competes with any product or service intended to be sold or provided by the Company at the time of the termination of my employment with the Company, or (iii) competed with any product or service sold or provided by the Company at any time during my employment with the Company;

(b) solicit sales from any of the Company's customers for any product or service that (i) competes with any product or service sold or provided by the Company, (ii) competes with any product or service intended to be sold or provided by the Company at the time of the termination of my employment with the Company, or (iii) competed with any product or service sold or provided by the Company at any time during my employment with the Company;

(c) entice any vendor, consultant, collaborator, agent, or contractor of the Company to cease its business relationship with the Company or engage in any activity that would cause them to cease their business relationship with the Company; or

(d) solicit, induce, recruit, or encourage any of the Company's employees to leave their employment, or attempt to solicit, induce, recruit, encourage, or take away Company employees.

10.2 Geographic Area Definition. "**Geographic Area**" means anywhere in the world where the Company conducts business.

10.3 Severability. The covenants contained in this Section 10 will be construed as a series of separate covenants, one for each country, city, state, or similar subdivision in any Geographic Area. If, in any judicial proceeding, a court refuses to enforce any of these separate covenants (or any part of a covenant), then the unenforceable covenant (or part) will be eliminated from this Agreement to the extent necessary to permit the remaining separate covenants (or portions) to be enforced. In the event that the provisions of this section are deemed to exceed the time, geographic, or scope limitations permitted by law, then the provisions will be reformed to the maximum time, geographic, or scope limitations permitted by law.

10.4 Reasonableness. The nature of the Company's business is such that if I were to become employed by, or substantially involved in, the business of a competitor to the Company, it would be difficult not to rely on or use Confidential Information. Therefore, I enter into this Agreement to reduce the likelihood of disclosure of Confidential Information. I acknowledge that the limitations of time, geography, and scope of activity agreed to above are reasonable because, among other things, (a) the Company is engaged in a highly competitive industry, (b) I will have access to Confidential Information, including but not limited to the Company's trade secrets, know-how, plans, and strategy (and in particular, the competitive strategy of the Company), (c) in the event my employment with the Company ends, I will be able to obtain suitable and satisfactory employment in my chosen profession without violating this Agreement, (d) these limitations are necessary to protect Confidential Information, and the goodwill of the Company, and (e) these limitations will apply even if I am transferred or demoted, or my job title, compensation, benefits and other terms and conditions of employment are reduced.

11. COMPENSATION

All compensation for services rendered to third parties during the term of my employment with the Company, including without limitation equity or equity-type payments, and consulting or advisory fees, will be paid to the Company unless otherwise unanimously approved by the Board of Directors of the Company in writing.

12. REPRESENTATIONS

I will execute any proper oath or verify any proper document required to carry out the terms of this Agreement. I represent and warrant that my performance of all the terms of this Agreement will not breach any agreement to keep in confidence proprietary information acquired by me in confidence or in trust prior to my employment by the Company. I have not entered into, and I will not enter into, any oral or written agreement in conflict with this Agreement.

13. ARBITRATION AND EQUITABLE RELIEF

13.1 Arbitration. EXCEPT AS PROVIDED IN SECTION 13.4, ANY DISPUTE OR CONTROVERSY ARISING OUT OF, RELATING TO, OR CONCERNING ANY INTERPRETATION, CONSTRUCTION, PERFORMANCE, OR BREACH OF THIS AGREEMENT, WILL BE SETTLED BY

ARBITRATION TO BE HELD IN KING COUNTY, WASHINGTON, IN ACCORDANCE WITH THE EMPLOYMENT DISPUTE RESOLUTION RULES THEN IN EFFECT OF THE AMERICAN ARBITRATION ASSOCIATION ("**RULES**"). THE ARBITRATOR MAY GRANT INJUNCTIONS OR OTHER RELIEF IN A DISPUTE OR CONTROVERSY. THE DECISION OF THE ARBITRATOR WILL BE FINAL, CONCLUSIVE, AND BINDING ON THE PARTIES TO THE ARBITRATION. JUDGMENT MAY BE ENTERED ON THE ARBITRATOR'S DECISION IN ANY COURT HAVING JURISDICTION. THE COMPANY WILL PAY ALL ARBITRATION FEES, EXCEPT AN AMOUNT EQUAL TO THE FILING FEES I WOULD HAVE PAID HAD I FILED A COMPLAINT IN A COURT OF LAW. THE COMPANY AND I WILL EACH SEPARATELY PAY OUR COUNSEL FEES AND EXPENSES.

13.2 Waiver of Right to Jury Trial. THIS ARBITRATION CLAUSE CONSTITUTES A WAIVER OF MY RIGHT TO A JURY TRIAL AND RELATES TO THE RESOLUTION OF ALL DISPUTES RELATING TO ALL ASPECTS OF MY EMPLOYMENT RELATIONSHIP WITH THE COMPANY (EXCEPT AS PROVIDED IN SECTION 13.4 BELOW), INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING CLAIMS:

(a) CLAIMS FOR WRONGFUL DISCHARGE OF EMPLOYMENT, BREACH OF CONTRACT, BOTH EXPRESS AND IMPLIED, BREACH OF THE COVENANT OF GOOD FAITH AND FAIR DEALING, BOTH EXPRESS AND IMPLIED, NEGLIGENT OR INTENTIONAL INFLICTION OF EMOTIONAL DISTRESS, NEGLIGENT OR INTENTIONAL MISREPRESENTATION, NEGLIGENT OR INTENTIONAL INTERFERENCE WITH CONTRACT OR PROSPECTIVE ECONOMIC ADVANTAGE, AND DEFAMATION;

(b) CLAIMS FOR VIOLATION OF ANY FEDERAL, STATE, OR MUNICIPAL STATUTE, INCLUDING, BUT NOT LIMITED TO, TITLE VII OF THE CIVIL RIGHTS ACT OF 1964, THE CIVIL RIGHTS ACT OF 1991, THE AGE DISCRIMINATION IN EMPLOYMENT ACT OF 1967, THE AMERICANS WITH DISABILITIES ACT OF 1990, THE FAIR LABOR STANDARDS ACT, AND REVISED CODE OF WASHINGTON SECTION 49.60.010, ET SEQ.; AND

(c) CLAIMS ARISING OUT OF ANY OTHER LAWS AND REGULATIONS RELATING TO EMPLOYMENT OR EMPLOYMENT DISCRIMINATION.

NOTHING IN THIS AGREEMENT CONSTITUTES A WAIVER OF MY RIGHTS UNDER SECTION 7 OF THE NATIONAL LABOR RELATIONS ACT.

13.3 Remedy. EXCEPT AS PROVIDED BY THE RULES AND THIS AGREEMENT, ARBITRATION SHALL BE THE SOLE, EXCLUSIVE AND FINAL REMEDY FOR ANY DISPUTE BETWEEN ME AND THE COMPANY. ACCORDINGLY, EXCEPT AS PROVIDED FOR BY THE RULES AND THIS AGREEMENT, NEITHER I NOR THE COMPANY WILL BE PERMITTED TO PURSUE COURT ACTION REGARDING CLAIMS THAT ARE SUBJECT TO ARBITRATION. NOTWITHSTANDING, THE ARBITRATOR WILL NOT HAVE THE AUTHORITY TO DISREGARD OR REFUSE TO ENFORCE ANY LAWFUL COMPANY POLICY, AND THE ARBITRATOR SHALL NOT ORDER OR REQUIRE THE COMPANY TO ADOPT A POLICY NOT OTHERWISE REQUIRED BY LAW. NOTHING IN THIS AGREEMENT OR IN THIS PROVISION IS INTENDED TO WAIVE THE PROVISIONAL RELIEF REMEDIES AVAILABLE UNDER THE RULES.

13.4 Equitable Remedies. THE COMPANY OR I MAY APPLY TO ANY COURT OF COMPETENT JURISDICTION FOR A TEMPORARY RESTRAINING ORDER, PRELIMINARY INJUNCTION, OR OTHER INTERIM OR CONSERVATORY RELIEF, AS NECESSARY, WITHOUT BREACH OF THIS AGREEMENT AND WITHOUT ABRIDGEMENT OF THE POWERS OF THE ARBITRATOR.

13.5 Administrative Relief. I UNDERSTAND THAT THIS AGREEMENT DOES NOT PROHIBIT ME FROM PURSUING AN ADMINISTRATIVE CLAIM WITH A LOCAL, STATE OR FEDERAL ADMINISTRATIVE BODY SUCH AS THE DEPARTMENT OF FAIR EMPLOYMENT AND HOUSING, THE EQUAL EMPLOYMENT OPPORTUNITY COMMISSION OR THE WORKERS' COMPENSATION BOARD. THIS AGREEMENT DOES, HOWEVER, PRECLUDE ME FROM PURSUING COURT ACTION REGARDING ANY SUCH CLAIM.

13.6 Consideration. I UNDERSTAND THAT EACH PARTY'S PROMISE TO RESOLVE CLAIMS BY ARBITRATION IN ACCORDANCE WITH THE PROVISIONS OF THIS AGREEMENT, RATHER THAN THROUGH THE COURTS, IS CONSIDERATION FOR THE OTHER PARTY'S LIKE PROMISE. I FURTHER UNDERSTAND THAT I AM OFFERED EMPLOYMENT IN CONSIDERATION OF MY PROMISE TO ARBITRATE CLAIMS.

13.7 Voluntary Nature of Agreement. I ACKNOWLEDGE THAT I AM EXECUTING THIS AGREEMENT VOLUNTARILY AND WITHOUT ANY DURESS OR UNDUE INFLUENCE BY THE COMPANY OR ANYONE ELSE. I FURTHER ACKNOWLEDGE AND AGREE THAT I HAVE CAREFULLY READ THIS AGREEMENT AND THAT I HAVE ASKED ANY QUESTIONS NEEDED FOR ME TO UNDERSTAND THE TERMS, CONSEQUENCES AND BINDING EFFECT OF THIS AGREEMENT AND FULLY UNDERSTAND IT, INCLUDING WITHOUT LIMITATION THAT ***I AM WAIVING MY RIGHT TO A JURY TRIAL***. FINALLY, I ACKNOWLEDGE THAT I HAVE BEEN PROVIDED AN OPPORTUNITY TO SEEK THE ADVICE OF AN ATTORNEY OF MY CHOICE BEFORE SIGNING THIS AGREEMENT.

14. GENERAL PROVISIONS

14.1 Governing Law and Consent to Personal Jurisdiction. The internal laws of the state of Washington, but not the choice of law rules of the state of Washington, govern this Agreement. I expressly consent to the personal jurisdiction of the state and federal courts located in King County, Washington, for any lawsuit filed there against me by the Company arising from or relating to this Agreement.

14.2 Entire Agreement. This Agreement sets forth the entire agreement and understanding between the Company and me relating to the subject matter of this Agreement. This Agreement supersedes all prior or contemporaneous discussions between us. No modification of this Agreement or amendment to it, nor any waiver of any rights under this Agreement, will be effective unless in writing signed by the party to be charged. Any subsequent change or changes in my duties, obligations, rights, salary, or compensation will not affect the validity or scope of this Agreement.

14.3 Severability. If one or more of the provisions in this Agreement is deemed void by law, then the remaining provisions will continue in full force and effect.

14.4 Successors and Assigns. This Agreement will be binding upon my heirs, executors, assigns, administrators, and other legal representatives and will be for the benefit of the Company, its successors, and its assigns. The Company may assign this Agreement to a successor to all or part of its business or assets without restriction. I may not assign this Agreement to any third party. Any assignment that is not permitted under this Section 14.4 above will be null and void. There are no intended third party beneficiaries to this Agreement except as expressly stated.

14.5 Headings. Headings are used in this Agreement for reference only and will not be considered when interpreting this Agreement.

14.6 Waiver. Waiver by the Company of a breach of any provision of this Agreement will not operate as a waiver of any other or subsequent breach.

14.7 Survivorship. The rights and obligations of the parties will survive termination of my employment with the Company.

14.8 Signatures. This Agreement may be signed in two counterparts, each of which shall be deemed an original, with the same force and effectiveness as though executed in a single document.

14.9 I ACKNOWLEDGE THAT I HAVE HAD THE OPPORTUNITY TO SEEK THE ADVICE OF INDEPENDENT LEGAL COUNSEL AND THAT I HAVE READ THIS AGREEMENT CAREFULLY AND I UNDERSTAND AND ACCEPT THE OBLIGATIONS WHICH IT IMPOSES UPON ME WITHOUT RESERVATION. NO PROMISES OR REPRESENTATIONS HAVE BEEN MADE TO ME TO INDUCE ME TO SIGN THIS AGREEMENT.

SANA BIOTECHNOLOGY, INC.

By: /s/ Robin Andrulevich
Title: Chief People Officer
Date: October 2, 2019

EMPLOYEE

/s/ James J. MacDonald
Print Name: James J. MacDonald
Date: September 28, 2018

CERTAIN CONFIDENTIAL INFORMATION IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED

EXCLUSIVE LICENSE AGREEMENT

BETWEEN

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

AND

SANA BIOTECHNOLOGY, INC.

FOR

[***]

EXCLUSIVE LICENSE AGREEMENT
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EXCLUSIVE LICENSE AGREEMENT

THIS EXCLUSIVE LICENSE AGREEMENT AND THE ATTACHED APPENDICES A, B, and C (collectively, the "**Agreement**") is made and is effective **March 22, 2019** (the "**Effective Date"**) between **THE REGENTS OF THE UNIVERSITY OF CALIFORNIA** ("**The Regents**"), a California corporation having its corporate offices located at [***], acting through The Technology Development Group of the University of California, Los Angeles, located at **[***]**, and **SANA BIOTECHNOLOGY, INC.** ("**Licensee"**), a Delaware corporation having a principal place of business at **1616 Eastlake Ave. East, Suite 360, Seattle WA 98102.**

RECITALS

WHEREAS, a certain invention(s), generally characterized as

1. [***]

(the "**Invention**") was made in the course of research at the University of California, Los Angeles by [***] ("**Inventor(s)**"), and is claimed in Regents' Patent Rights, as defined below;

WHEREAS, the Inventors were employees of The Regents and as such were obligated to assign and have assigned their right, title and interest in and to the Invention to The Regents;

WHEREAS, the Invention was developed with United States Government funds, and The Regents has elected title thereto and granted a royalty-free nonexclusive license to the United States Government on December 13, 2016, as required under 35 U.S.C. §200-212;

WHEREAS, [***] was developed with funding from the California Institute for Regenerative Medicine ("**CIRM**") under CIRM grant number [***] while performing research supporting the development of the Invention, which is subject to Title 17, California Code of Regulations, Section 100600-100611 (the "**CIRM Regulations**");

WHEREAS, Cobalt Biomedicine, Inc., having since been acquired by Licensee, and The Regents executed a Letter of Intent (UC [***]) with an effective date of April 2, 2018;

WHEREAS, Licensee is a "**small business concern**" as defined in 15 U.S.C. §§632;

WHEREAS, The Regents wishes that Regents' Patent Rights be developed and utilized to the fullest extent so that the benefits can be enjoyed by the general public.

The parties agree as follows:

1. DEFINITIONS

1.1 "**Affiliate**" means any business entity in which Licensee owns or controls, directly or indirectly, at least fifty percent (50%) of the outstanding stock or other voting rights entitled to elect directors. In any country where the local law does not permit foreign equity participation of at least fifty percent (50%), then "**Affiliate**" means any business entity in which Licensee owns or controls, directly or indirectly, the maximum percentage of outstanding stock or voting rights that is permitted by local law.

1.2 "**Approval**" means any approvals (including the approval by an applicable governmental authority in certain countries or territories with respect to the price at which a pharmaceutical product is sold and can be reimbursed by healthcare insurers), licenses, registrations or authorizations of any national, supra-national, regional, state or local regulatory agency, department, bureau, commission, council or other governmental entity, necessary for the marketing and sale of a pharmaceutical product in a given regulatory jurisdiction.

1.3 "**Change of Control**" shall mean the occurrence of any one or more of the following after the Effective Date:

(a) the sale to a third party of all or substantially all of the Licensee's assets or business relating to this Agreement;

(b) the merger, consolidation or sale of the Licensee or substantially all of the Licensee's assets or similar transaction or series of transactions with or to a non-Affiliate third party, as a result of which the Licensee's shareholders before such transaction or series of transactions own less than fifty percent (50%) of the total number of voting securities of the surviving entity immediately after such transaction or series of transactions; or

(c) the assignment by the Licensee of this Agreement to any non-Affiliate third party.

1.4 "**Clinical Trial Failure Delay**" means a delay in the completion of a Development Milestone that is directly caused by (i) failure to meet one or more endpoints in a clinical trial of a Licensed Product despite Licensee's or its Sublicensee's use of commercially reasonable efforts to conduct the applicable clinical trial in a manner designed to assess such endpoint(s), or (ii) issues with patient enrollment (including delays in recruitment) despite Licensee's or its Sublicensee's use of commercially reasonable efforts to achieve such enrollment or recruitment.

1.5 "**Customer**" means any individual or entity that receives Licensed Products, provided however, that Licensee, Affiliate or Sublicensee shall be deemed a Customer only if it receives Licensed Products that are not intended for further sale, transfer, lease, exchange or other disposition other than Customer's own end-use.

1.6 "**Development Issue**" has the meaning given in Section 6.4 of this Agreement.

1.7 "**EMA**" means the European Medicines Agency.

1.8 "**End User Product**" means a Licensed Product that is administered directly to a patient for therapeutic purposes.

1.9 "**Field of Use**" means all human therapeutic uses.

1.10 "**Final Sale**" means any sale, transfer, lease, exchange or other disposition or provision of a Licensed Product to a Customer by Licensee, its Affiliate or a Sublicensee. A Final Sale will be deemed to have occurred upon the earliest to occur of the following (as applicable): (a) the transfer of title to such Licensed Product to a Customer, (b) the shipment of such Licensed Product to a Customer, (c) (d) the provision of an invoice for such Licensed Product to a Customer, or (e) payment by the Customer for Licensed Products. Exchange of Licensed Products between Licensee and a Sublicensee or Affiliate is not a Final Sale if the Licensed Product is intended for further sale, transfer, lease, exchange or other disposition, in which case the Final Sale will be deemed to have occurred upon sale, transfer, lease, exchange or other disposition or provision of Licensed Product by Licensee or Sublicensee or Affiliate to a Customer. If Licensee, Affiliate or a Sublicensee transfers Licensed Product at no or below cost solely for use in, or for purposes of, a clinical study, clinical trial, individual named patient programs (e.g. compassionate use) or, at no cost as a free sample in product promotion, then such transfers will not be considered a Final Sale and no royalty will be owed hereunder.

1.11 "**First Commercial Sale**" means the first sale of any Licensed Product by Licensee or a Sublicensee, following Approval of its marketing by the appropriate governmental agency for the country in which the sale is to be made. When Approval is not required, "First Commercial Sale" means the first sale in that country.

1.12 "**License**" has the meaning given in Section 2.1 of this Agreement.

1.13 "**Licensed Method**" means any process, or method that utilizes or that is covered by a Valid Claim within Regents' Patent Rights or whose use or practice would, absent the license granted under this Agreement, constitute an infringement, inducement of infringement or contributory infringement of any Valid Claim within Regents' Patent Rights.

1.14 "**Licensed Product**" means any article, composition, apparatus, substance, chemical, or any other material that is covered by a Valid Claim within Regents' Patent Rights or whose manufacture, import use, offer for sale, or sale would, absent the license granted under this Agreement, constitute an infringement, inducement of infringement or contributory infringement of any Valid Claim within Regents' Patent Rights, or any article, composition, apparatus, chemical, substance or any other material made, used or sold by or utilizing or practicing a Licensed Method.

1.15 "**Milestone Payments**" has the meaning given in Section 4.2 of this Agreement.

1.16 "**Minimum Annual Royalty**" has the meaning set forth in Section 5.4 of this Agreement.

1.17 "**Net Sales**" means the total of the gross amount received (whether consisting of cash or any other forms of consideration) for all Final Sales, less the following deductions (to the extent included in and not already deducted from the gross amount received) to the extent reasonable and customary: [***]. Such amounts shall be determined from the books and records of Licensee, maintained, as applicable, in accordance with US GAAP. Income taxes are not an allowed deduction under Net Sales.

1.18 "**Patent Action**" means the preparation, filing, prosecution and maintenance of patent applications and patents in Regents' Patent Rights. Prosecution includes, but is not limited to, reexaminations, interferences, oppositions, and any other ex parte or inter partes matters originating in a patent office. Patent Action also includes inter partes review petitions and litigation associated with an abbreviated new drug application (ANDA) for a Licensed Product.

1.19 "**Patent Costs**" means all out-of-pocket costs incurred by The Regents for Patent Actions.

1.20 "**Phase I Trial**" will mean a human clinical trial of a Licensed Product in a human subject the purpose of which is preliminary determination of safety and tolerability of a dosing regimen, as required in 21 C.F.R. § 312.21(a), or any equivalent clinical study in a country other than the United States.

1.21 "**Phase II Trial**" will mean a human clinical trial of a Licensed Product, for which the primary endpoints include a determination of dose ranges and/or a preliminary determination of efficacy in patients being studied as required by 21 C.F. R. § 312.21 (b), or any equivalent clinical study in a country other than the United States.

1.22 "**Phase III Trial**" will mean a human clinical trial of a Licensed Product on a sufficient number of subjects that is designed to establish that a pharmaceutical product is safe and efficacious for its intended use, and to determine warnings, precautions, and adverse reactions that are associated with such pharmaceutical product in the dosage range to be prescribed, which trial is intended to support Approval of a Licensed Product, as described in 21 C.F.R. 312.21(c) for the United States or any equivalent clinical study in a country other than the United States.

1.23 "**Regents' Patent Rights**" means The Regents' interest in any of the patent applications and patents listed in Appendix A (REGENTS' PATENT RIGHTS) attached to this Agreement ([***]); any continuing applications thereof including divisions; but excluding continuations-in-part except to the extent of claims entirely supported in the specification and entitled to the priority date of the parent application; any patents issuing on these applications including reissues, substitutions, and patent extensions; and any corresponding foreign patents, patent applications and supplemental protection certificates; all of which will be automatically incorporated in and added to Appendix A and made a part of this Agreement.

1.24 **"Regulatory Delay**" means a delay in the completion of a clinical stage Diligence Milestone that results from the FDA either (a) putting a clinical hold on one or more classes of Licensed Products that Licensee or a Sublicensee is developing pursuant to this Agreement, (b) requiring additional data related to the Licensed Product that Licensee or a Sublicensee is developing pursuant to this Agreement based on FDA guidelines or regulations and such guidelines or regulations were only implemented after initiation of a human clinical trial for such Licensed Product or (c) determining that there is a potential safety risk associated with such Licensed Product; provided, however, that with respect to (a)-(c) (i) such delay is not primarily due to Licensee's actions or inactions that were counter to the guidance provided to Licensee or otherwise published by the FDA, and (ii) such delay is not primarily due to Licensee's failure to provide data to the FDA in a form, amount and quality commonly used in the pharmaceutical industry or to undertake preclinical and clinical development in a form and of a quality that would be commonly used in the pharmaceutical industry.

1.25 "**Sublicense**" has the meaning given in Section 3.1 of this Agreement.

1.26 "**Sublicensee**" means any person or entity to which a Sublicense is granted other than an Affiliate. For clarity, if Licensee desires to enable any joint venture (other than a joint venture that constitutes an Affiliate) to use or have any other right or license to the Regents' Patent Rights, then Licensee must grant such joint venture a Sublicense.

1.27 "**Sublicensing Income**" means consideration (whether cash or any other type of consideration) received by Licensee or Sublicensee in consideration for a Sublicense (as defined below in Section 3.1). Sublicensing Income includes consideration received from Sublicensees in consideration for a Sublicense in the form of license issue fees and milestone payments, but specifically excludes royalties on the sale or distribution of Licensed Products (solely to the extent such royalties are accounted for in the amounts paid to The Regents pursuant to Section 5.1). Not included in the definition of Sublicensing Income is [***]. In addition, to the extent that a payment is made under a sublicense agreement that grants both a sublicense under the Regents' Patent Rights and a license or sublicense under intellectual property rights, products, services, methods or materials not licensed to Licensee under this Agreement, then a pro rata portion of such payment will be considered Sublicensing Income which pro rata portion will be calculated jointly by the parties upon request by Licensee based on the relative value of the Regents' Patent Rights as compared to the other intellectual property rights and material licensed or sublicensed by Licensee under such sublicense agreement in consideration for which such payment was made. Licensee will provide The Regents with written justification for a proposed calculation of the Sublicensing Income and the parties will discuss such calculation in good faith.

1.28 "**Territory**" means all countries of the world in which Regents' Patents Rights have or will be filed.

1.29 **"Valid Claim"** means (i) a claim of an issued patent that has not expired or been held unenforceable or invalid by a final judgment or decision of a court or other government agency of competent jurisdiction from which no appeal has been or can be taken, and which has not been admitted to be invalid or unenforceable through reissue, disclaimer or the like, or (ii) a claim of a pending patent application that has not been pending longer than [***] years from the date of receipt of the first substantive office action received with respect to such claim and has not been abandoned or finally rejected without the possibility of appeal or re-filing. For purposes of clarity, both (i) and (ii) are Valid Claims for purposes of this Agreement.

The following terms have the meanings given in the referenced sections of this Agreement:

"Calendar Year"	5.4
"Earned Royalty"	5.1
"Infringement Notice"	8.1
"Notice of Default"	12.1
"Notice of Termination"	12.1
"Ongoing Patent Costs"	7.3
"Patent Costs"	7.2
"Patent Prosecution Request"	7.1c
"Patent Termination Notice"	7.4
"Termination Effective Date"	13.1

2. GRANT

2.1 Subject to the limitations set forth in this Agreement, The Regents hereby grants to Licensee an exclusive license (the "**License**") under Regents' Patent Rights in the Territory, (i) to research, make, have made, use, sell, offer for sale, have sold and import Licensed Products, and (ii) to practice Licensed Methods, in the Field of Use to the extent permitted by law, provided that the scope of Licensee's license to practice Licensed Methods pursuant to this subpart (ii) is solely for the purposes of researching, manufacturing, and using Licensed Products pursuant to the foregoing subpart (i) of Licensee's License (for abundance of clarity, while Licensee has a right to use the Licensed Methods to research, make, and use End User Products, Licensee has no right to use the Licensed Methods to perform services for a fee or other consideration (or to sublicense any of the foregoing) without first negotiating with The Regents to remove or modify the restriction in subpart (ii)).

So long as Licensee's License pursuant to this Section 2.1 remains exclusive, The Regents agrees not to grant any rights under Regents' Patent Rights regarding Licensed Methods to third parties (except as permitted under Sections 2.2 and 2.3 below) without first offering Licensee a reasonable opportunity to remove the restrictions regarding Licensed Methods set forth above.

The licenses granted to Licensee may be extended by Licensee to one or more of its Affiliates at Licensee's sole discretion, in which case rights and obligation of Licensee in this Agreement will apply to such Affiliates, but only during the period such entity satisfies the definition of Affiliate. As a licensee of Regents' Patent Rights under this Agreement, Affiliates shall have all of the same rights and obligations, financial and otherwise, that Licensee has under this Agreement. Acts of an Affiliate are considered to be those of Licensee under this Agreement and Licensee is responsible for all such acts. Licensee is also responsible and liable for all obligations of Affiliates due to The Regents under this Agreement, including without limitation payment to The Regents of royalties or other consideration due to The Regents hereunder.

2.2 Each of The Regents and Licensee recognize the License encompasses the right under the Regents' Patent Rights to research, make, have made, use, sell, offer for sale, have sold and import Licensed Products other than End User Products. Notwithstanding the foregoing, Licensee will not commercialize, or permit a Sublicensee to commercialize, any Licensed Product that is not an End User Product without first negotiating with The Regents for possible development milestones to be achieved and royalties or other payments applicable to such Licensed Products. Such negotiations will be conducted by the parties in a timely manner and in good faith. Licensee and The Regents will reflect the outcome of such negotiations in a mutually agreed written amendment to this Agreement.

2.3 The License is subject to all the applicable provisions of any license to the United States Government executed by The Regents and is subject to Title 17, § 100610 of the California Code of Regulations, obligations to the United States Federal Government under 35 U.S.C. §§200-212, applicable governmental implementing regulations, and the U.S. Government sponsored research agreement or other guidelines. If CIRM exercises its rights under § 100610 and, as a result, the scope of Licensee's exclusive license to the Regents' Patent Rights is impacted, The Regents agree that Licensee's financial obligations under Sections 4 and 5 of this Agreement will be reduced by [***] percent ([***]%).

2.4 The Regents expressly reserves the right to: (a) use Regents' Patent Rights for educational and research purposes and research sponsored by commercial entities, (b) publicly disclose research results, (c) use Regents' Patent Rights to offer and perform clinical diagnostic and prognostic care, as well as perform investigator-initiated clinical trials, in all cases in this subpart (c) solely within the University of California system, and (d) allow other non-profit and academic institutions to use Regents' Patent Rights for the same purposes as subparts (a) and (b). For clarity, no rights to Regents' Patent Rights within the Field of Use may be granted to any commercial entities and this provision does not:

(a) provide The Regents with any right to use any information or data that is owned by Licensee, its Affiliates or Sublicensees;

(b) restrict any rights that Licensee may otherwise have to attempt to sell its product or services to any part of the University of California;

(c) create an obligation for Licensee to supply products to services to the University of California for no charge or for a below-market charge; or

(d) provide The Regents with any right to provide Licensed Products to any commercial third-party entity other than in the context of The Regents' educational and research activities.

2.5 If Licensee or a Sublicensee, itself or through a third party, institutes any proceeding that challenges the validity of any Regents' Patent Rights during the term of this Agreement, Licensee agrees to pay to The Regents, directly and not into any escrow or other account, all royalties and other amounts due in view of Licensee's and its Sublicensees' activities under the Agreement during the period of challenge. Should the outcome of such contest determine that any challenged patent claim is valid, Licensee (or its Sublicensee, as applicable) will thereafter, and for the remaining term of this Agreement, pay a royalty rate of [***] [***] specified above and all of The Regents' legal (including attorney) verifiable out-of-pocket fees and costs incurred defending such proceeding.

3. SUBLICENSES

3.1 The Regents grants to Licensee the right to sublicense the rights granted to Licensee under this Agreement, which includes the right to negotiate or obtain such a sublicense (each a "**Sublicense**"), provided that the initial grantee under a Sublicense (i.e. granted by Licensee) may it or themselves grant further sublicenses only to one other third party (and such other third party will not have the right to grant further sublicenses without the prior written approval of The Regents, which approval will not be unreasonably withheld, conditioned or delayed). All Sublicenses will: (i) be issued in writing, and (ii) to the extent applicable include all of the rights of The Regents and require the performance of obligations due to The Regents (and, if applicable, the U.S. Government under 35 U.S. C. §§201-212) contained in this Agreement. For the purposes of this Agreement, operations of Sublicensees in relation to the Regents' Patent Rights and Licensed Products during the term of any such Sublicense are deemed to be the operations of Licensee, for which Licensee is responsible.

3.2 Licensee must pay to The Regents the percentage of Sublicensing Income it receives as set forth in the table below. Licensee must pay such Sublicensing Income to The Regents on or before the following dates:

- March 31 (for Sublicensing Income received by Licensee on or before the last day of the calendar quarter ending December 31 of the prior year);
- June 30 (for Sublicensing Income received by Licensee on or before the last day of the calendar quarter ending March 31);
- September 30 (for Sublicensing Income received by Licensee on or before the last day of the calendar quarter ending June 30); and
- December 31 (for Sublicensing Income received by Licensee on or before the last day of the calendar quarter ending September 30).

[***]

3.3 Licensee must provide to The Regents a copy of each Sublicense within [***] days of execution, which may be redacted except regarding matters related to Regents' Patent Rights (including to the extent necessary to determine the consideration owed to The Regents) under this Agreement. Licensee is prohibited from entering into an agreement with a Sublicensee or other entity (e.g., Affiliate or non-Affiliate joint venture) where the terms of such agreement intentionally reduce, divert, conceals or misrepresents the amount of consideration paid to the Licensee as consideration for a Sublicense.

3.4 Licensee will require that each Sublicensee provide Licensee with reports that are sufficiently detailed to establish all amounts due to The Regents under this Agreement. Licensee will provide a copy of all such information submitted to Licensee by Sublicensees relevant to the computation of the payments due to The Regents under this Agreement within [***] days after receipt of such information from such Sublicensee. All disclosures of information to The Regents under this Section 3.4 are subject to the confidentiality obligations in Section 30 of this Agreement.

3.5 If this Agreement is terminated for any reason, to the extent The Regents is legally able and not otherwise contractually obligated, The Regents agree to enter into a license agreement for Regents' Patent Rights directly with each Sublicensee then in compliance with its obligations under a Sublicense, provided in all cases the obligations of The Regents under such license agreement with a Sublicensee will not be greater than the obligations of The Regents under this Agreement, and the rights of The Regents under such license agreement with a Sublicensee will not be less than the rights of The Regents under this Agreement, including all financial consideration and other rights of The Regents. The Regents may, at The Regents' sole discretion, amend such outstanding Sublicenses to contain the terms and conditions found in this Agreement.

4. FEES

4.1 In partial consideration for the License, Licensee will pay to The Regents a license issue fee of [***] within [***] days of the Effective Date. This fee is non-refundable and is not an advance against royalties.

4.2 For each End User Product reaching the milestones indicated below, Licensee will make the following payments ("**Milestone Payments**") to The Regents within [***] of reaching such milestone. For purposes of clarity such Milestone Payments are due from Licensee irrespective of whether the associated milestone listed below was reached by Licensee itself or a third party acting on Licensee's behalf or by a Sublicensee.

[***]

4.3 Licensee will pay to The Regents a license maintenance fee beginning on the one-year anniversary date of the Effective Date of this Agreement and continuing annually on each anniversary date of the Effective Date until First Commercial Sale. The license maintenance fee for the first anniversary of the Effective Date will be [***]. The license maintenance fee for each of the nine (9) subsequent anniversaries will increase by [***] per anniversary (to a maximum annual license maintenance fee of [***]).

The maintenance fee will not be due and payable on any anniversary date of the Effective Date if on that date Licensee is commercially selling a Licensed Product and paying an Earned Royalty to The Regents on the sales of that Licensed Product. The license maintenance fees are non-refundable and are not an advance against royalties.

5. ROYALTIES

5.1 Licensee must pay to The Regents for Net Sales by Licensee, Affiliates, and Sublicensees an earned royalty at the rate of [***] of Net Sales of Licensed Products ("**Earned Royalty**"). This Earned Royalty will accrue in a country for the duration of the life of Regents' Patent Rights in such country.

5.2 If payment is due to a third party (other than an Affiliate) as royalty in consideration for pending applications or patent rights owned or controlled by such third party (whether by written agreement or court order) ("Third Party Payment"), without a license to which Licensee, its Affiliate or Sublicensee would reasonably be expected to infringe such third party patent rights in the manufacture, use, import, offer for sale, or sale of a Licensed Product ("Other Required Patent"), then Licensee will have the right, upon execution of a license with such third party for such Other Required Patent or the entry of a court order, as applicable, to credit [***] of any Third Party Payment made to such third party in any given year in consideration for such Other Required Patent, against the Earned Royalties due The Regents under this Agreement, provided that: On an ongoing basis, and in conjunction with reduction of any Earned Royalty due to The Regents under this Agreement for a given calendar quarter, Licensee will submit written evidence to The Regents of the payment obligations to such third party for such calendar quarter demonstrating that such payment obligation is, in fact, in consideration for an Other Required Patent.

5.3 Licensee must pay Earned Royalties owed to The Regents on a quarterly basis. Licensee must pay such Earned Royalties on or before the following dates:

- March 31 (for any Final Sales that took place on or before the last day of the calendar quarter ending December 31 of the prior year);
- June 30 (for any Final Sales that took place on or before the last day of the calendar quarter ending March 31);
- September 30 (for any Final Sales that took place on or before the last day of the calendar quarter ending June 30); and
- December 31 (for any Final Sales that took place on or before the last day of the calendar quarter ending September 30).

5.4 Licensee must pay to The Regents the following minimum annual royalty of **[***]** (referred to below as "**Minimum Annual Royalty**") beginning with the first full calendar year after First Commercial Sale and in each of the following calendar years (measured relative to the calendar year in which there was a First Commercial Sale, and referred to below as "**Calendar Year**") for the time period that any royalty under Section 5.1 is due under this Agreement:

Licensee must pay the Minimum Annual Royalty due for a given Calendar Year to The Regents on or before [***] of such Calendar Year. The Minimum Annual Royalty due for a given Calendar Year will be credited against the Earned Royalty due and owing with respect to Net Sales made during the Calendar Year in which such Minimum Annual Royalty was paid. By way of example, if FCS took place on February 1, 2018, the first full Calendar Year be 2019 and the Minimum Annual Royalty would be due on or before [***] and will be credited against any Earned Royalties due during 2020.

5.5 All monies due The Regents must be paid in United States funds. With respect to sales of Licensed Products in a currency other than United States Dollars, the royalties due The Regents will first be determined in the foreign currency of the country in which the Licensed Products were sold and, second, converted into equivalent United States Funds by using the applicable conversion rates for buying and selling United States dollars for such foreign currency as published by Reuters on the final business day of the quarter in which such sales were made or, as applicable, in accordance with the Licensee's worldwide accounting practices.

5.6 Any tax for the account of The Regents required to be withheld by Licensee under the laws of any foreign country must be promptly paid by Licensee for and on behalf of The Regents to the appropriate governmental authority. Licensee will use its best efforts to furnish The Regents with proof of payment of any tax. Licensee is responsible for all bank transfer charges. All payments made by Licensee in fulfilment of The Regents' tax liability in any particular country will be credited against fees or royalties due The Regents for Net Sales or other costs in that country.

5.7 If any patent or any claim included in Regents' Patent Rights is held invalid or unenforceable in a final decision by a court of competent jurisdiction from which no appeal has or can be taken, all obligation to pay royalties based on that patent or claim or any claim patentably indistinct from it will cease as of the date of that final decision. Licensee will not, however, be relieved from paying any royalties that accrued before that decision or that is based on another patent or claim not involved in that decision.

5.8 Only to the extent required by law, no royalties will be collected or paid on Licensed Products sold to the United States Federal Government or any agency of the United States Government. Licensee and its Sublicensee will reduce the amount charged for Licensed Products distributed to the United States Government by the amount of the royalty.

6. DILIGENCE

6.1 Upon execution of this Agreement, Licensee itself, or through its Affiliates or Sublicensees, will use commercially reasonable and diligent efforts to develop and commercialize a Licensed Product consistent with the efforts of a similarly situated company for a product in a similar therapeutic area with similar market potential. Such effort will be directed to (a) develop Licensed Products; (b) market Licensed Products; and (c) manufacture and sell Licensed Products in quantities sufficient to meet the market demands for them. For purposes of clarity, the requirements under the foregoing subsection (b) and (c) shall continue to apply after a First Commercial Sale.

6.2 The Regents has the right and option to either terminate this Agreement or reduce Licensee's exclusive license to a nonexclusive license if Licensee fails to perform any of the terms in Section 6.1 or this Section 6.2, subject to Sections 6.4 below. This right, if exercised by The Regents, supersedes the rights granted in Article 2 (GRANT). Licensee will achieve each of the following development milestones (each a "**Development Milestone**") with respect to at least one End User Product:

[***]

6.3 Without limiting Licensee's obligations under Sections 6.1 and 6.2 of this Agreement, Licensee has the sole discretion for making all decisions as to how to commercialize any Licensed Product.

6.4 Notwithstanding the foregoing, if Licensee should reasonably believe it may fail to meet the deadline for any Development Milestone, Licensee shall promptly provide The Regents with notice thereof, which notice shall set forth, as applicable, (i) whether Licensee desires to use a Paid Milestone Extension to extend such deadline pursuant to Section 6.4.A below, or (ii) whether Licensee desires to request an extension pursuant to Section 6.4.B below on the basis that such failure is attributable to a Regulatory Delay or to a Clinical Trial Failure Delay (in which case such notice shall include the basis for the Regulatory Delay or Clinical Trial Failure Delay and copies of documents or correspondence from the FDA or EMA that set forth the basis for Licensee's assertion that such delay or failure should be excused). If Licensee fails to provide such notice, or provides notice and is granted an extension per Section 6.4.A or B below, as applicable, and thereafter fails to achieve a Development Milestone by the deadline set forth above, or by the permitted extended deadline, then The Regents has the right and option, at its sole discretion, to either terminate this Agreement or reduce Licensee's exclusive license to a nonexclusive license, under the terms set forth in Section 12.1.

A. Licensee may elect to extend any Development Milestone in Section 6.2 above by **[***]** (with automatic extension of any subsequent milestones) by payment of **[***]**. For purposes of clarity, the automatically extended milestones do not trigger any payment requirement, nor does any milestone extended through the process set out in Section 6.4 above.

B. In addition to the Paid Milestone Extensions, if the completion of any of the Development Milestones set forth in Section 6.2.D through 6.2.F above is delayed beyond the corresponding deadline set forth in Section 6.2 (taking into account the Paid Milestone Extensions) on account of either a (a) Regulatory Delay or (b) Clinical Trial Failure Delay (collectively, "Excused Delays"), The Regents shall execute an amendment to this Agreement to extend such Development Milestone and all subsequent Development Milestones shall be extended for a period of time equal to the duration of the Excused Delays. Any documents and correspondence provided in support of a reason for an Excused Delay shall be treated as Licensee's confidential information. The duration of any such extension shall be reasonably related to the cause and effect of the Excused Delay as determined by good faith negotiation between The Regents and Licensee after The Regents has had an opportunity to review all such relevant documentation. In no event will The Regents have any obligation to allow Licensee to extend such Development Milestone by more than **[***]** months (in addition to the extensions taken under the Paid Milestone Extensions).

7. PATENT FILING, PROSECUTION AND MAINTENANCE

7.1 Patent Prosecution

7.1a **[***]** Patent Rights will be held in the name of **[***]**. **[***]** will diligently prosecute and maintain **[***]** Patent Rights using patent counsel of **[***]** choice to which **[***]** has no reasonable objection; if **[***]** demonstrates a reasonable objection to **[***]** choice of counsel, **[***]** will provide the names of three (3) alternative counsel for **[***]** to choose from to replace **[***]** counsel. **[***]** shall control all Patent Actions and all decisions with respect to Patent Actions and will consider and incorporate in good faith any reasonable comments or suggestions by **[***]** with respect to Patent Actions. **[***]** is entitled to take action to preserve rights and minimize costs whether or not **[***]** has commented, and will use reasonable efforts to prevent any **[***]** Patent Rights for which **[***]** is licensed and is underwriting the costs of to lapse or become abandoned without **[***]** written authorization under this Article 7, except for the filing of continuations, divisionals, or the like that substitute for the lapsed application. **[***]** shall have no requirement to file, prosecute, or maintain **[***]** Patent Rights if **[***]** [***].

7.1b **[***]** will consult with **[***]** to discuss in good faith a commercially reasonable strategy for the prosecution and maintenance of **[***]** Patent Rights consistent with **[***]** commercial goals and interests. **[***]** will provide **[***]**, in a timely manner, with copies of each patent application, office action, response to office action, request for terminal disclaimer, and request for reissue or reexamination of any patent or patent application under **[***]** Patent Rights. For a document to be filed in any patent office, or correspondence to be sent to any patent office, **[***]** will instruct its patent counsel to make best efforts to provide a draft of such document sufficiently prior to its filing, to allow for review and comment by the **[***]**.

7.1c So long as **[***]** is current with its Patent Costs reimbursement obligations under this Agreement, **[***]** may request that **[***]** obtain **[***]** Patent Rights in foreign territories, if available and if it so desires and at **[***]** expense. **[***]** has the right to request initiation of Patent Actions in such territories via a written request to **[***]** (or such shorter period as may be required in the case of emergency filings) prior to the deadline set by the patent office in the applicable territory such Patent Action is to take place in (a "**Patent Prosecution Request**"). The absence of a given Patent Prosecution Request with respect to timely initiation of filing of the **[***]** Patent Rights, or to respond to an office action, in a given jurisdiction by the applicable deadline will be considered an election not to secure the patent rights in such territory, and such patent application(s) and patent(s) will not be part of **[***]** Patent Rights and no longer licensed to **[***]**

under this Agreement, and **[***]** will have no further rights or license to them. **[***]** will have the right to file patent applications at its own expense in any territory which **[***]** has not identified in written notice pursuant to this Section 7.1 and such patent application(s) and patent(s) will not be part of **[***]** Patent Rights and will not be licensed to **[***]** under this Agreement, and [***] will have no further rights or license to them.

7.2 **Past Patent Costs**

Licensee will bear all Patent Costs incurred prior to the term of this Agreement that have not been reimbursed to The Regents ("**Past Patent Costs**"). As of September 24, 2018, Past Patent Costs are **[***]**. Licensee must send payment for such Past Patent Costs to The Regents within **[***]** days of Licensee's receipt of an invoice for these costs.

7.3 **Ongoing Patent Costs**

[***] will [***] for Patent Costs incurred during the term of this Agreement ("**Ongoing Patent Costs**") based on written invoice and all verifiable amounts on such invoices will be paid within **[***]** days following receipt of the invoice.

7.4 **Termination of Patent Prosecution by Licensee**

Licensee may terminate its obligations with respect to any or all of Regents' Patent Rights by providing written notice to The Regents ("**Patent Termination Notice**"). Termination of Licensee's obligations with respect to one or more of Regents' Patent Rights will be effective **[***]** months after receipt of such Patent Termination Notice by The Regents. [***].

7.5 **Patent Extensions**

7.5a Licensee will consider in good faith whether to apply for an extension of the term of any patent included within The Regents' Patent Rights, if appropriate, under the Drug Price Competition and Patent Term Restoration Act of 1984 and/or European, Japanese and other foreign counterparts to protect any Licensed Product. The Licensee may, in its discretion, apply for such an extension of the term, if appropriate. If Licensee does elect to pursue a patent term extension, then Licensee shall prepare all documents and The Regents agrees to execute the documents and to take additional action as Licensee reasonably requests in connection therewith and Licensee will be liable for all costs relating to such application.

7.5b If either party (in the case of The Regents, the licensing officer responsible for administration of this Agreement) receives notice pertaining to the infringement or potential infringement of any issued patent included with Regents' Patent Rights under the Drug Price Competition and Patent Term Restoration Act of 1984 (and/or foreign counterparts of this law) then that party shall within **[***]** days notify the other party after receipt of such notice of infringement.

8. PATENT INFRINGEMENT

8.1 In the event that The Regents (to the extent of the actual knowledge of one or more of the Inventors or the licensing professional or manager responsible for the administration of this Agreement) or Licensee learns of infringement of potential commercial significance of any patent licensed under this Agreement, the knowledgeable party will provide the other with (i) written notice of such infringement and (ii) evidence of such infringement available to it (the "**Infringement Notice**"). During the period in which, and in the jurisdiction where, Licensee has exclusive rights under this Agreement, neither The Regents nor Licensee will notify a third party (including the infringer) of infringement or put such third party on notice of the existence of any Regents' Patent Rights without first [***]. If Licensee puts such infringer on notice of the existence of any Regents' Patent Rights with respect to such infringement without first [***] The Regents and if a declaratory judgment action is filed by such infringer against The Regents, then Licensee's right to initiate a suit against such infringer for infringement under Section 8.2 below will terminate immediately without the obligation of The Regents to provide notice to Licensee. Both The Regents and Licensee will use diligent efforts to cooperate with each other to terminate such infringement without litigation.

8.2 If infringing activity of potential commercial significance by the infringer, as determined in Licensee's reasonable judgment, has not been abated within **[***]** days following the date the Infringement Notice takes effect, then [***] may institute suit for patent infringement against the infringer. [***] may not join [***] in a suit initiated by [***] without [***] prior written consent. [***] may join such suit at its own expense, but may not thereafter commence suit against the infringer for the acts of infringement that are the subject of [***] suit or any judgment rendered in the suit. If [***] joins any suit initiated by [***], then [***] will pay any costs incurred by [***] arising out of such suit, including but not limited to, any verifiable out-of-pocket legal fees of counsel that [***] selects and retains to represent it in the suit. If The Regents refuses to join a suit instituted by Licensee in a country where required by law or procedure for purposes of having the right to proceed with an infringement action in such country, [***] for so long as the infringement by the third party continues unabated in such country, but only to the extent that such infringement in such country [***] the business of Licensee relating to the Licensed Products.

8.3 If, within a reasonable period of time, not to exceed **[***]** days following the date the Infringement Notice takes effect, infringing activity of potential commercial significance by the infringer has not been abated and if [***] has not brought suit against the infringer, then [***] institute suit for patent infringement against the infringer. If [***] institutes such suit, then Licensee may not join such suit without [***] consent and may not thereafter commence suit against the infringer for acts of infringement that are subject to [***] suit or any judgment rendered in that suit.

8.4 Any recovery or settlement received in connection with any suit will first be [***] and next shall be [***].

In any suit initiated by [***] will receive [***] of any recovery in excess of litigation costs and [***] will receive [***].

If the [***] fails to bring an infringement suit and such suit is initiated by [***], any recovery in excess of litigation costs will belong to [***].

The Regents and Licensee agree to be bound by all final and non-appealable determinations of patent infringement, validity and enforceability (but no other issue) resolved by any adjudicated judgment in a suit brought in compliance with this Article 8 (PATENT INFRINGEMENT).

8.5 Any agreement made by [***] involving a Sublicense to an infringer under Regents' Patent Rights for purposes of settling litigation or other dispute shall comply with the requirements of Article 3 (SUBLICENSES) of this Agreement. For clarity, [***] is not permitted to [***], and [***] will not have the right to grant rights under Regents' Patent Rights in the Field of Use to settle infringement litigation if [***] are pursuing an infringer on their own during the term of this Agreement.

8.6 Each party will cooperate with the other in litigation proceedings instituted hereunder but at the expense of the party who initiated the suit (unless such suit is being jointly prosecuted by the parties).

8.7 Any litigation proceedings will be controlled by the party bringing the suit, except that [***] may be represented by counsel of its choice in any suit brought by [***].

9. PROGRESS AND ROYALTY REPORTS

9.1 Beginning [***], and for the term of this Agreement, Licensee must submit to The Regents annual progress reports covering Licensee's (and any Affiliates' and Sublicensees') activities related to the development and testing of all Licensed Products and the obtaining of the governmental approvals necessary for marketing.

9.2 Each progress report must include all of the following for each time period:

[***]

9.3 After the First Commercial Sale of each Licensed Product, Licensee must submit quarterly royalty reports to The Regents by March 31, June 30, September 30 and December 31 of each year (i.e., within [***] days from the end of each calendar quarter). Licensee will state in its royalty report if it had no sales of any Licensed Product in the applicable quarter. Each royalty report must cover Licensee's and all Sublicensees' activities for the last completed calendar quarter and shall include the completed Royalty Statement attached hereto as "**APPENDIX B**" and incorporated herein by this reference, showing:

[***]

9.4 The Regents shall have the right to terminate this Agreement in accordance with Article 12 (TERMINATION BY THE REGENTS) if Licensee does not provide progress reports and royalty reports in accordance with this Article 9.

9.5 Because of the provisions under 35 U.S.C. §41(h), Licensee must notify The Regents if Licensee or any of its Sublicensees ceases to be a small entity (as defined by the United States Patent and Trademark Office).

10. BOOKS AND RECORDS

10.1 Licensee must keep accurate books and records of all Licensed Products developed, manufactured, used or sold and all Sublicenses, collaboration agreements and joint venture agreements entered into by Licensee that in either case, extend rights or licenses to Regents' Patent Rights or to make, use or sell Licensed Products. Licensee must preserve these books and records for at least [***] years from the date of the royalty payment to which they pertain. These books and records will be open to examination by a certified public accountant ("CPA") on behalf of The Regents, which CPA shall enter into a confidentiality agreement with Licensee. Examination may take place during regular office hours and

only to determine accuracy of financial and development information reported for purposes of this Agreement. Licensee will pay fees and expenses of these inspections if an underpayment of more than [***] percent ([***]%) of the total payments due The Regents within a given year under this Agreement is discovered. Payment owed by Licensee hereunder for underpayment of royalties will be due within [***] days of the examination result and payment by Licensee for any examination costs incurred by The Regents will be due within [***] days from the date of The Regents' invoice. Overpayment will be credited to future amounts due to The Regents under this Agreement.

11. LIFE OF THE AGREEMENT

11.1 Unless otherwise terminated by operation of law or by acts of the parties in accordance with the terms of this Agreement, this Agreement is in force from the Effective Date recited on page one and remains in effect for the life of the last-to-expire patent or last to be abandoned patent application in Regents' Patent Rights, whichever is later.

11.2 Upon termination of this Agreement, Licensee will have no further right to make, have made, use or sell any Licensed Product except as provided in Article 14 (DISPOSITION OF LICENSED PRODUCTS ON HAND UPON TERMINATION).

11.3 Any expiration or termination of this Agreement will not affect the rights and obligations set forth in the following Articles:

Article 1	DEFINITIONS;
Article 10	BOOKS AND RECORDS;
Article 14	DISPOSITION OF LICENSED PRODUCTS ON HAND UPON TERMINATION;
Article 16	USE OF NAMES AND TRADEMARKS;
Article 17	LIMITED WARRANTY;
Article 18	INDEMNIFICATION;
Article 19	LIMITATION OF LIABILITY;
Article 24	FAILURE TO PERFORM;
Article 25	GOVERNING LAW; and
Article 30	CONFIDENTIALITY.

12. TERMINATION BY THE REGENTS

12.1 If Licensee violates or fails to perform any material term of this Agreement, then The Regents may give written notice of the default ("**Notice of Default**") to Licensee. If Licensee does not cure the default within [***] days after the effective date of the Notice of Default, then The Regents has the right to terminate this Agreement and the License by a second written notice ("**Notice of Termination**") to Licensee, provided that if the default is of the type that cannot be cured within such time period, The Regents will consider Licensee's efforts to avoid, and to take reasonable steps to cure, such default when determining whether to terminate this Agreement, provided also that The Regents have no obligation to provide any extension to the [***] day cure period. If The Regents sends a Notice of Termination to Licensee, then this Agreement automatically terminates on the effective date of such notice. Termination does not relieve Licensee of its obligation to pay any monies owed to The Regents as of the effective date of the Notice of Termination, and does not impair any accrued right of The Regents.

13. TERMINATION BY LICENSEE

13.1 Licensee has the right at any time to terminate this Agreement in whole or with respect to any portion of Regents' Patent Rights by giving written notice to The Regents. This notice of termination will be subject to Article 20 (NOTICES) and will be effective [***] days after the date such notice is sent ("**Termination Effective Date**").

13.2 Any termination in accordance with Section 13.1 does not relieve Licensee of any obligation or liability accrued prior to termination. Nor does termination rescind anything done by Licensee or any payments made to The Regents prior to the effective date of termination. Termination does not affect in any manner any rights of The Regents arising under this Agreement prior to termination.

14. DISPOSITION OF LICENSED PRODUCTS ON HAND UPON TERMINATION

14.1 Upon termination of this Agreement by Licensee, Licensee may continue to sell any previously made Licensed Products during the [***] days following the Termination Effective Date.

14.2 Upon termination of this Agreement by The Regents for failure to pay Patent Costs per the terms of this Agreement after the application time period for cure, Licensee may continue to sell all previously made Licensed Products during the [***] days following the effective date of the Notice of Termination. Licensee will not have this right if this Agreement is terminated for any other causes.

14.3 Licensee must submit Royalty reports on the sale of Licensed Products allowed under this Article 14 in accordance with Article 9 (PROGRESS AND ROYALTY REPORTS) and must pay royalties on such sales at the same rate and at the same time provided in this Agreement for royalties on Net Sales made during the term of this Agreement.

14.4 Except as set forth in this Article 14, Licensee will not otherwise make, sell, offer for sale, or import Licensed Products after termination of this Agreement by Licensee or The Regents.

15. PATENT MARKING

15.1 Licensee must mark all Licensed Products made, used or sold under the terms of this Agreement, or their containers, in accordance with the applicable patent marking laws. Licensee shall be responsible for all monetary and legal liabilities arising from or caused by (i) failure to abide by applicable patent marking laws and (ii) any type of incorrect or improper patent marking.

16. USE OF NAMES AND TRADEMARKS

16.1 Licensee will not use any name, trade name, trademark or other designation of The Regents' or its employees (including contraction, abbreviation or simulation of any of the foregoing) in advertising, publicity or other promotional activity. Unless required by law or regulation or the rules of any stock exchange or listing entity, Licensee is expressly prohibited from using the name "The Regents of the University of California" or the name of any campus of the University of California in advertising, publicity, or other promotional activity, without written permission of The Regents.

17. LIMITED WARRANTY

17.1 The Regents warrants that it has the lawful right to grant this license to Licensee.

17.2 This license and the associated invention are provided **WITHOUT WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED. THE REGENTS MAKES NO REPRESENTATION OR WARRANTY THAT ANY LICENSED PRODUCT WILL NOT INFRINGE ANY PATENT OR OTHER PROPRIETARY RIGHT.**

17.3 Nothing in this Agreement will be construed as:

17.3a A warranty or representation by The Regents as to the validity or scope of any Regents' Patent Rights.

17.3b A warranty or representation that anything made, used, sold or otherwise disposed of under any license granted in this Agreement is or will be free from infringement of patents, copyrights, trademarks or any other forms of intellectual property rights or tangible property rights of third parties.

17.3c Obligating The Regents to bring or prosecute actions or suits against third parties for patent, copyright or trademark infringement except as provided in Article 8 (PATENT INFRINGEMENT).

17.3d Conferring by implication, estoppel or otherwise any license or rights under any patents or know-how of The Regents other than Regents' Patent Rights, regardless of whether such patents are dominant or subordinate to Regents' Patent Rights.

17.3e Obligating The Regents to furnish any know-how not provided in Regents' Patent Rights.

18. INDEMNIFICATION

18.1 Licensee will, and will require its Sublicensees to, indemnify, hold harmless and defend The Regents, The Regents' officers, employees, and agents, the sponsors of the research that led to the Invention, the inventors of the patents and patent applications in Regents' Patent Rights and their respective employers from and against any and all third party claims, suits, losses, damages, costs, fees and expenses resulting from or arising out of [***]. Indemnification includes but is not limited to [***]. If The Regents, in its sole discretion, believes that there will be a conflict of interest or it will not otherwise be adequately represented by counsel chosen by Licensee to defend The Regents in accordance with this Section 18.1, then The Regents may retain counsel of its choice to represent it, and Licensee will pay all verifiable out-of-pocket expenses for such representation.

18.2 Licensee, at its sole cost and expense, must insure its activities in connection with the work under this Agreement and obtain, keep in force and maintain Commercial Form General Liability Insurance (contractual liability included) with limits as follows:

18.2a	Each occurrence	[***]
18.2b	Products/completed operations aggregate	[***]
18.2c	Personal and advertising injury	[***]
18.2d	General aggregate	[***]
18.2e	Worker's compensation (as legally required in the jurisdiction in which Licensee is doing business)	

Notwithstanding the foregoing, no later than [***] days before the first use of any Licensed Product in or on a human, Licensee, at its sole cost and expense, must insure its activities in connection with the work under this Agreement and obtain, keep in force and maintain Commercial Form General Liability Insurance (contractual liability included) with limits as follows:

18.2f	Each occurrence	[***]
18.2g	Products/completed operations aggregate	[***]
18.2h	Personal and advertising injury	[***]
18.2i	General aggregate	[***]
18.2j	Worker's compensation (as legally required in the jurisdiction in which Licensee is doing business)	

Notwithstanding the foregoing, no later than [***] days before the anticipated date of market introduction of any Licensed Product, Licensee, at its sole cost and expense, must insure its activities in connection with the work under this Agreement and obtain, keep in force and maintain Commercial Form General Liability Insurance (contractual liability included) with limits as follows:

18.2k	Each occurrence	[***]
18.2l	Products/completed operations aggregate	[***]
18.2h	Personal and advertising injury	[***]
18.2i	General aggregate	[***]
18.2j	Worker's compensation (as legally required in the jurisdiction in which Licensee is doing business)	

18.3 If the above insurance is written on a claims-made form, it shall continue for [***] years following termination or expiration of this Agreement. The insurance shall have a retroactive date of placement prior to or coinciding with the Effective Date of this Agreement.

18.4 Licensee will obtain, keep in force and maintain Worker's Compensation Insurance as legally required in the jurisdiction in which Licensee is doing business.

18.5 Licensee expressly understands, however, that the coverages and limits in Section 18.2 do not in any way limit Licensee's liability or indemnification obligations. Licensee's insurance must:

18.5a State that The Regents of the University of California is endorsed as an additional insured under the coverages listed in Section 18.2.

18.5b Include a provision that the coverages will be primary and will not participate with nor will be excess over any valid and collective insurance or program of self-insurance carried or maintained by The Regents.

Licensee shall provide [***] days advance written notice to The Regents of any material change to the insurance required under this Agreement including but not limited to cancellation of any of its insurance coverages, nonpayment of premium, purchase of new or substitute coverages.

18.6 The Regents shall notify Licensee in writing of any claim or suit brought against The Regents in respect of which The Regents intends to invoke the provisions of this Article 18 (INDEMNIFICATION). To the extent that The Regents elect to permit Licensee authority to defend or settle such claim or suit, Licensee may not admit liability or wrongdoing on the part of The Regents without The Regents' prior express written consent. Licensee shall keep The Regents informed on a current basis of its defense of any claims under this Article 18 (INDEMNIFICATION).

18.7 Licensee will furnish The Regents with (i) valid certificates of insurance evidencing compliance with all requirements of this Agreement and (ii) additional insured endorsements for Licensee's applicable policies of insurance naming "The Regents of the University of California" as an additional insured. Per occurrence forms, including ISO Form CG or its equivalent, are acceptable additional insured endorsement forms. Licensee will furnish both such documents within [***] days of the execution of the Agreement; thereafter Licensee will furnish evidence of compliance with obligations of this Section 18.7 annually upon prior written request of The Regents.

19. LIMITATION OF LIABILITY

19.1 **EXCEPT [***], NEITHER LICENSEE NOR THE REGENTS WILL BE LIABLE TO THE OTHER FOR ANY LOST PROFITS, COSTS OF PROCURING SUBSTITUTE GOODS OR SERVICES, LOST BUSINESS, ENHANCED**

DAMAGES FOR INTELLECTUAL PROPERTY INFRINGEMENT OR ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR OTHER SPECIAL DAMAGES SUFFERED BY THE OTHER ARISING OUT OF OR RELATED TO THIS AGREEMENT FOR ALL CAUSES OF ACTION OF ANY KIND (INCLUDING TORT, CONTRACT, NEGLIGENCE, STRICT LIABILITY AND BREACH OF WARRANTY) EVEN IF SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

20. NOTICES

20.1 Any notice, progress report, royalty report or payment required to be given to either party must be sent to the respective address given below and is effective: (a) on the date of delivery if delivered in person, (b) [***] days after mailing if mailed by first-class certified mail, postage paid, or (c) on the next [***] day if sent by overnight delivery. Either party may change its designated address by written notice.

For Licensee: [***]

For The Regents: [***]

20.2 Licensee shall furnish to The Regents the completed licensee contact information form attached hereto as "**APPENDIX C**" concurrent to execution of the Agreement and incorporated herein by this reference, showing:

20.2a The Progress Reports Contact (i.e. the contact responsible for ensuring that such progress reports are submitted to The Regents);

20.2b The Patent Prosecution Contact to whom patent prosecution correspondence should be sent to; and

20.2c The Financial Contact (i.e. the contact responsible for ensuring that payments are made under this Agreement to The Regents).

21. ASSIGNABILITY; CHANGE OF CONTROL

21.1 **Consent to Assign**

This Agreement is binding upon and inures to the benefit of The Regents, its successors and assignees. This Agreement is personal to Licensee and assignable by Licensee only with the prior written consent of The Regents. The consent of The Regents will not be required if the assignment of this Agreement is in conjunction with the transfer of all or substantially all of the business of Licensee to which this license relates to either (a) a non-Affiliate third party or (b) an Affiliate after Licensee has already received at least [***] of capital from one or more third parties.

Conditions of Assignment

No later than [***] days prior to any assignment of this Agreement all of the following terms and conditions shall be met and if they are not then any assignment thereof will be considered null and void with no further notice from The Regents.

(i) Licensee shall inform The Regents in writing of the identity of the proposed acquirer or successor entity and shall provide updated contact information in writing to The Regents for such acquirer or successor entity by updating and submitting in writing to The Regents APPENDIX C of this Agreement;

(ii) The proposed acquirer or successor entity shall agree in writing to be bound by all the terms and conditions of this Agreement as if such acquirer or successor entity were the original Licensee and a copy of such written agreement shall be provided to The Regents by Licensee or the proposed acquirer or successor entity;

(iii) The proposed acquirer or successor entity shall provide a written statement to The Regents that they assume responsibility for any and all liabilities that arose under this Agreement prior to the effective date of the proposed assignment of this Agreement; and

21.2 **Change of Control**

Within [***] days of a Change of Control, Licensee shall pay to The Regents a fee of [***].

22. LATE PAYMENTS

22.1 For each royalty payment or fee not received by The Regents when due, Licensee must pay to The Regents a simple interest charge of [***] percent ([***]%) per annum to be calculated from the date payment was due until it was actually received by The Regents. For purposes of clarity, this Article 22 (LATE PAYMENTS) does not limit any rights of The Regents under this Agreement arising from the failure by Licensee to make such payments when due.

23. WAIVER

23.1 The waiver of any breach of any term of this Agreement does not waive any other breach of that or any other term.

24. FAILURE TO PERFORM

24.1 If either party takes legal action against the other because of a failure of performance due under this Agreement, then the prevailing party is entitled to reasonable attorney's fees in addition to costs and necessary disbursements.

25. GOVERNING LAW

25.1 **THIS AGREEMENT IS TO BE INTERPRETED AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF CALIFORNIA**, but the scope and validity of any patent or patent application will be governed by the applicable laws of the country of the patent or patent application.

26. GOVERNMENT APPROVAL OR REGISTRATION

26.1 If this Agreement or any associated transaction is required by the law of any nation to be either approved or registered with any governmental agency, Licensee will assume all legal obligations to do so. Licensee will notify The Regents if it becomes aware that this Agreement is subject to a United States or foreign government reporting or approval requirement. Licensee will make all necessary filings and pay all costs including fees, penalties, and all other out-of-pocket costs associated with such reporting or approval process.

27. COMPLIANCE WITH LAWS

27.1 Licensee will comply with all applicable laws and regulations in performing its obligations hereunder and in its use, manufacture, offer for sale, sale or import of Licensed Products or practice of Licensed Methods, including, but not limited to, obtaining and maintaining all necessary governmental Approvals for the commercialization of Licensed Products. Licensee will observe all applicable United States and foreign laws with respect to the transfer of Licensed Products and related technical data, including and without limitation, the International Traffic in Arms Regulations (ITAR) and the Export Administration Regulations. Licensee will manufacture Licensed Products and practice the Licensed Methods in compliance with all applicable government importation laws and regulations of a country into which Licensed Products are imported.

28. PREFERENCE FOR UNITED STATES INDUSTRY

28.1 Because this Agreement grants an exclusive right to a particular use of the Invention, Licensee must manufacture in the United States Licensed Products intended for sale in the United States to the extent required by 35 U.S.C. §§200-212. Upon request of the Licensee, The Regents will provide reasonable assistance for purposes of requesting a waiver from such manufacturing requirement at Licensee's expense.

29. FORCE MAJEURE

29.1 Except for Licensee's obligation to make any payments to The Regents hereunder, the parties shall not be responsible for any failure to perform due to the occurrence of any events beyond their reasonable control that render their performance impossible or onerous, including, but not limited to: accidents (environment, toxic spill, etc.); acts of God; biological or nuclear incidents; casualties; earthquakes; fires; floods; governmental acts; orders or restrictions; inability to obtain suitable and sufficient labor, transportation, fuel and materials; local, national or state emergency; power failure and power outages; acts of terrorism; strike; and war.

29.2 Either party to this Agreement, however, will have the right to terminate this Agreement upon [***] days' prior written notice if either party is unable to fulfill its obligations under this Agreement due to any of the causes specified in Section 29.1 for a period of [***].

30. CONFIDENTIALITY

30.1 If either party discloses confidential information to the other party, the disclosing party will designate this information as confidential by appropriate legend or instruction and the receiving party will:

30.1a Use the same degree of care to maintain the secrecy of the confidential information as it uses to maintain the secrecy of its own information of like kind.

30.1b Use the confidential information only to accomplish the purposes of this Agreement or for audit or management purposes.

30.1c Ensure that any employees, customers, distributors and other agents to whom the confidential information is disclosed are bound to it by similar obligations of confidence and to make such disclosure only as required to accomplish the purposes of this Agreement.

30.2 Neither party will have any confidentiality obligation with respect to the confidential information belonging to or disclosed by the other party that:

30.2a the receiving party can demonstrate by written records was previously known to it;

30.2b the receiving party lawfully obtained from sources under no obligation of confidentiality;

30.2c is or becomes publicly available other than through an act or omission of the receiving party or any of its employees;

30.2d the receiving party independently develops without the use of the confidential information as demonstrated by written records; or

30.2e is required to be disclosed under the California Public Records Act, governmental audit requirement or other requirement of law.

30.3 The provisions of this Article 30 (CONFIDENTIALITY) will continue in effect for [***] years after expiration or termination of this Agreement.

30.4 The Regents is free to release the terms and conditions of this Agreement to any and all of the following: (i) the Inventors, (ii) employees of The Regents having a need to know for purposes of The Regents rights or obligations under this Agreement, (iii) individual Regents and CIRM so that The Regents can fulfill The Regents' obligations under the CIRM Regulations; and (iv) any co-owners of the patent rights comprising Regents' Patent Rights. If such release is made, then The Regents shall give notice of the confidential nature of such information.

30.5 If a third party inquires whether a license to Regents' Patent Rights is available, then The Regents may disclose the existence of this Agreement and the extent of the grant in Article 2 (GRANT) and Article 3 (SUBLICENSES) to such third party, but will not disclose the name of Licensee or any other negotiated terms or conditions of this Agreement to such third party, except where The Regents is required to release information under the California Public Records Act, a governmental audit requirement or other applicable law.

31. MISCELLANEOUS

31.1 The headings of the several sections are inserted for convenience of reference only and are not intended to be a part of, or to affect the meaning or interpretation of, this Agreement.

31.2 This Agreement is not binding upon the parties until it has been signed below on behalf of each party, in which event it becomes effective as of the date recited on page one.

31.3 No amendment or modification of this Agreement will be valid or binding upon the parties unless made in writing and signed by each party.

31.4 This Agreement and Appendix A (REGENTS' PATENT RIGHTS), APPENDIX B, and APPENDIX C embody the entire understanding of the parties and supersede all previous communications, representations or understandings, either oral or written, between the parties relating to the subject matter hereof, including the Letter of Intent Agreement entered into with Cobalt Biosciences, Inc., having since been acquired by Licensee, dated April 2, 2018.

31.5 If any part of this Agreement is for any reason found to be unenforceable, all other parts nevertheless remain enforceable as long as a party's rights under this Agreement are not materially affected. In lieu of the unenforceable provision, the parties will substitute or add as part of this Agreement a provision that will be as similar as possible in economic and business objectives as was intended by the unenforceable provision.

31.6 No provisions of this Agreement are intended or shall be construed to confer upon or give to any person or entity other than The Regents and the Licensee any rights, remedies or other benefits under, or by reason of, this Agreement.

31.7 In performing their respective duties under this Agreement, each of the parties will be operating as an independent contractor. Nothing contained herein will in any way constitute any association, partnership, or joint venture between the parties hereto, or be construed to evidence the intention of the parties to establish any such relationship. Neither party will have the power to bind the other party or incur obligations on the other party's behalf without the other party's prior written consent.

32. COUNTERPARTS AND EXECUTION

32.1 This Agreement may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument. Facsimile, Portable Document Format (PDF) or photocopied signatures of the parties will have the same legal validity as original signatures.

[SIGNATURE PAGE FOLLOWS:]

Both The Regents and Licensee have executed this Agreement in duplicate originals by their authorized officers on the dates written below:

SANA BIOTECHNOLOGY, INC.

By /s/ Steve Harr
Signature
Name: Steve Harr
Title: CEO
Date: March 21, 2019

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

By /s/ Mark Wisniewski
Signature
Name: Mark Wisniewski
Title: Sr. Director, Biopharmaceuticals
Date: March 21, 2019

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

By /s/ Amir Naiberg
Signature
Name: Amir Naiberg
Title: Assoc. Vice Chancellor and President & CEO
Date: March 22, 2019

APPENDIX A

REGENTS' PATENT RIGHTS

[***]

APPENDIX B

ROYALTY STATEMENT

[***]

APPENDIX C

LICENSEE CONTACT INFORMATION

Licensee Name Sana Biotechnology, Inc. **UC Control No.**

PATENT PROSECUTION CONTACT

LAST NAME TELEPHONE
FIRST NAME FAX
TITLE EMAIL
COMPANY NAME
ADDRESS
ADDRESS
CITY, STATE, ZIP
COUNTRY

PROGRESS REPORTS CONTACT

LAST NAME TELEPHONE
FIRST NAME FAX
TITLE EMAIL
COMPANY NAME
ADDRESS
ADDRESS
CITY, STATE, ZIP
COUNTRY

FINANCIALS CONTACT

LAST NAME TELEPHONE
FIRST NAME FAX
TITLE EMAIL
COMPANY NAME
ADDRESS
ADDRESS
CITY, STATE, ZIP
COUNTRY

WU [***]

CERTAIN CONFIDENTIAL INFORMATION IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED

EXCLUSIVE LICENSE AGREEMENT

PREAMBLE

This agreement ("Agreement") is made and entered into, effective as of the date of last signature below, ("Effective Date") by and between: Washington University, a corporation established by special act of the Missouri General Assembly approved February 22, 1853 and acts amendatory thereto, having its principal offices at One Brookings Drive, St. Louis, Missouri 63130 (hereinafter referred to as "WU"); and Sana Biotechnology, Inc. a corporation organized and existing under the laws of the State of Delaware, having its principal offices at 188 E Blaine Street, Suite 400, Seattle, WA 98102 (hereinafter referred to as "Licensee") and the following correspondence addresses, each a "Party" or collectively the "Parties" of this Agreement:

[***] [***]

License Issue Fee: [***]

License Maintenance Fee: Licensee will pay the License Maintenance Fees to WU as follows until the First Commercial Sale of the first Licensed Product:

- [***] on the [***] anniversaries of the Effective Date; and
- [***] on the [***] anniversaries of the Effective Date; and
- [***] on the [***] anniversaries of the Effective Date; and
- $[***] on the [***] aniversary of the Effective Date and every anniversary thereafter until a First Commercial Sale.

Milestones and Milestone Payments: On a Licensed Product-by-Licensed Product basis, for the first [***] Licensed Products as distinguished by whether or not such product would require a different BLA to be submitted to the FDA due to differing composition: **[***]**

Milestone payments shall be due whether the milestones are achieved by Licensee or a Sublicensee or Affiliate of Licensee. In addition, if Licensee is not required to conduct a specific clinical trial, then Licensee shall make that skipped milestone payment upon achievement of the next milestone event (in addition to payment for such next milestone).

Royalty Rate: [***]%

Minimum Royalty: Following the First Commercial Sale Licensee of the first Licensed Product, Licensee will make the following Minimum Royalty payments to WU.

- [***] on the [***] anniversary of the Effective Date following a First Commercial Sale; and
- [***] on the [***] anniversary of the Effective Date following a First Commercial Sale; and
- [***] on the [***] anniversary of the Effective Date following a First Commercial Sale; and
- [***] on the [***] anniversary of the Effective Date following a First Commercial Sale and every anniversary of the Effective Date thereafter until the last to expire Valid Claim which covers a Licensed Product.

WU [***]

Sublicensee Revenue percentage:

- [***] percent ([***]%) of all Sublicensing Revenue if the Sublicense is executed prior to [***]; and
- [***] percent ([***]%) of all Sublicensing Revenue if the Sublicense is executed after [***].

Patents and Patent Applications within Patent Rights: See Exhibit C.

Field: Diagnosis, prevention and treatment of human disease or disorders.

Territory: Worldwide.

Term: The term of this Agreement shall commence on the Effective Date and continue until the last day that at least one Valid Claim exists.

RECITALS

A. WU possesses certain Patent Rights (as defined below).

B. Licensee has developed, or within [***] months following the Effective Date will develop, a plan to research, develop and manufacture, products based on the Patent Rights, which plan will be attached hereto as Exhibit A, and which plan will be updated if regulatory approval is obtained, to include the plan to promote, import, sell and/or market such products (the "Development Plan").

C. Licensee possesses the desire, and possesses or has or plans to obtain the knowledge, expertise, experience and resources, to carry out the Development Plan (as it may be amended from time to time), to meet the milestones set forth in Exhibit D hereto (subject to extension as provided in Exhibit D hereto) and to otherwise meet its diligence obligations hereunder with respect to products based on the Patent Rights.

D. Licensee desires to obtain from WU certain licenses to the Patent Rights, and WU desires to grant such licenses to Licensee.

TERMS AND CONDITIONS

NOW, THEREFORE, in consideration of the premises, covenants and agreements set forth herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. Definitions.

As used in this Agreement, the following terms have the meaning ascribed to them below:

1.1 "Agreement" is defined in the Preamble above.

1.2 "Affiliate" means an entity that now or hereafter, directly or indirectly, controls or is controlled by or is under common control with a Party to this Agreement whether by beneficial ownership, contract, or otherwise.

1.3 "BLA" means, with respect to a Licensed Product and a jurisdiction, approval or authorization from the relevant governmental authority to market and sell such Licensed Product in the Field in such jurisdiction.

1.4 "Calendar Half" means each six-month period of a calendar year, or portion thereof, beginning on January 1 or July 1.

1.5 "Claims" is defined in Section 11.1 below.

1.6 "Combination Products" a Licensed Product that is sold for a single price in combination with another Therapeutically Active Pharmaceutical Ingredient as a single product.

1.7 "**Commercially Reasonable Efforts**" means, with respect to the efforts to be expended with respect to a specified objective, those reasonable, diligent, good faith efforts to accomplish such objective as a similarly situated biotechnology company would normally use to accomplish a similar objective taking into account all relevant considerations.

1.8 "Confidential Information" is defined in Section 7.1 below.

1.9 "Development Plan" is defined in Recital B above.

1.10 "Effective Date" is defined in the Preamble above.

1.11 "Elected Patent Rights" is defined in Section 9.3 below.

1.12 "Election Notice" is defined in Section 9.3 below.

1.13 "EMA" means the European Medicines Agency, and any successor governmental authority having substantially the same function.

1.14 "FDA" means the United Stated Food and Drug Administration, and any successor governmental authority having substantially the same function.

1.15 "EU5" means France, Germany, Italy, Spain, and the United Kingdom.

1.16 "Field" is defined in the Preamble above.

1.17 "First Commercial Sale" means the earlier to occur of the earliest date on which a Sale of a Licensed Product is consummated pursuant to this Agreement.

1.18 "Humanitarian Use" means the practice of Patent Rights in the humanitarian field (i.e. prevention or treatment of disease in humans) (a) to manufacture Licensed Products anywhere in the world for the sole and express purposes of distribution and use of such Licensed Products in one or more Qualified Developing Countries, and (b) to sell or otherwise distribute Licensed Products or use solely in one or more Qualified Developing Countries; *provided*, *however*, that sales and distribution of Licensed Products shall not be deemed for Humanitarian Purposes unless products are made available to otherwise underserved populations at locally-affordable prices.

1.19 "License Issue Fee" is defined in the Preamble above.

1.20 "Licensed Product" means any product the manufacture, use, sale or import of which by Licensee and/or Sublicensee that would, in the absence of this Agreement, infringe, at least one Valid Claim of an issued patent or at least one Valid Claim of a pending patent application. For clarity, with respect to a claim of a pending patent application, "infringed" refers to activity that would infringe such Valid Claim if it were contained in an issued patent.

1.21 "Licensee" is defined in the Preamble above.

1.22 "Minimum Royalty" is defined in the Preamble above.

1.23 "Net Sales" means the gross value of compensation and payments, whether in cash or in kind, received by Licensee or its Sublicensees for Sales of Licensed Products, less all Permissible Deductions.

1.24 "NMPA" means China's National Medical Product Administration, formerly known as the China Food and Drug Administration, and any successor governmental authority having substantially the same function.

1.25 "Patent Rights" means, subject to Section 9.3 below, (a) the patents and patent applications listed in the Preamble above, and (b) any divisionals, continuations, Continuations-in-Part (as defined below), or substitute applications, any patents issued or granted from any such patent applications, and any reissues, renewals, reexamination, extension (including by virtue of any supplementary protection certificate) of any such patents, and any confirmation patents, inventor's certificates, applications for inventor's certificate or registration patents or patents of addition based on any such patents, and all foreign counterparts or equivalents in any country or jurisdiction of any of the foregoing patent applications and patents. "Continuation-in-Part" means any claims of any continuation-in-part patent application to the extent the claims are entirely supported in the parent application's original specification and entitled to the parent application's priority date.

1.26 "Permissible Deductions" means, and shall be limited to, [***].

1.27 "PMDA" means Japan's Pharmaceutical and Medical Device Agency, and any successor governmental authority having substantially the same function.

1.28 "Qualified Developing Country" means any one of those countries identified as low- income or lower-middle income by the World Bank Group at the time of the Effective Date; *provided*, *however*, that "Qualified Developing Country" shall not include any of the following: (a) current and future Organization for Economic Cooperation and Development (OECD) countries, (b) all current and future members of the European Union not otherwise members of the OECD; (c) People's Republic of China, India, Malaysia, Russian Federation, Singapore, South Korea and Taiwan ; and (d) any other country of the world that, as a result of its progress and economic development after the Effective Date, Licensee reasonably determines should be excluded from the definition of Qualified Developing Country.

1.29 "Qualified Humanitarian Organization" shall mean any governmental agency, non-governmental agency or other not-for-profit organization that has as one of its bona fide missions to address the public health or economic development needs of underserved populations.

1.30 "Sale" means any transaction in which a Licensed Product is exchanged or transferred to another person or entity for any value, payment or compensation of any type or kind. Notwithstanding the forgoing, Sales shall not include and shall expressly exclude transfers by Licensee: (a) for the purpose of researching, developing, or testing a Licensed Product or for charitable or compassionate use purposes, provided that such testing is not conducted for or on behalf of any end user and further provided that Licensee receives no payment for such Licensed Product in excess of the fully burdened (i.e. direct and indirect) costs of producing and transporting such materials and/or Licensed Product; (b) to a Sublicensee of Affiliate for distribution or resale, but the subsequent transaction with an end user shall be included in Sales; and (c) to others for marketing/promotional purposes, provided that the foregoing is not performed for or on behalf of any end user and further provided that Licensee receives no payment for such Licensed Product in excess of the fully burdened (i.e. direct and indirect) costs of producing and transporting such materials and/or Licensed Product.

1.31 "Royalty Rate" is defined in the Preamble above.

1.32 "Sublicensing Revenue" means all value, payment or compensation of any type or kind, other than earned royalties or profit shares on Net Sales, received by Licensee from or through its Sublicensees for the licensing or cross-licensing of the Patent Rights granted herein by WU, provided that earned royalties are separately paid by Licensee to WU on the entire value of Net Sales of Licensed Products including the portion attributed to profit shares on Net Sales. Sublicensing Revenue shall include, without limitation, all fees, milestone payments, cash equivalents, equities, securities, equipment, property, rights or anything else of value received by Licensee as sublicensing consideration from or for the benefit of any Sublicensee for the licensing or cross-licensing of the Patent Rights granted herein by WU, but in all cases excluding equity investments at fair market value, bona fide loans (unless and until forgiven but only if forgiven with ten years of issuance of the loan), funding or reimbursement for actual costs of future bona fide research or development relating directly to the Licensed Product , as evidenced by a detailed budget provided to WU prior to receipt of any such funding, reimbursement for patent expenses at their out-of-pocket cost solely for licensed Patent Rights reimbursed by a Sublicensee, or those portions of milestone payments received in consideration for the achievement of a milestone event substantially similar to a milestone event for which a milestone payment is due to WU upon the achievement thereof under this Agreement, provided that, for clarity, the portion of any milestone payment received by Licensee in excess of the amount of the milestone payment that is due to WU for achievement of such substantially similar milestone shall be treated as Sublicensing Revenue and will be subject to the applicable Non-Royalty Sublicensing Revenue Percentage.

1.33 "Territory" is defined in the Preamble above.

1.34 "Therapeutically Active Pharmaceutical Ingredient" shall mean any substance used in a finished pharmaceutical product, intended to furnish pharmaceutical activity or otherwise have direct effect in the cure, mitigation, treatment or prevention of disease or to have effect in restoring, correcting or modifying physiologic function in human beings. For avoidance of doubt, excipients and inert ingredients without disease-specific therapeutic or pharmacologic effects shall not be considered Therapeutically Active Pharmaceutical Ingredients.

1.35 "WU" is defined in the Preamble above.

1.36 "WU Indemnitee" is defined in Section 11.1.

1.37 "Valid Claim" means a claim (a) of a pending patent application within the Patent Rights that has not been pending for more than [***] years from the first office action on the merits (i.e., other than a restriction requirement) in the relevant patent family, and has not been abandoned or finally rejected

without the possibility of appeal or refiling or without such appeal having been taken or refiling having been made within the applicable time period specified for appeal, or (b) of an issued and unexpired patent within the Patent Rights that has not been (i) held invalid, permanently revoked, unpatentable or unenforceable by a court or other governmental agency of competent jurisdiction in a decision or order that is not subject to appeal or has not been appealed within the applicable time period specified for appeal, (ii) canceled, disclaimed or rendered unenforceable through disclaimer or otherwise, or (iii) abandoned.

2. License Grants and Restrictions.

2.1 Patent Rights. Subject to the terms and conditions of this Agreement, WU hereby grants to Licensee, and Licensee hereby accepts, a non-transferable, exclusive (subject to Section 2.4 below) and royalty-bearing license under the Patent Rights and for the Term of this Agreement, to research, develop, make, have made, sell, offer for sale, have sold, use, have used, export and import Licensed Products solely in the Territory and in the Field. For the avoidance of doubt, Licensee acknowledges and agrees that no license is granted or implied under the Patent Rights outside the Field or the Territory. In exploiting the rights granted hereunder, Licensee agrees to consider opportunities to pursue Humanitarian Use, whether such Humanitarian Use is performed by or through Licensee or a Qualified Humanitarian Organization.

2.2 Limitations on Patent Rights License. WU retains its right to use the Patent Rights to make, have made, use, and import Licensed Products in the Territory and in the Field for research and educational purposes including collaboration with other nonprofit entities, which shall expressly exclude any commercial purposes.

2.3 Clarifications. For the avoidance of doubt, the license "to have made" granted in Section 2.1 above means that the Licensee, its Affiliates and any Sublicensees may contract with one or more third parties to make Licensed Products for Licensee, its Affiliates or any Sublicensees for Sale or offer for Sale by Licensee within the scope of its sales operations or for research and development purposes. In any such event, Licensee shall require all such third parties to be bound to a written confidentiality agreement that contains non-use and nondisclosure obligations that are at least as restrictive as those that are contained in Article 7 below before any Confidential Information is disclosed to such third parties.

2.4 Government Rights. In accordance with Public Laws 96-517, 97-256 and 98-620, codified at 35 U.S.C. §§ 200-212, the United States government retains certain rights to inventions arising from federally supported research or development. Under these laws and implementing regulations, the government may impose requirements on such inventions. Licensed Products embodying inventions subject to these laws and regulations sold in the United States must be substantially manufactured in the United States. Upon Licensee's request, and at Licensee's expense, WU agrees to cooperate reasonably with Licensee in connection with attempting to secure a waiver of such obligations. The license rights granted in this Agreement are expressly made subject to these laws and regulations as amended from time to time. Licensee shall be required to abide by all such laws and regulations.

2.5 Reservation of Rights and Restrictions. Nothing in this Agreement provides Licensee with any ownership rights of any kind in the Patent Rights. All ownership rights in the Patent Rights shall remain the sole and exclusive property of WU. No license or right is granted by WU, by implication or otherwise, to any patent other than those patents and patent applications within the Patent Rights. Other than the licenses expressly granted in Section 2.1 above, all rights in and to the Patent Rights are hereby reserved by WU. Licensee agrees not to practice or use Patent Rights outside the scope of the license expressly granted herein. Licensee further agrees that it will not do any act or thing which would in any way contest WU's ownership in, or otherwise derogate from the ownership by WU, of any rights in the Patent Rights. In furtherance of the foregoing but without limiting the generality thereof, Licensee agrees not to register or attempt to register in the Territory or elsewhere any ownership rights in the Patent Rights or to assist any third party to do so.

2.6 Markings. Licensee shall ensure that appropriate markings, such as "Patent Pending" or the Patent Rights patent numbers or application serial numbers, appear, in accordance with each country's patent laws, on all Licensed Products (or their packaging, as appropriate) sold by or on behalf of Licensee.

2.7 Sublicensing; Affiliates.

2.7.1 General. Subject to the further provisions of this Section 2.7, Licensee may grant sublicenses of the licenses granted to Licensee in Section 2.1 above to Affiliates or to third parties by entering into a written agreement with any such third party (each such agreement shall be referred to herein as a "**Sublicense**" and each such third party shall be referred to herein as a "**Sublicensee**"). Each direct Sublicensee of Licensee may grant a further Sublicense under the Sublicense granted by Licensee; provided, however, that no such further Sublicensee shall have the right to grant any further Sublicense without the reasonable written consent of WU, such consent not to be unreasonably withheld, delayed or conditioned (each such third party receiving a further Sublicense shall be referred to herein as a "Sub-Sublicesee;" for clarity, each Sub-Sublicensee shall be a "Sublicensee" for the purposes of this Agreement).

2.7.2 Requirements of each Sublicense Agreement. Licensee agrees that it will require all Sublicensees to comply with the terms and conditions set forth in this Agreement and applicable to Licensee. In furtherance of the foregoing, but without limiting the generality thereof, each Sublicense shall, for the express benefit of WU, bind the Sublicensee to the applicable terms and conditions no less favorable to WU than those between WU and Licensee contained in this Agreement that are relevant to a Sublicense. To the extent that any term, condition, or limitation of any Sublicense is inconsistent with the terms, conditions and limitations contained in this Agreement, such term, condition, and/or limitation shall be null and void against WU. Without in any way narrowing or limiting the scope of the foregoing provisions of this Section 2.7.2, all Sublicenses shall contain the terms and conditions set forth in Exhibit B hereto. Within [***] days after the effective date of any Sublicense, Licensee shall provide WU a complete copy of the Sublicense including, without limitation, any and all exhibits and/or attachments thereto, provided, that Licensee may redact any non-financial terms not relevant to obligations owed to WU hereunder. If the Sublicense is written in a language other than English, the copy of the Sublicense shall be accompanied by a complete translation written in English. Upon delivery of such translation to WU, Licensee shall be deemed to represent and warrant to WU that such translation is a true and accurate translation of the Sublicense.

2.7.3 Survival of Sublicenses. At Licensee's written request, any Sublicense granted by Licensee under this Agreement will remain in effect in the event that this Agreement is terminated prior to expiration. Any such Sublicensee will automatically become a direct licensee of WU under the rights originally Sublicensed to it by Licensee provided the Sublicensee did not cause the termination of this Agreement and the Sublicensee agrees to comply with the terms of this Agreement and to fulfill all the responsibilities of Licensee hereunder. Each such Sublicensee shall be an intended third party beneficiary of this Section 2.7.3. In the event that this Agreement is terminated, all amounts subsequently due to Licensee with respect to any such Sublicense granted under the licenses granted under this Agreement shall become paid directly to WU following the date of termination.

2.7.4 Primary Liability. Licensee will be primarily liable to WU for all acts, errors or omissions of a Sublicensee. Any act, error or omission of a Sublicensee that would be a breach of this Agreement if imputed to Licensee will be deemed to be a breach of this Agreement by Licensee.

2.7.5 Rights of Affiliates. Licensee may exercise its rights, perform its obligations and pursue its remedies under this Agreement either directly or through one or more of its Affiliates that Licensee designates as a licensed Affiliate under this Agreement by providing written notice to Licensor of such designation (each such Affiliate, a "**Licensed Affiliate**"). A Licensed Affiliate will have the benefit of all rights (including all licenses) and remedies of Licensee under this Agreement. Accordingly, in this Agreement, "Licensee" will be interpreted to mean "Licensee or its Licensed Affiliates" where necessary to give each Licensed Affiliate the benefit of the rights and remedies provided to Licensee in this Agreement; provided, however, that in any event Licensee will be primarily liable to WU for all acts, errors or omissions of a Licensed Affiliate. Any act, error or omission of a Licensed Affiliate that would be a breach of this Agreement if imputed to Licensee will be deemed to be a breach of this Agreement by Licensee. The right of Licensee to exercise its rights, perform its obligations and pursue its remedies under this Agreement through one or more of its Affiliates is in addition to and not in lieu of the right of Licensee to grant a Sublicense to Affiliates as provided in Section 2.7.1.

3. Development Plan.

3.1 Development Plan. Licensee represents and warrants that (a) the Development Plan contains Licensee's good faith, bona fide plans, as of the date that is [***] months following the Effective Date, for researching and developing, and if regulatory approval is obtained, commercializing Licensed Products, and (b) Licensee has or plans to obtain the knowledge, expertise, experience and resources to fully carry out such plans.

3.2 Progress Reports. Licensee will deliver to WU written reports on Licensee's progress against the Development Plan no later than [***] and [***] of the [***] calendar years following the calendar year in which the Effective Date falls, and no later than [***] of each calendar year thereafter. Each such report will set forth Licensee's progress against the Development Plan in reasonable detail including, without limitation [***]. Each such report will identify [***]. Upon reasonable request by WU from time-to-time, Licensee will meet with WU to consult with WU about Licensee's then-current progress against the Development Plan.

3.3 Changes to Development Plan. Licensee may amend, change or otherwise modify the Development Plan upon written notice to WU.

4. Diligence.

4.1 Licensee agrees to, throughout the term of this Agreement, use Commercially Reasonable Efforts, itself or through its Affiliates, Sublicensees or contractors, to develop, manufacture, promote and sell Licensed Products, in each instance throughout the Territory and in the Field and to achieve the diligence milestones set forth in Exhibit D.

4.2 Should WU conclude in its reasonable judgment that Licensee fails to meet the diligence requirements set out in Section 4.1 above (as may be extended pursuant to Exhibit D), WU may notify Licensee of its conclusions and the basis therefore. The Parties shall then undertake to resolve WU's

concerns through good faith negotiations for a period of [***] days. Should such negotiations fail to result in Licensee achieving a level of diligence consistent with its obligations under Section 4.1 above, in WU's sole reasonable judgment, then WU may terminate this Agreement as provided in Article 13 below.

5. Fees, Payments and Royalties.

5.1 License Issue Fee. Within [***] days after the Effective Date, Licensee agrees to pay the License Issue Fee to WU. Such License Issue Fee shall be non-refundable and shall not be credited against any other payments that may be due hereunder.

5.2 License Maintenance Fee. On or before [***] anniversary of the Effective Date and until the First Commercial Sale of the first Licensed Product occurs, Licensee agrees to pay the License Maintenance Fee to WU. All License Maintenance Fees shall be non-refundable and shall not be credited against any other payments that may be due hereunder.

5.3 Royalties.

5.3.1 Licensed Products. For each Licensed Product made or sold by or for Licensee, its' Affiliate and/or Sublicensee within the Territory, Licensee agrees to pay WU an earned royalty equal to the Royalty Rate of Net Sales if there is a Valid Claim in at least one of the country of manufacture or country of Sale of such Licensed Product. Such earned royalties on Net Sales in each Calendar Half shall be paid by Licensee within [***] days after the end of such Calendar Half.

5.3.2 Stacking Royalties. In the event that Licensee makes a royalty payment to one or more third parties for any patent rights (or know-how rights licensed under the same agreement as such patent rights, but only prior to the expiration of the last valid claim of such patent rights) needed to practice, use, make, sell, offer to sell, import or otherwise exploit any Licensed Product, Licensee would be entitled to deduct from the royalties due to WU up to [***] percent ([***]%) of the royalty Licensee actually pays to such third parties subject to the requirement that the Royalty Rate for the royalties paid to WU hereunder shall not be reduced below [***] percent ([***]%) as a result of any such deductions.

5.3.3 Combination Products. The Royalty Rate for Combination Products shall be determined by the Parties in good faith, taking into account the relative fair market value contribution of the Licensed Product and the other Therapeutically Active Pharmaceutical Ingredient in such Combination Product.

5.3.4 Minimum Royalty Rate. The Royalty Rate for royalties paid to WU hereunder shall not be reduced below [***] percent ([***]%) as a result of the Stacking Royalty and/or Combination Product provisions in Sections 5.3.2 and 5.3.3.

5.4 Minimum Royalties. Commencing with the [***] anniversary of the Effective Date following the First Commercial Sale of the first Licensed Product and continuing thereafter throughout the Term, Licensee agrees to pay WU a minimum royalty equal to the Minimum Royalty for each such anniversary of the Effective Date as an advance against the royalties due under Section 5.3.1 and/or 5.3.2 and/or 5.3.3 above that are paid to WU by Sana over the ensuing [***] period. Such Minimum Royalties shall be due within [***] days after the applicable anniversary.

5.5 Milestone Payments. Licensee agrees to pay WU milestone payments in the amounts set forth in this Section 5.5 within [***] days after the date that the applicable milestone set forth below in the Preamble is achieved; provided, however, that in the case of achievement of a milestone by a Sublicensee, such [***] day period shall be extend to [***] days.

5.6 Clarifications. For the avoidance of doubt, no multiple royalty will be required to be paid because a Licensed Product or its manufacture, use, Sale or importation or performance is covered by more than one Valid Claim or patent or patent application within the Patent Rights. A Sale of a Licensed Product will be deemed to have been made at the time Licensee or a Sublicensee (or anyone acting on behalf of or for the benefit of Licensee or its Sublicensees) first invoices, ships, or receives value for a Licensed Product. In order to ensure that WU obtains the full amount of royalty payments contemplated in this Agreement, in the event of a Sale of any Licensed Product internally and not for resale between Licensee, its Affiliates or any Sublicensee or other third party with whom Licensee has any agreement or arrangement regarding consideration (including but not limited to an option to purchase stock, stock ownership, division of profits, or special rebates or allowances), the gross value of the Sale for purposes of calculating Net Sales shall be deemed to be the fair market value of the Licensed Product.

5.7 Sublicensing Revenue Obligations.

5.7.1 Licensee shall pay to WU the applicable percentage of Sublicensing Revenue identified in the Preamble above, after application of the terms of Section 5.7.2, to the extent applicable, within [***] days of the end of the Calendar Half in which Licensee receives the Sublicensing Revenue.

5.7.2 To the extent that a payment is made under a Sublicense that grants both a sublicense under the Patent Rights and a license or sublicense under other intellectual property rights for technology, or materials, then Licensee shall calculate reasonably and in good faith the portion(s) of overall consideration in the transaction that will be considered Sublicensing Revenue versus other consideration that is not Sublicensing Revenue based on the relative value of the Patent Rights as compared to the other intellectual property rights or material licensed or sublicensed by Licensee under such Sublicense in consideration for which such payment was made. Licensee shall notify WU in writing of its calculation ("**Sublicense Income Calculation Notice**") within [***] of receipt of Sublicense Consideration and shall provide such supporting detail and documentation as Licensee deems appropriate to support its calculation, provided that WU may reasonably request additional information and documentation from Licensee to support its Sublicense Income Calculation Notice if WU reasonably disputes the calculation because of insufficient information. Licensee shall not be obligated to disclose to WU confidential terms of any other license agreements or confidential information regarding its products or technology. If WU reasonably disputes Licensee's calculation, the matter shall be escalated to [***] for resolution, and if the matter remains unresolved after such escalation then, within [***] days of WU's receipt of the Sublicense Income Calculation Notice, then WU may invoke baseball arbitration as provided below. The matter shall be resolved by baseball arbitration under the Final Offer Arbitration Supplementary Rules of the AAA (also referred to as Baseball or Last Best Offer Arbitration Supplementary Rules). To the extent that any of the procedures set forth above would be duplicated under such Supplementary Rules, such procedures shall not be repeated under the Supplementary Rules; provided that in any event the simultaneous exchange of final offers under paragraph 3 of such Supplementary Rules as in force as of September 2015 (or similar final offer process in a future version of the Supplementary Rules) shall in any event occur and not be considered duplicative over this paragraph. The arbitrators are not entitled to modify a proposal, or average proposals, or do anything other than to select one Party's proposal or the other Party's proposal. The arbitrators shall choose the Party's proposal that more fairly allocates total consideration paid in the overall transaction at issue between the value of the Patent Rights versus the value of the other intellectual property licensed or sublicensed by Licensee under the applicable agreement,

taking into account all relevant factors, including without limitation scientific, intellectual property-related and commercial factors. The decision in the arbitration shall finally settle the matter (i.e. it shall be final and binding on the Parties, enforceable in any court of competent jurisdiction). The Parties shall share the fees of the Arbitrators equally. If WU reasonably disputes Licensee's calculation and WU has not invoked baseball arbitration as provided above to resolve the matter within [***] days of WU's receipt of the Sublicense Income Calculation Notice, then Licensee's calculation of portion(s) of the overall consideration in the transaction that will be considered Sublicensing Revenue versus other consideration that is not Sublicensing Revenue Sublicense Income shall be final and binding upon WU.

6. Place and Method of Payment; Reports and Records; Audit; Interest.

6.1 Method of Payment. All dollar ($) amounts referred to in this Agreement are expressed in United States dollars. All payments to WU shall be made in United States dollars by check or electronic transfer payable to "Washington University." Any Sales revenues for Licensed Products in currency other than United States dollars shall be converted to United States dollars at the conversion rate for the foreign currency as published in the Eastern edition of *The Wall Street Journal* as of the last business day in the United States of the applicable Calendar Half or at such other conversion rate(s) as Licensee uses generally in its business for reporting sales and as reasonably agreed by WU.

6.2 Place of Payment. Checks shall reference WU [***] and shall be sent to:

[***]

All payments shall include the WU Contract Number to ensure accurate crediting to Licensee's account. Electronic transfers shall be made to a bank account designated in writing by WU.

6.3 Reports. Within [***] days after the end of each Calendar Half in which a Licensed Product is Sold or made, Licensee shall deliver to WU, a written report setting forth the calculation of all amounts due to WU under Sections 5.3 and 5.5 above for such Calendar Half. For Licensed Products, each such report shall show, at a minimum, [***].

6.4 Books and Records. Licensee shall maintain complete and accurate books of account and records that would enable an independent auditor to verify the amounts paid as royalties, fees and payments under this Agreement. The books and records for a Calendar Half must be maintained for [***] years following the last day of such Calendar Half. Upon reasonable notice by WU, Licensee must give an independent, certified public accountant appointed by and representing WU and reasonably acceptable to Licensee access to all books and records relating to Sales of Licensed Products by Licensee to conduct, at WU's expense, an audit or review of those books and records during regular business hours. All such audits may be made no more than once each calendar year at reasonable times and on reasonable advance notice. No accounting period shall be subject to audit more than one time hereunder. No such audit of a Calendar Half may be conducted more than [***] years after the last day of such Calendar Half, and no such audit may be conducted more than [***] calendar years following the year in which termination or expiration of this Agreement occurs. If any such audit or review determines that Licensee has underpaid royalties by [***]% or more for any Calendar Half, Licensee shall (a) [***] for the costs and expenses of the independent, certified public accountant in connection with the review and audit, and (b) [***].

6.5 Interest and Collection. Any amounts not paid by Licensee to WU when due shall accrue interest, from the date [***] days after the balance is due, at an interest rate of [***]% per month or portion of month. In addition, Licensee will reimburse WU for all reasonable costs and expenses incurred (including reasonable attorneys' fees) in collecting any overdue amounts.

6.6 Foreign Taxes. Payments shall be paid to WU free and clear of all foreign taxes. If laws, rules or regulations of any foreign jurisdiction require withholding of income taxes of other rates imposed upon payments set forth in this Agreement, Licensee shall make such withholding payments as required and without subtracting such withholding payments from such payments to WU. Licensee shall submit appropriate proof of payment of the withholding rates to WU within a reasonable period of time. Licensee shall use efforts consistent with its usual business practices to minimize the extent of any withholding taxes imposed under the provisions of the current or any future double taxation treaties or agreement between foreign countries, and the Parties shall cooperate with each other with respect thereto, with the appropriate Party under the circumstances providing the documentation required under such treaty or agreement to claim benefits thereunder.

7. Confidentiality.

7.1 Definition of Confidential Information. The Parties acknowledge that, prior to and during the Term of this Agreement, the Parties may disclose to one another scientific, technical, trade secret, business, or other information which is treated by the disclosing Party as confidential or proprietary, including but not limited to unpublished Patent Rights patent applications (hereinafter referred to as "**Confidential Information**"). Both Parties agree that in order to ensure that each Party understands which information is deemed to be confidential, all Confidential Information will be in written form and clearly marked as "Confidential," and if the Confidential Information is initially disclosed in oral or some other non-written form, it will be confirmed and summarized in writing and clearly marked as "Confidential" within [***] days of disclosure. The receiving Party shall hold such Confidential Information in confidence and shall treat such information in the same manner as it treats its own confidential information but not less than with a reasonable degree of care. In recognition that WU is a non-commercial, academic institution, Licensee agrees to limit to the extent practicable the delivery of Licensee Confidential Information to WU. WU retains the right to refuse to accept any such information or data from Licensee which it does not consider to be essential to this Agreement or which it believes to be improperly designated, for any reason, but such refusal shall not eliminate the obligation of the individual making such a determination from treating such information as confidential hereunder where such information has been read by such individual. The Confidential Information provided to the receiving Party will remain the property of the disclosing Party, and will be disclosed only to those persons necessary for the performance of this Agreement.

7.2 Exclusions. Confidential Information does not include information that (a) was known to the receiving Party without obligations of confidentiality prior to receipt from the disclosing Party as evidenced by the receiving Party's records; (b) is or becomes part of the public domain through no act by or on behalf of the receiving Party; (c) is lawfully received by the receiving Party from a third party without any obligations of confidentiality, and/or (d) comprises identical subject matter to that which had been originally and independently developed by the receiving Party personnel without knowledge or use of any Confidential Information as evidenced by the receiving Party's records.

7.3 General Obligations. Subject to Section 2.3 above and to Sections 7.5 and 7.6 below, the receiving Party agrees that during the term of this Agreement and forever thereafter it will (a) refrain from disclosing any Confidential Information of the disclosing Party to third parties, (b) disclose Confidential Information of the disclosing Party to only those directors, officers, employees, advisors, consultants and

subcontractors of the receiving Party necessary for the receiving Party to use the Confidential Information in accordance with this Agreement and who are subject to restrictions on use and disclosure at least as restrictive as those set forth in this Agreement, (c) keep confidential the Confidential Information, and (d) except for use in accordance with the licenses and other rights which are expressly granted in this Agreement, refrain from using Confidential Information.

7.4 No License. By disclosing the Confidential Information to the other Party, the disclosing Party does not grant any express or implied rights to the other Party under any patents, copyrights, trademarks, or trade secrets other than the licenses expressly granted herein. Each Party reserves, without prejudice, the ability to protect its rights under any such patents, copyrights, trademarks, or trade secrets.

7.5 Judicial and Securities Law Procedures. The receiving Party may, to the extent necessary, disclose the disclosing Party's Confidential Information in accordance with a judicial or other governmental rule, regulation or order, provided that the receiving Party (a) in the case of disclosures other than those required by securities laws, rules, regulations or orders or the rules of any securities exchange or market on which a receiving Party's securities are listed or traded, either (i) gives the disclosing Party reasonable notice (to the extent reasonably practicable and legally permissible) prior to such disclosure to allow the disclosing Party a reasonable opportunity to seek a protective order or equivalent, or (ii) obtains written assurance from the applicable judicial or governmental entity that it will afford the Confidential Information of the disclosing Party an appropriate level of protection afforded under applicable law or regulation and (b) in the case of disclosures required by securities laws, rules, regulations or orders or the rules of any securities exchange or market on which a receiving Party's securities are listed or traded, the receiving Party takes reasonable steps, upon the advice of securities counsel, to limit disclosure of or seek confidential treatment for such Confidential Information.

7.6 Permitted Disclosures. Licensee may, to the extent necessary, use and disclose the Confidential Information of WU (a) to secure governmental approval to clinically test or market a Licensed Product, (b) if applicable, to secure patent protection for an invention within the Patent Rights, (c) to actual or potential Sublicensees or contractors performing services with respect to Licensed Products, and their respective directors, officers, employees, advisors, consultants and subcontractors, provided such actual or potential Sublicensees or contractors first agree in writing to be bound by terms of confidentiality that are at least as restrictive as the terms of confidentiality set forth in this Agreement, (d) to actual or potential investors, lenders or other financing sources, licensees, sublicensees and acquirers, and their respective directors, officers, employees, advisors, consultants and subcontractors, provided such actual or potential investors, lenders or other financing sources, licensees, sublicensees and acquirers first agree in writing to be bound by terms of confidentiality that are at least as restrictive as the terms of confidentiality set forth in this Agreement. Licensee will, in any such event, take all reasonably available steps to maintain the confidentiality of the disclosed WU Confidential Information and to guard against any further disclosure.

8. Representations and Warranties.

8.1 Authority. Each of WU and Licensee represents and warrants to the other of them that (a) this Agreement has been duly executed and delivered and, as of the Effective Date, constitutes a valid and binding agreement enforceable against such Party in accordance with its terms, (b) no authorization or approval from any third party is required in connection with such Party's execution, delivery, or, as of the Effective Date, performance of this Agreement, and (c) as of the Effective Date, the execution, delivery, and performance of this Agreement does not violate the laws of any jurisdiction or the terms or conditions of any other agreement to which it is a party or by which it is otherwise bound.

8.2 Compliance with Laws. Licensee represents and warrants that it will (a) use the Patent Rights only to exploit the license rights granted in Section 2.1 in accordance with the provisions of this Agreement and with such laws, rules, regulations, government permissions and standards as may be applicable thereto in the Territory and in the Field, and (b) otherwise comply with all laws, rules, regulations, government permissions and standards as may be applicable to Licensee in the Territory with respect to the performance by Licensee of its obligations hereunder.

8.3 Reports and Statements. Licensee warrants that all reports and/or statements provided by Licensee hereunder are true and correct and are certified true and correct by Licensee upon delivery to WU.

8.4 Additional Warranties of Licensee. Licensee represents and warrants that (a) it has obtained, or will obtain Effective Date, the insurance coverage required by Article 12 below, (b) as of the Effective Date, there is no pending litigation and no claims threatened in writing against it that impair its ability or capacity to perform and fulfill its duties and obligations under this Agreement, and (c) it has as of the Effective Date raised [***] U.S. dollars through the sale of its equity.

8.5 Additional Warranties of WU. WU represents and warrants that (a) it has in place an intellectual property policy that provides for its ownership (subject to any rights retained by the U.S. government by operation of law) of the Patent Rights and as of the Effective Date, WU solely owns the Patent Rights; (b) as of the Effective Date, there is no known pending litigation against WU or, to the knowledge of WU, any WU inventor relating to the Patent Rights, and WU has not received any notice of any third party claims against WU challenging WU's ownership or control of the Patent Rights; (c) as of the Effective Date, there are no known claims, judgments or settlements against WU, (d) it has obtained assignments from all WU inventors named in patent applications and patents within the Patent Rights assigning to WU all their right, title and interest in and to the Patent Rights and any inventions contained therein, and (e) it has the authority and right to enter into and perform its obligations under this Agreement and grant the licenses granted to Licensee herein.

9. Application, Prosecution and Maintenance of Patent Rights.

9.1 Patent Applications. [***] has the sole right to control the preparation, filing, prosecution, issue and maintenance of Patent Rights patents and applications. Subject to compliance by [***] with the terms and conditions of this Agreement (including, without limitation, Section 9.2 below), [***] will (a) prosecute and maintain the applications and patents within the Patent Rights, and (b) prepare, file and prosecute additional applications within the Patent Rights as [***] may reasonably request, in [***] name at [***] sole cost and expense. [***] will select qualified outside patent counsel and corresponding foreign associates reasonably acceptable to [***] to prepare, file, prosecute and maintain U.S. patents and patent applications and foreign counterparts within the Patent Rights. [***] will (a) instruct patent counsel to copy [***] on all substantive correspondence, or otherwise provide [***] with a copy of correspondence, in connection with the prosecution of the Patent Rights, including correspondence from the United States Patent and Trademark Office (USPTO) and any other patent office, as well as copies of proposed responses to such correspondence in order to provide [***] a reasonable opportunity to review and comment on proposed submissions to any patent office before the submission is filed, (b) consult with [***] regarding the prosecution of patent applications within the Patent Rights, (c) give [***] an opportunity to review and comment on the text of each patent application before filing, and (d) supply [***] with a copy of the application as filed, together with notice of its filing date and serial number. [***] will keep [***] reasonably informed of the status of Patent Rights patents and applications. [***] shall give [***] the opportunity to provide comments on and make requests of [***] concerning the preparation, filing, prosecution, protection, defense and maintenance of the Patent Rights, and [***] shall seriously consider such comments and requests; however, final decision-making authority shall vest in [***].

9.2 Costs and Expenses. Subject to Section 9.3 below, [***] agrees to reimburse [***] for all reasonable costs and expenses incurred by [***] in connection with the preparation, filing, prosecution, issue and/or maintenance of patents and applications within the Patent Rights [***] and at any time thereafter during the term of this Agreement. [***] agrees to pay [***] the amount of any such reimbursement within [***] days after receipt by [***] of documentation for any such costs and expenses, which [***] shall provide to [***] from time-to-time.

9.3 Failure to Reimburse. [***] may elect not to [***] for amounts due under Section 9.2 in respect to one or more Patent Rights patents and/or patent applications in one or more jurisdictions only by giving [***] notice of such election at least [***] days before the date on which the applicable cost or expense is to be incurred by [***] (each an "**Election Notice**"). For purposes of this Section 9.3, a cost or expense shall be deemed to be incurred by [***] on the earlier of (a) the date [***] actually pays the cost or expense, or (b) the date [***] becomes obligated to pay the cost or expense (which, for example, shall be the date [***] engages a third party to perform any service which gives rise to any such cost or expense if such engagement is non-cancelable). Any such Election Notice shall specify the Patent Rights patents and/or patent applications and the jurisdictions to which such Election Notice relates ("**Elected Patent Rights**"). In the event any Election Notice is given by Licensee, the term "Patent Rights" shall be modified to exclude, as applicable, such Elected Patent Rights, in each instance as of the date the Election Notice is given. Accordingly, and for the avoidance of doubt, as of the date the Election Notice is given, [***].

9.4 Community of Interest. The Parties desire to avail themselves to the maximum extent possible of all applicable legal privileges. The Parties intend that information regarding the preparation, filing, prosecution and maintenance of the applications and patents within the Patent Rights ("**Shared Information**") that would otherwise be subject to one or more legal privileges or protections is and shall be subject to those same privileges and protections despite the fact that it has been developed by or exchanged between or among them and/or their joint or independent counsel. The Parties further intend that Shared Information is and shall be subject to the joint defense doctrine and common interest/community of interest doctrine. The Parties acknowledge that the legal privileges and protections pertaining to Shared Information are held jointly by all Parties, and that no individual Party is authorized to waive any such privilege or protection. Further, this Agreement shall not affect the ethical, fiduciary or other obligations inherent in those attorney-client relationships other than to extend the cloak of confidentiality and privilege to the Shared Information as provided herein. Each Party agrees that Shared Information obtained from another Party or developed jointly shall be used only for the preparation and prosecution of the Licensed Patents and for no other purpose. Each Party agrees to keep Shared Information as the Confidential Information of the other Party.

10. Infringement, Enforcement, and Defense.

10.1 Notice of Infringement. Throughout the term of this Agreement, each of WU and Licensee agree to give the other prompt notice of (a) any known or suspected infringement of the Patent Rights in the Territory, and (b) any claim that a Licensed Product infringes the intellectual property rights of a third party.

10.2 Patent Rights.

10.2.1 Enforcement. [***] will have the right, but not the obligation, at its sole expense, to attempt to stop promptly any known or suspected infringement of the Patent Rights in the Territory. [***] may initiate and prosecute actions in its own name or, if required by law and upon receipt of [***] written consent (such consent not to be unreasonably withheld), in [***] name against third parties for infringement of the Patent Rights in the Territory through outside counsel of [***] choice who are reasonably acceptable to [***]. [***] shall consult with [***] prior to and in conjunction with all significant issues, shall keep [***] informed of all

proceedings, and shall provide copies to [***] of all pleadings, legal analyses, and other papers related to such actions. Upon [***] request, [***] will provide reasonable assistance to [***] in prosecuting, resolving and/or settling any such actions, including but not limited to joining as a party if necessary or desirable. If [***] fails or declines to take any action under this Section 10.2.1 within a reasonable time after learning of the infringement of the Patent Rights, [***] shall have the right (but not the obligation) to take appropriate actions including, without limitation, filing a lawsuit, at [***] cost, provided that prior to bringing any action, [***] shall consider in good faith the reasons [***] has failed to bring such action. [***] will provide reasonable assistance to [***] in prosecuting, resolving and/or settling any such actions.

10.2.2 Restrictions on Settlement. Notwithstanding anything in this Agreement to the contrary, neither Party may, without the advanced written consent of the other Party, not to be unreasonably withheld, conditioned or delayed, settle, compromise, or otherwise enter into any form of settlement (or other similar agreement) regarding any claim of action brought under Section 10.2.1 above that either (a) admits liability on the part of the other Party, (b) otherwise negatively affects the rights of the other Party or imposes any liability, restrictions or obligation upon the other Party, (c) requires any financial payment by the other Party, (d) concedes or otherwise portions the Territory and/or (e) grants rights or concessions to a third party to the Patent Rights or any Licensed Products.

10.2.3 Proceeds. If a Party obtains any value, payment or compensation of any type or kind as a result of any claim brought pursuant to Section 10.2.1 above, such Party shall pay to the other Party [***].

11. Indemnification.

11.1 Licensee agrees to indemnify, defend, reimburse and hold harmless WU, WU personnel, WU's Affiliates, and each of their respective trustees, faculty, staff, employees, students, directors, officers, agents, successors and assigns (altogether the "**WU Indemnitees**") from, for and against any and all judgments, settlements, losses, expenses, damages and/or liabilities and any and all court costs, attorneys' fees, and expert witness fees and expenses ("Losses") that a WU Indemnitee may incur from any and all allegations, claims, suits, actions or proceedings (the "**Claims**") arising out of, relating to, or incidental to [***], but excluding Losses to the extent [***]. The obligations set forth in this Section 11.1 shall survive termination of this Agreement, shall continue even after assignment of rights and responsibilities, and shall not be limited by any provision of this Agreement outside this Article 11.

11.2 A WU Indemnitee seeking indemnification under this Agreement shall: (a) give Licensee prompt written notice of the Claim; (b) cooperate with the Licensee, at Licensee's expense, in connection with the defense and settlement of the Claim; and (c) permit Licensee to control the defense, settlement or compromise of such Claim, including the right to select defense counsel. In no event shall Licensee compromise or settle any Claim in a manner which admits fault or negligence on the part of WU or a WU Indemnitee without the prior written consent of WU, such consent not to be unreasonably withheld, conditioned or delayed. Neither Party shall have any liability under this Article 11 with respect to Claims settled or compromised without complying with the terms of this Article 11.

12. Insurance.

12.1 Throughout the Term of this Agreement and for a period of [***] years thereafter, Licensee shall obtain and maintain comprehensive general liability and product liability insurance, naming WU as an additional insured, with carrier(s) having at least A.M. Best ratings/class sizes of A/VII and in the following minimum annual limits: [***].

12.2 Licensee will provide WU with a certificate of insurance within [***] of WU's written request following execution of this Agreement. The certificates must provide that Licensee's insurer will notify WU in writing at least thirty [***] prior to cancellation or material change in coverage. The specified minimum insurance coverage and limits do not constitute a limitation on Licensee's liability or obligation to indemnify or defend under this Agreement.

12.3 Notwithstanding the foregoing to the contrary, Licensee shall not be required to maintain such insurance if it maintains a reasonable and customary program of self-insurance that covers the liabilities described in Section 12.1 and such program of self-insurance is reasonably acceptable to WU.

13. Term and Termination.

13.1 Term. The Term of this Agreement is defined in the Preamble and is subject to earlier termination as provided herein.

13.2 Termination By Licensee. Licensee may terminate this Agreement without cause by giving [***] days' advance written notice thereof to WU. Licensee shall pay WU within [***] days of such termination notice all amounts due and owing to WU under this Agreement (absent termination) under Sections 5.2, 5.4, 5.5 above during the [***] day notice period.

13.3 Termination by WU. WU may terminate this Agreement by giving notice thereof to Licensee upon the occurrence of any one or more of the following events (in which event this Agreement shall terminate on the date such notice is given): (a) upon [***] days written notice if Licensee fails to achieve the diligence milestones as set forth in Section 4.1 (as may be extended pursuant to the last paragraph of Exhibit D) and is unable to resolve WU's concerns through good faith negotiations as set forth in Section 4.2, and/or (b) Licensee (i) becomes insolvent, bankrupt, or is otherwise unable to pay its debt(s) to WU by the due date(s), or (ii) suffers the appointment of a receiver, receiver and manager, or administrative receiver of the whole or any part of its assets or undertaking, or (iii) an order is made or a notice issued convening a meeting of shareholders to consider the passing of a resolution for Licensee's winding up (other than for the purpose of amalgamation or reconstruction) or (iv) a resolution is passed for Licensee's winding up (other than for the purpose of amalgamation or reconstruction).

13.4 Termination for Breach and Failure to Cure. WU may terminate this Agreement by giving notice thereof to Licensee in the event Licensee commits a material breach of this Agreement (other than a breach of the type contemplated by Section 13.3 above) and fails to cure such breach within [***] days after the day that WU gives Licensee notice of such breach. Such termination shall be effective on the date such notice of termination is given. Licensee may terminate this Agreement by giving notice thereof to WU in the event WU commits a breach of any provision of this Agreement and fails to cure such breach within [***] days after the day that Licensee gives notice to WU of such breach, and such termination shall be effective on the date such notice of termination is given.

13.5 Duties Upon Expiration or Earlier Termination. For the avoidance of doubt, on the date of expiration or earlier termination of this Agreement, all license rights granted to Licensee under Article 2 above shall terminate. After the termination of this Agreement, Licensee agrees to, promptly deliver to WU all originals, copies, reproductions and summaries of all Confidential Information of WU, in each instance in the format in which it exists at the time of expiration or earlier termination of this Agreement, or in another mutually agreed format. Notwithstanding the foregoing, a Party, and in the case of Licensee, its Affiliates and Sublicensees, (a) shall have the right to keep one (1) copy of any of the Confidential Information of the other Party for its legal archives solely for the purpose of determining compliance with the terms and conditions of this Agreement and (b) shall not have any obligation to destroy originals, copies, reproductions and summaries of Confidential Information of the other Party that are stored in the ordinary course of business in laboratory notebooks or electronic databases consistent with good business practices. Within [***] days after the termination of this Agreement for any reason whatsoever, Licensee agrees to deliver a written report to WU of all Licensed Products in inventory. If this Agreement terminates before the expiration of the last-to-expire Patent Rights, then, upon the termination of this Agreement, Licensee agrees (a) to promptly discontinue the exportation of Licensed Products that were made in the Territory, (b) to promptly discontinue the manufacture, Sale and distribution of the Licensed Products in the Territory, (c) to promptly destroy all Licensed Products in inventory, and (d) not to manufacture, sell and/or distribute Licensed Products in the Territory until the expiration of applicable last-to-expire Patent Rights.

13.6 Effect of Expiration or Earlier Termination. For the avoidance of doubt, the expiration or earlier termination of this Agreement shall not relieve Licensee of its obligation to account for and make payment to WU of any amount due hereunder including, without limitation, any royalties accrued during the Term of this Agreement and amounts under Section 9.2 above.

14. Disclaimer and Limitation of Liability. NOTWITHSTANDING ANYTHING HEREIN TO THE CONTRARY, EVERYTHING PROVIDED BY WU UNDER THIS AGREEMENT IS UNDERSTOOD TO BE EXPERIMENTAL IN NATURE, MAY HAVE HAZARDOUS PROPERTIES, AND IS PROVIDED WITHOUT ANY WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT OF ANY THIRD-PARTY PATENT, TRADEMARK, COPYRIGHT OR ANY OTHER THIRD-PARTY RIGHT. WU MAKES NO WARRANTIES REGARDING THE QUALITY, ACCURACY, COMMERCIAL VIABILITY OR ANY OTHER ASPECT OF ITS PERFORMANCE PURSUANT TO THIS AGREEMENT OR REGARDING THE PERFORMANCE, VALIDITY, SAFETY, EFFICACY OR COMMERCIAL VIABILITY OF ANYTHING PROVIDED BY WU UNDER THIS AGREEMENT. IN NO EVENT SHALL WU OR LICENSEE BE LIABLE FOR ANY INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS AGREEMENT, WHETHER IN BREACH OF CONTRACT, TORT OR OTHERWISE, EVEN IF THE PARTY IS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. EXCEPT FOR THEIR RESPECTIVE INDEMNITY OBLIGATIONS, EACH OF WU'S AND LICENSEE'S AGGREGATE LIABILITY TO THE OTHER UNDER THIS AGREEMENT SHALL NOT EXCEED [***].

15. General Provisions.

15.1 Import/Export Controls. In performing their respective obligations under the Agreement, the Parties will comply with United States export control and asset control laws, regulations, and orders, as they may be amended from time to time, applicable to the export or re-export of goods or services, including software, processes, or technical data. Such regulations include without limitation the Export Administration Regulations ("EAR"), International Traffic in Arms Regulations ("ITAR"), and regulations and orders administered by the Treasury Department's Office of Foreign Assets Control (collectively, "Export Control Laws"). WU is not transferring any information or material outside of the United States under this Agreement and is providing no representation regarding the export control status or classification of any information or materials provided hereunder.

15.2 Entire Agreement; Amendment. This Agreement embodies the entire understanding of the parties and supersedes all other past and present communications and agreements relating to the subject matter. No amendment or modification of this Agreement shall be valid unless made in writing and signed by authorized representatives of both parties.

15.3 Governing Law, Jurisdiction and Venue. This Agreement shall be governed by and construed in accordance with the laws of the State of New York, without regard to its rules or procedures involving conflicts of laws. All actions relating to this Agreement shall be brought exclusively in the [***] if no federal subject matter jurisdiction exits. The Parties irrevocably waive all present and future objections to personal jurisdiction, forum or venue in such courts.

15.4 Survival. Each provision of this Agreement that would by its nature or terms survive, shall survive any termination or expiration of this Agreement, regardless of the cause. Such provisions include, without limitation, Sections 1, 2.7.3, 7, 8, 10, 11, 14 and 15.

15.5 Notices. Notices pursuant to this Agreement shall be to the following contacts and are effective when sent if sent by a commercial carrier's overnight delivery service or when received if sent otherwise:

If to WU:

[***]

If to Licensee:

[***]

A Party may update or amend its contact information set forth above by written notice given in accordance with this Section 15.5.

15.6 Assignment. This Agreement is binding upon and inures to the benefit of the Parties and their successors, but this Agreement may not be assigned by either Party without the prior written consent of the other Party; provided, however, that notwithstanding the foregoing, a Party may at any time assign this Agreement in whole, but not in part, without the other Party's consent, to an acquiring entity in connection with the sale or transfer of all or substantially all of the business or assets of such Party to which this Agreement relates, whether by sale of assets, merger, consolidation or otherwise provided that (i) Licensee shall not be released of its obligations existing at the time of such assignment and (ii) the assignee or successor to this Agreement confirms, in writing, that it will be subject to and must comply with all terms, conditions and obligations of this Agreement.

15.7 Construction. The recitals and preamble to this Agreement, if any, are hereby incorporated as an integral part of this Agreement as if restated herein in full. Headings are included for convenience and reference only and are not incorporated as an integral part of this Agreement. This Agreement may be executed in any number of counterparts each of which shall be deemed an original and as executed shall constitute one agreement, binding on both parties, even though both parties do not sign the same counterpart.

15.8 Relationship of the Parties. Each Party is an independent contractor and not a partner or agent of the other Party. This Agreement will not be interpreted or construed as creating or evidencing any partnership or agency between the Parties or as imposing any partnership or agency obligation or liability upon either Party. Further, neither Party is authorized to, and will not, enter into or incur any agreement, contract, commitment, obligation or liability in the name of or otherwise on behalf of the other Party.

15.9 Severability. If any provision in this Agreement is held invalid, illegal, or unenforceable in any respect, such holding shall not affect any other provisions of this Agreement, and this Agreement shall be construed as if it had never contained the invalid, illegal, or unenforceable provisions.

15.10 Remedies. The failure of either Party to insist upon or enforce strict performance by the other Party of any provision of this Agreement, or to exercise any right or remedy under this Agreement will not be interpreted or construed as a waiver or relinquishment of that Party's right to assert or rely upon any such provision, right or remedy in that or any other instance; rather, the same will be and remain in full force and effect. All rights and remedies under this Agreement are cumulative of every other such right or remedy and may be exercised concurrently or separately from time-to-time.

15.11 Use of Names. Neither Party may use the trademarks or name of the other Party or its employees for any commercial, advertisement, or promotional purposes without the prior written consent of an authorized corporate officer of the other Party. If either Party is required by law, governmental regulation, or its own authorship or conflict of interest policies to disclose its relationship with the other Party, including, but not limited to, in SEC filings, scientific publications or grant submissions, it shall provide the other Party with a copy of the disclosure. Notwithstanding the provisions of this Section 15.11, either party may publicize the existence of, and the Parties to, this Agreement.

15.12 Force Majeure. Neither WU nor Licensee will be liable for failure of or delay in performing obligations set forth in this Agreement, and neither will be deemed in breach of its obligations, other than for Payments, if such failure or delay is due to natural disasters or other causes reasonably beyond the control of a Party and reasonable notice of the delay is provided to the other Party.

15.13 WU Personnel. Licensee agrees that for all WU faculty or staff members who serve Licensee in the capacity of consultant, officer, employee, board member, advisor, or otherwise through a personal relationship with Licensee and not through a sponsored research or other relationship with WU (a "Consultant") (i) such Consultant shall serve the Licensee in his or her individual capacity, as an independent contractor, and not as an agent, employee or representative of WU; (ii) WU exercises no authority or control over such Consultant while acting in such capacity; (iii) WU receives no benefit from such activity; (iv) neither Licensee nor the Consultant may use WU resources in the course of such service; (v) WU makes no representations or warranties regarding such service and otherwise assumes no liability or obligation in connection with any such work or service undertaken by such Consultant; and (vi) any breach, error, or omission by a Consultant acting in the capacity set forth in this paragraph shall not be imputed or otherwise attributed to WU, and shall not constitute a breach of this Agreement by WU.

15.14 Further Acts. Each Party shall, at the reasonable request of the other, execute and deliver to the other such instruments and/or documents and shall take such actions as may be required to more effectively carry out the terms of this Agreement.

15.15 Impact on Tax-Exempt Status. WU advises (a) that it is exempt from federal income tax under Section 501(c) (3) of the Internal Revenue Code, (b) that maintenance of such exempt status is of critical importance to WU and to its members, and (c) that WU has entered into this Agreement with the expectation that there will be no adverse impact on its tax exempt status. As such, and if it becomes necessary, the parties agree to amend, modify or reform this Agreement as necessary (i) in order to ensure that there is no material adverse impact on WU's tax exempt status, and (ii) in a manner that preserves the economic terms of the Agreement as such are set forth in this Agreement.

SIGNATURE PAGE FOLLOWS

In Witness Whereof, the Parties have by duly authorized persons executed this Agreement as of the Effective Date.

WASHINGTON UNIVERSITY

By: [***]
Name: [***]
Title: Assistant Vice Chancellor &
Managing Director
Office of Technology Management
Washington University in St. Louis
Date: November 14, 2019

SANA BIOTECHNOLOGY, INC.

By: [***]
Name: [***]
Title: CEO
Date: November 14, 2019

Exhibit A
Initial Development Plan

[***]

Exhibit B
Sublicense Agreement Provisions

Sublicensee agrees to indemnify and hold harmless WU Indemnitees to the same extent and under terms no less favorable to WU Indemnitees as Licensee's obligations under Article 11 of this Agreement.

Sublicensee agrees to maintain insurance for WU's benefit to the same extent and under terms no less favorable to WU as Licensee's obligations under Article 12 of this Agreement.

Sublicensee agrees to maintain books and records and allow audits for WU's benefit to the same extent and under terms no less favorable to WU as Licensee's obligations under this Agreement.

If Licensee enters bankruptcy or receivership, voluntarily or involuntarily, sublicensing revenue then or thereafter due to Licensee will, upon notice from WU to any Sublicensee, become directly due and owing to WU for the account of Licensee. WU will remit to Licensee any amounts received that exceed the sum actually owed by Licensee to WU.

Washington University is a third party beneficiary of this Sublicense Agreement. Accordingly, Washington University may enforce this Agreement against Sublicensee to the same extent as the Sublicensor.

Exhibit C
Patent Rights

[***]

Exhibit D
Diligence Milestones

To be considered diligent, Licensee must meet each of the following milestones, [***].

Technical Diligence:

[***]

Licensee may elect to extend the date for achievement of any Diligence Milestone by a period of [***] months, by paying WU a non-refundable fee in the amount of [***] dollars (the "Milestone Extension Fee"). Upon WU's receipt of the Milestone Extension Fee, the applicable Diligence Milestone will become due [***] months after the original deadline for such Diligence Milestone, and the deadline for each subsequent Diligence Milestone, if any, shall also be extended by [***] months. For avoidance of doubt, Licensee may exercise no more than [***] separate extensions of Diligence Milestones during the term of this Agreement.

WU [***]

CERTAIN CONFIDENTIAL INFORMATION IN THIS DOCUMENT, MARKED BY [***], HAS BEEN OMITTED BECAUSE IT IS BOTH (I) NOT MATERIAL AND (II) WOULD BE COMPETITIVELY HARMFUL IF PUBLICLY DISCLOSED

EXCLUSIVE LICENSE AGREEMENT

PREAMBLE

This agreement ("Agreement") is made and entered into, effective as of the date of last signature below, ("Effective Date") by and between: Washington University, a corporation established by special act of the Missouri General Assembly approved February 22, 1853 and acts amendatory thereto, having its principal offices at One Brookings Drive, St. Louis, Missouri 63130 (hereinafter referred to as "WU"); and Sana Biotechnology, Inc. a corporation organized and existing under the laws of the State of Delaware, having its principal offices at 188 East Blaine Street, Suite 400, Seattle, WA 98102 (hereinafter referred to as "Licensee") and the following correspondence addresses, each a "Party" or collectively the "Parties" of this Agreement:

[***] [***]

License Issue Fee: [***]

License Maintenance Fee: Licensee will pay the License Maintenance Fees to WU as follows until the First Commercial Sale of the first Licensed Product:

- [***] on the [***] anniversaries of the Effective Date; and
- [***] on the [***] anniversaries of the Effective Date; and
- [***] on the [***] anniversaries of the Effective Date; and
- $[***] on the [***] aniversary of the Effective Date and every anniversary thereafter until a First Commercial Sale.

Milestones and Milestone Payments: On a Licensed Product-by-Licensed Product basis, for the first [***] Licensed Products as distinguished by whether or not such product would require a different BLA to be submitted to the FDA due to differing composition: [***]

Milestone payments shall be due whether the milestones are achieved by Licensee or a Sublicensee or Affiliate of Licensee. In addition, if Licensee is not required to conduct a specific clinical trial, then Licensee shall make that skipped milestone payment upon achievement of the next milestone event (in addition to payment for such next milestone).

Royalty Rate: [***]%

Minimum Royalty: Following the First Commercial Sale Licensee of the first Licensed Product, Licensee will make the following Minimum Royalty payments to WU.

- [***] on the [***] anniversary of the Effective Date following a First Commercial Sale; and
- [***] on the [***] anniversary of the Effective Date following a First Commercial Sale; and
- [***] on the [***] anniversary of the Effective Date following a First Commercial Sale; and
- [***] on the [***] anniversary of the Effective Date following a First Commercial Sale and every anniversary of the Effective Date thereafter until the last to expire Valid Claim which covers a Licensed Product.

Sublicensee Revenue percentage:

- [***] percent ([***]%) of all Sublicensing Revenue if the Sublicense is executed prior to [***]; and
- [***] percent ([***]%) of all Sublicensing Revenue if the Sublicense is executed after [***].

Patents and Patent Applications within Patent Rights: See Exhibit C.

Field: Diagnosis, prevention and treatment of human disease or disorders. Notwithstanding anything to the contrary and for the avoidance of doubt, the Field shall not include the commercialization of Licensed Products that are (i) veterinary medicines or (ii) research tools.

Territory: Worldwide.

Term: The term of this Agreement shall commence on the Effective Date and continue until the last day that at least one Valid Claim exists.

RECITALS

A. WU possesses certain Patent Rights (as defined below).

B. Licensee has developed, or within [***] months following the Effective Date will develop, a plan to research, develop and manufacture, products based on the Patent Rights, which plan will be attached hereto as Exhibit A, and which plan will be updated if regulatory approval is obtained, to include the plan to promote, import, sell and/or market such products (the "Development Plan").

C. Licensee possesses the desire, and possesses or has or plans to obtain the knowledge, expertise, experience and resources, to carry out the Development Plan (as it may be amended from time to time), to meet the milestones set forth in Exhibit D hereto (subject to extension as provided in Exhibit D hereto) and to otherwise meet its diligence obligations hereunder with respect to products based on the Patent Rights.

D. Licensee desires to obtain from WU certain licenses to the Patent Rights, and WU desires to grant such licenses to Licensee.

TERMS AND CONDITIONS

NOW, THEREFORE, in consideration of the premises, covenants and agreements set forth herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. Definitions.

As used in this Agreement, the following terms have the meaning ascribed to them below:

1.1 “Agreement” is defined in the Preamble above.

1.2 “Affiliate” means an entity that now or hereafter, directly or indirectly, controls or is controlled by or is under common control with a Party to this Agreement whether by beneficial ownership, contract, or otherwise.

1.3 “BLA” means, with respect to a Licensed Product and a jurisdiction, approval or authorization from the relevant governmental authority to market and sell such Licensed Product in the Field in such jurisdiction.

1.4 “Calendar Half” means each six-month period of a calendar year, or portion thereof, beginning on January 1 or July 1.

1.5 “Claims” is defined in Section 11.1 below.

1.6 “Combination Products” a Licensed Product that is sold for a single price in combination with another Therapeutically Active Pharmaceutical Ingredient as a single product.

1.7 “**Commercially Reasonable Efforts**” means, with respect to the efforts to be expended with respect to a specified objective, those reasonable, diligent, good faith efforts to accomplish such objective as a similarly situated biotechnology company would normally use to accomplish a similar objective taking into account all relevant considerations.

1.8 “Confidential Information” is defined in Section 7.1 below.

1.9 “Development Plan” is defined in Recital B above.

1.10 “Effective Date” is defined in the Preamble above.

1.11 “Elected Patent Rights” is defined in Section 9.3 below.

1.12 “Election Notice” is defined in Section 9.3 below.

1.13 “EMA” means the European Medicines Agency, and any successor governmental authority having substantially the same function.

1.14 “FDA” means the United Stated Food and Drug Administration, and any successor governmental authority having substantially the same function.

1.15 “EU5” means France, Germany, Italy, Spain, and the United Kingdom.

1.16 “Field” is defined in the Preamble above.

1.17 “First Commercial Sale” means the earlier to occur of the earliest date on which a Sale of a Licensed Product is consummated pursuant to this Agreement.

1.18 “Humanitarian Use” means the practice of Patent Rights in the humanitarian field (i.e. prevention or treatment of disease in humans) (a) to manufacture Licensed Products anywhere in the world for the sole and express purposes of distribution and use of such Licensed Products in one or more Qualified Developing Countries, and (b) to sell or otherwise distribute Licensed Products or use solely in one or more Qualified Developing Countries; *provided*, *however*, that sales and distribution of Licensed Products shall not be deemed for Humanitarian Purposes unless products are made available to otherwise underserved populations at locally-affordable prices.

1.19 "License Issue Fee" is defined in the Preamble above.

1.20 "Licensed Product" means any product the manufacture, use, sale or import of which by Licensee and/or Sublicensee that would, in the absence of this Agreement, infringe, at least one Valid Claim of an issued patent or at least one Valid Claim of a pending patent application. For clarity, with respect to a claim of a pending patent application, "infringed" refers to activity that would infringe such Valid Claim if it were contained in an issued patent.

1.21 "Licensee" is defined in the Preamble above.

1.22 "Minimum Royalty" is defined in the Preamble above.

1.23 "Net Sales" means the gross value of compensation and payments, whether in cash or in kind, received by Licensee or its Sublicensees for Sales of Licensed Products, less all Permissible Deductions.

1.24 "NMPA" means China's National Medical Product Administration, formerly known as the China Food and Drug Administration, and any successor governmental authority having substantially the same function.

1.25 "Patent Rights" means, subject to Section 9.3 below, (a) the patents and patent applications listed in the Preamble above, and (b) any divisionals, continuations, Continuations-in-Part (as defined below), or substitute applications, any patents issued or granted from any such patent applications, and any reissues, renewals, reexamination, extension (including by virtue of any supplementary protection certificate) of any such patents, and any confirmation patents, inventor's certificates, applications for inventor's certificate or registration patents or patents of addition based on any such patents, and all foreign counterparts or equivalents in any country or jurisdiction of any of the foregoing patent applications and patents. "Continuation-in-Part" means any claims of any continuation-in-part patent application to the extent the claims are entirely supported in the parent application's original specification and entitled to the parent application's priority date.

1.26 "Permissible Deductions" means, and shall be limited to, [***].

1.27 "PMDA" means Japan's Pharmaceutical and Medical Device Agency, and any successor governmental authority having substantially the same function.

1.28 "Qualified Developing Country" means any one of those countries identified as low- income or lower-middle income by the World Bank Group at the time of the Effective Date; *provided, however*, that "Qualified Developing Country" shall not include any of the following: (a) current and future Organization for Economic Cooperation and Development (OECD) countries, (b) all current and future members of the European Union not otherwise members of the OECD; (c) People's Republic of China, India, Malaysia, Russian Federation, Singapore, South Korea and Taiwan ; and (d) any other country of the world that, as a result of its progress and economic development after the Effective Date, Licensee reasonably determines should be excluded from the definition of Qualified Developing Country.

1.29 "Qualified Humanitarian Organization" shall mean any governmental agency, non-governmental agency or other not-for-profit organization that has as one of its bona fide missions to address the public health or economic development needs of underserved populations.

1.30 “Sale” means any transaction in which a Licensed Product is exchanged or transferred to another person or entity for any value, payment or compensation of any type or kind. Notwithstanding the forgoing, Sales shall not include and shall expressly exclude transfers by Licensee: (a) for the purpose of researching, developing, or testing a Licensed Product or for charitable or compassionate use purposes, provided that such testing is not conducted for or on behalf of any end user and further provided that Licensee receives no payment for such Licensed Product in excess of the fully burdened (i.e. direct and indirect) costs of producing and transporting such materials and/or Licensed Product; (b) to a Sublicensee of Affiliate for distribution or resale, but the subsequent transaction with an end user shall be included in Sales; and (c) to others for marketing/promotional purposes, provided that the foregoing is not performed for or on behalf of any end user and further provided that Licensee receives no payment for such Licensed Product in excess of the fully burdened (i.e. direct and indirect) costs of producing and transporting such materials and/or Licensed Product.

1.31 “Royalty Rate” is defined in the Preamble above.

1.32 “Sublicensing Revenue” means all value, payment or compensation of any type or kind, other than earned royalties or profit shares on Net Sales, received by Licensee from or through its Sublicensees for the licensing or cross-licensing of the Patent Rights granted herein by WU, provided that earned royalties are separately paid by Licensee to WU on the entire value of Net Sales of Licensed Products including the portion attributed to profit shares on Net Sales. Sublicensing Revenue shall include, without limitation, all fees, milestone payments, cash equivalents, equities, securities, equipment, property, rights or anything else of value received by Licensee as sublicensing consideration from or for the benefit of any Sublicensee for the licensing or cross-licensing of the Patent Rights granted herein by WU, but in all cases excluding equity investments at fair market value, bona fide loans (unless and until forgiven but only if forgiven with ten years of issuance of the loan), funding or reimbursement for actual costs of future bona fide research or development relating directly to the Licensed Product , as evidenced by a detailed budget provided to WU prior to receipt of any such funding, reimbursement for patent expenses at their out-of-pocket cost solely for licensed Patent Rights reimbursed by a Sublicensee, or those portions of milestone payments received in consideration for the achievement of a milestone event substantially similar to a milestone event for which a milestone payment is due to WU upon the achievement thereof under this Agreement, provided that, for clarity, the portion of any milestone payment received by Licensee in excess of the amount of the milestone payment that is due to WU for achievement of such substantially similar milestone shall be treated as Sublicensing Revenue and will be subject to the applicable Non-Royalty Sublicensing Revenue Percentage.

1.33 “Territory” is defined in the Preamble above.

1.34 “Therapeutically Active Pharmaceutical Ingredient” shall mean any substance used in a finished pharmaceutical product, intended to furnish pharmaceutical activity or otherwise have direct effect in the cure, mitigation, treatment or prevention of disease or to have effect in restoring, correcting or modifying physiologic function in human beings. For avoidance of doubt, excipients and inert ingredients without disease-specific therapeutic or pharmacologic effects shall not be considered Therapeutically Active Pharmaceutical Ingredients.

1.35 “WU” is defined in the Preamble above.

1.36 “WU Indemnitee” is defined in Section 11.1.

1.37 "Valid Claim" means a claim (a) of a pending patent application within the Patent Rights that has not been pending for more than [***] years from the first office action on the merits (i.e., other than a restriction requirement) in the relevant patent family, and has not been abandoned or finally rejected without the possibility of appeal or refiling or without such appeal having been taken or refiling having been made within the applicable time period specified for appeal, or (b) of an issued and unexpired patent within the Patent Rights that has not been (i) held invalid, permanently revoked, unpatentable or unenforceable by a court or other governmental agency of competent jurisdiction in a decision or order that is not subject to appeal or has not been appealed within the applicable time period specified for appeal, (ii) canceled, disclaimed or rendered unenforceable through disclaimer or otherwise, or (iii) abandoned.

2. License Grants and Restrictions.

2.1 Patent Rights. Subject to the terms and conditions of this Agreement, WU hereby grants to Licensee, and Licensee hereby accepts, a non-transferable, exclusive (subject to Section 2.4 below) and royalty-bearing license under the Patent Rights and for the Term of this Agreement, to research, develop, make, have made, sell, offer for sale, have sold, use, have used, export and import Licensed Products solely in the Territory and in the Field. For the avoidance of doubt, Licensee acknowledges and agrees that no license is granted or implied under the Patent Rights outside the Field or the Territory. In exploiting the rights granted hereunder, Licensee agrees to consider opportunities to pursue Humanitarian Use, whether such Humanitarian Use is performed by or through Licensee or a Qualified Humanitarian Organization.

2.2 Limitations on Patent Rights License. WU retains its right to use the Patent Rights to make, have made, use, and import Licensed Products in the Territory and in the Field for research and educational purposes including collaboration with other nonprofit entities, which shall expressly exclude any commercial purposes.

2.3 Clarifications. For the avoidance of doubt, the license "to have made" granted in Section 2.1 above means that the Licensee, its Affiliates and any Sublicensees may contract with one or more third parties to make Licensed Products for Licensee, its Affiliates or any Sublicensees for Sale or offer for Sale by Licensee within the scope of its sales operations or for research and development purposes. In any such event, Licensee shall require all such third parties to be bound to a written confidentiality agreement that contains non-use and nondisclosure obligations that are at least as restrictive as those that are contained in Article 7 below before any Confidential Information is disclosed to such third parties.

2.4 Government Rights. In accordance with Public Laws 96-517, 97-256 and 98-620, codified at 35 U.S.C. §§ 200-212, the United States government retains certain rights to inventions arising from federally supported research or development. Under these laws and implementing regulations, the government may impose requirements on such inventions. Licensed Products embodying inventions subject to these laws and regulations sold in the United States must be substantially manufactured in the United States. Upon Licensee's request, and at Licensee's expense, WU agrees to cooperate reasonably with Licensee in connection with attempting to secure a waiver of such obligations. The license rights granted in this Agreement are expressly made subject to these laws and regulations as amended from time to time. Licensee shall be required to abide by all such laws and regulations.

2.5 Reservation of Rights and Restrictions. Nothing in this Agreement provides Licensee with any ownership rights of any kind in the Patent Rights. All ownership rights in the Patent Rights shall remain the sole and exclusive property of WU. No license or right is granted by WU, by implication or otherwise, to any patent other than those patents and patent applications within the Patent Rights. Other than the licenses expressly granted in Section 2.1 above, all rights in and to the Patent Rights are hereby reserved by WU. Licensee agrees not to practice or use Patent Rights outside the scope of the license expressly granted herein. Licensee further agrees that it will not do any act or thing which would in any way contest WU's ownership in, or otherwise derogate from the ownership by WU, of any rights in the Patent Rights. In furtherance of the foregoing but without limiting the generality thereof, Licensee agrees not to register or attempt to register in the Territory or elsewhere any ownership rights in the Patent Rights or to assist any third party to do so.

2.6 Markings. Licensee shall ensure that appropriate markings, such as "Patent Pending" or the Patent Rights patent numbers or application serial numbers, appear, in accordance with each country's patent laws, on all Licensed Products (or their packaging, as appropriate) sold by or on behalf of Licensee.

2.7 Sublicensing; Affiliates.

2.7.1 General. Subject to the further provisions of this Section 2.7, Licensee may grant sublicenses of the licenses granted to Licensee in Section 2.1 above to Affiliates or to third parties by entering into a written agreement with any such third party (each such agreement shall be referred to herein as a "**Sublicense**" and each such third party shall be referred to herein as a "**Sublicensee**"). Each direct Sublicensee of Licensee may grant a further Sublicense under the Sublicense granted by Licensee; provided, however, that no such further Sublicensee shall have the right to grant any further Sublicense without the reasonable written consent of WU, such consent not to be unreasonably withheld, delayed or conditioned (each such third party receiving a further Sublicense shall be referred to herein as a "Sub-Sublicesee;" for clarity, each Sub-Sublicensee shall be a "Sublicensee" for the purposes of this Agreement).

2.7.2 Requirements of each Sublicense Agreement. Licensee agrees that it will require all Sublicensees to comply with the terms and conditions set forth in this Agreement and applicable to Licensee. In furtherance of the foregoing, but without limiting the generality thereof, each Sublicense shall, for the express benefit of WU, bind the Sublicensee to the applicable terms and conditions no less favorable to WU than those between WU and Licensee contained in this Agreement that are relevant to a Sublicense. To the extent that any term, condition, or limitation of any Sublicense is inconsistent with the terms, conditions and limitations contained in this Agreement, such term, condition, and/or limitation shall be null and void against WU. Without in any way narrowing or limiting the scope of the foregoing provisions of this Section 2.7.2, all Sublicenses shall contain the terms and conditions set forth in Exhibit B hereto. Within [***] days after the effective date of any Sublicense, Licensee shall provide WU a complete copy of the Sublicense including, without limitation, any and all exhibits and/or attachments thereto, provided, that Licensee may redact any non-financial terms not relevant to obligations owed to WU hereunder. If the Sublicense is written in a language other than English, the copy of the Sublicense shall be accompanied by a complete translation written in English. Upon delivery of such translation to WU, Licensee shall be deemed to represent and warrant to WU that such translation is a true and accurate translation of the Sublicense.

2.7.3 Survival of Sublicenses. At Licensee's written request, any Sublicense granted by Licensee under this Agreement will remain in effect in the event that this Agreement is terminated prior to expiration. Any such Sublicensee will automatically become a direct licensee of WU under the rights originally Sublicensed to it by Licensee provided the Sublicensee did not cause the termination of this Agreement and the Sublicensee agrees to comply with the terms of this Agreement and to fulfill all the responsibilities of Licensee hereunder. Each such Sublicensee shall be an intended third party beneficiary of this Section 2.7.3. In the event that this Agreement is terminated, all amounts subsequently due to Licensee with respect to any such Sublicense granted under the licenses granted under this Agreement shall become paid directly to WU following the date of termination.

2.7.4 Primary Liability. Licensee will be primarily liable to WU for all acts, errors or omissions of a Sublicensee. Any act, error or omission of a Sublicensee that would be a breach of this Agreement if imputed to Licensee will be deemed to be a breach of this Agreement by Licensee.

2.7.5 Rights of Affiliates. Licensee may exercise its rights, perform its obligations and pursue its remedies under this Agreement either directly or through one or more of its Affiliates that Licensee designates as a licensed Affiliate under this Agreement by providing written notice to Licensor of such designation (each such Affiliate, a "**Licensed Affiliate**"). A Licensed Affiliate will have the benefit of all rights (including all licenses) and remedies of Licensee under this Agreement. Accordingly, in this Agreement, "Licensee" will be interpreted to mean "Licensee or its Licensed Affiliates" where necessary to give each Licensed Affiliate the benefit of the rights and remedies provided to Licensee in this Agreement; provided, however, that in any event Licensee will be primarily liable to WU for all acts, errors or omissions of a Licensed Affiliate. Any act, error or omission of a Licensed Affiliate that would be a breach of this Agreement if imputed to Licensee will be deemed to be a breach of this Agreement by Licensee. The right of Licensee to exercise its rights, perform its obligations and pursue its remedies under this Agreement through one or more of its Affiliates is in addition to and not in lieu of the right of Licensee to grant a Sublicense to Affiliates as provided in Section 2.7.1.

3. Development Plan.

3.1 Development Plan. Licensee represents and warrants that (a) the Development Plan contains Licensee's good faith, bona fide plans, as of the date that is [***] months following the Effective Date, for researching and developing, and if regulatory approval is obtained, commercializing Licensed Products, and (b) Licensee has or plans to obtain the knowledge, expertise, experience and resources to fully carry out such plans.

3.2 Progress Reports. Licensee will deliver to WU written reports on Licensee's progress against the Development Plan no later than [***] and [***] of the [***] calendar years following the calendar year in which the Effective Date falls, and no later than [***] of each calendar year thereafter. Each such report will set forth Licensee's progress against the Development Plan in reasonable detail including, without limitation, the [***]. Each such report will identify [***]. Upon reasonable request by WU from time-to-time, Licensee will meet with WU to consult with WU about Licensee's then-current progress against the Development Plan.

3.3 Changes to Development Plan. Licensee may amend, change or otherwise modify the Development Plan upon written notice to WU.

4. Diligence.

4.1 Licensee agrees to, throughout the term of this Agreement, use Commercially Reasonable Efforts, itself or through its Affiliates, Sublicensees or contractors, to develop, manufacture, promote and sell Licensed Products, in each instance throughout the Territory and in the Field and to achieve the diligence milestones set forth in Exhibit D.

4.2 Should WU conclude in its reasonable judgment that Licensee fails to meet the diligence requirements set out in Section 4.1 above (as may be extended pursuant to Exhibit D), WU may notify Licensee of its conclusions and the basis therefore. The Parties shall then undertake to resolve WU's concerns through good faith negotiations for a period of [***] days. Should such negotiations fail to result in Licensee achieving a level of diligence consistent with its obligations under Section 4.1 above, in WU's sole reasonable judgment, then WU may terminate this Agreement as provided in Article 13 below.

5. Fees, Payments and Royalties.

5.1 License Issue Fee. Within [***] days after the Effective Date, Licensee agrees to pay the License Issue Fee to WU. Such License Issue Fee shall be non-refundable and shall not be credited against any other payments that may be due hereunder.

5.2 License Maintenance Fee. On or before [***] of the Effective Date and until the First Commercial Sale of the first Licensed Product occurs, Licensee agrees to pay the License Maintenance Fee to WU. All License Maintenance Fees shall be non-refundable and shall not be credited against any other payments that may be due hereunder.

5.3 Royalties.

5.3.1 Licensed Products. For each Licensed Product made or sold by or for Licensee, its' Affiliate and/or Sublicensee within the Territory, Licensee agrees to pay WU an earned royalty equal to the Royalty Rate of Net Sales if there is a Valid Claim in at least one of the country of manufacture or country of Sale of such Licensed Product. Such earned royalties on Net Sales in each Calendar Half shall be paid by Licensee within [***] days after the end of such Calendar Half.

5.3.2 Stacking Royalties. In the event that Licensee makes a royalty payment to one or more third parties for any patent rights (or know-how rights licensed under the same agreement as such patent rights, but only prior to the expiration of the last valid claim of such patent rights) needed to practice, use, make, sell, offer to sell, import or otherwise exploit any Licensed Product, Licensee would be entitled to deduct from the royalties due to WU up to [***]percent ([***]%) of the royalty Licensee actually pays to such third parties subject to the requirement that the Royalty Rate for the royalties paid to WU hereunder shall not be reduced below [***] percent ([***]%) as a result of any such deductions.

5.3.3 Combination Products. The Royalty Rate for Combination Products shall be determined by the Parties in good faith, taking into account the relative fair market value contribution of the Licensed Product and the other Therapeutically Active Pharmaceutical Ingredient in such Combination Product.

5.3.4 Minimum Royalty Rate. The Royalty Rate for royalties paid to WU hereunder shall not be reduced below [***] ([***]%) as a result of the Stacking Royalty and/or Combination Product provisions in Sections 5.3.2 and 5.3.3.

5.4 Minimum Royalties. Commencing with the [***] anniversary of the Effective Date following the First Commercial Sale of the first Licensed Product and continuing thereafter throughout the Term, Licensee agrees to pay WU a minimum royalty equal to the Minimum Royalty for each such anniversary of the Effective Date as an advance against the royalties due under Section 5.3.1 and/or 5.3.2 and/or 5.3.3 above that are paid to WU by Sana over the ensuing [***] period. Such Minimum Royalties shall be due within [***] days after the applicable anniversary.

5.5 Milestone Payments. Licensee agrees to pay WU milestone payments in the amounts set forth in this Section 5.5 within [***] days after the date that the applicable milestone set forth below in the Preamble is achieved; provided, however, that in the case of achievement of a milestone by a Sublicensee, such [***] day period shall be extend to sixty [***].

5.6 Clarifications. For the avoidance of doubt, no multiple royalty will be required to be paid because a Licensed Product or its manufacture, use, Sale or importation or performance is covered by more than one Valid Claim or patent or patent application within the Patent Rights. A Sale of a Licensed Product will be deemed to have been made at the time Licensee or a Sublicensee (or anyone acting on behalf of or for the benefit of Licensee or its Sublicensees) first invoices, ships, or receives value for a Licensed Product. In order to ensure that WU obtains the full amount of royalty payments contemplated in this Agreement, in the event of a Sale of any Licensed Product internally and not for resale between Licensee, its Affiliates or any Sublicensee or other third party with whom Licensee has any agreement or arrangement regarding consideration (including but not limited to an option to purchase stock, stock ownership, division of profits, or special rebates or allowances), the gross value of the Sale for purposes of calculating Net Sales shall be deemed to be the fair market value of the Licensed Product.

5.7 Sublicensing Revenue Obligations.

5.7.1 Licensee shall pay to WU the applicable percentage of Sublicensing Revenue identified in the Preamble above, after application of the terms of Section 5.7.2, to the extent applicable, within [***] days of the end of the Calendar Half in which Licensee receives the Sublicensing Revenue.

5.7.2 To the extent that a payment is made under a Sublicense that grants both a sublicense under the Patent Rights and a license or sublicense under other intellectual property rights for technology, or materials, then Licensee shall calculate reasonably and in good faith the portion(s) of overall consideration in the transaction that will be considered Sublicensing Revenue versus other consideration that is not Sublicensing Revenue based on the relative value of the Patent Rights as compared to the other intellectual property rights or material licensed or sublicensed by Licensee under such Sublicense in consideration for which such payment was made. Licensee shall notify WU in writing of its calculation ("**Sublicense Income Calculation Notice**") within [***] days of receipt of Sublicense Consideration and shall provide such supporting detail and documentation as Licensee deems appropriate to support its calculation, provided that WU may reasonably request additional information and documentation from Licensee to support its Sublicense Income Calculation Notice if WU reasonably disputes the calculation because of insufficient information. Licensee shall not be obligated to disclose to WU confidential terms of any other license agreements or confidential information regarding its products or technology. If WU reasonably disputes Licensee's calculation, the matter shall be escalated to senior management for resolution, and if the matter remains unresolved after such escalation then, within [***] days of WU's receipt of the Sublicense Income Calculation Notice, then WU may invoke baseball arbitration as provided below. The matter shall be resolved by baseball arbitration under the Final Offer Arbitration Supplementary Rules of the AAA (also referred to as Baseball or Last Best Offer Arbitration Supplementary Rules). To the extent that any of the procedures set forth above would be duplicated under such Supplementary Rules, such procedures shall not be repeated under the Supplementary Rules; provided that in any event the simultaneous exchange of final offers under paragraph 3 of such Supplementary Rules as in force as of September 2015 (or similar final offer process in a future version of the Supplementary Rules) shall in any event occur and not be considered duplicative over this paragraph. The arbitrators are not entitled to modify a proposal, or average proposals, or do anything other than to select one Party's proposal or the other Party's proposal. The arbitrators shall choose the Party's proposal that more fairly allocates total consideration paid in the overall transaction at issue between the value of the Patent Rights versus the value of the other intellectual property licensed or sublicensed by Licensee under the applicable

agreement, taking into account all relevant factors, including without limitation scientific, intellectual property-related and commercial factors. The decision in the arbitration shall finally settle the matter (i.e. it shall be final and binding on the Parties, enforceable in any court of competent jurisdiction). The Parties shall share the fees of the Arbitrators equally. If WU reasonably disputes Licensee's calculation and WU has not invoked baseball arbitration as provided above to resolve the matter within [***] days of WU's receipt of the Sublicense Income Calculation Notice, then Licensee's calculation of portion(s) of the overall consideration in the transaction that will be considered Sublicensing Revenue versus other consideration that is not Sublicensing Revenue Sublicense Income shall be final and binding upon WU.

6. Place and Method of Payment; Reports and Records; Audit; Interest.

6.1 Method of Payment. All dollar ($) amounts referred to in this Agreement are expressed in United States dollars. All payments to WU shall be made in United States dollars by check or electronic transfer payable to "Washington University." Any Sales revenues for Licensed Products in currency other than United States dollars shall be converted to United States dollars at the conversion rate for the foreign currency as published in the Eastern edition of *The Wall Street Journal* as of the last business day in the United States of the applicable Calendar Half or at such other conversion rate(s) as Licensee uses generally in its business for reporting sales and as reasonably agreed by WU.

6.2 Place of Payment. Checks shall reference WU [***] and shall be sent to:

[***]

All payments shall include the WU Contract Number to ensure accurate crediting to Licensee's account. Electronic transfers shall be made to a bank account designated in writing by WU.

6.3 Reports. Within [***] days after the end of each Calendar Half in which a Licensed Product is Sold or made, Licensee shall deliver to WU, a written report setting forth the calculation of all amounts due to WU under Sections 5.3 and 5.5 above for such Calendar Half. For Licensed Products, each such report shall show, at a minimum, [***].

6.4 Books and Records. Licensee shall maintain complete and accurate books of account and records that would enable an independent auditor to verify the amounts paid as royalties, fees and payments under this Agreement. The books and records for a Calendar Half must be maintained for [***] years following the last day of such Calendar Half. Upon reasonable notice by WU, Licensee must give an independent, certified public accountant appointed by and representing WU and reasonably acceptable to Licensee access to all books and records relating to Sales of Licensed Products by Licensee to conduct, at WU's expense, an audit or review of those books and records during regular business hours. All such audits may be made no more than once each calendar year at reasonable times and on reasonable advance notice. No accounting period shall be subject to audit more than one time hereunder. No such audit of a Calendar Half may be conducted more than [***] years after the last day of such Calendar Half, and no such audit may be conducted more than [***] calendar years following the year in which termination or expiration of this Agreement occurs. If any such audit or review determines that Licensee has underpaid royalties by [***]% or more for any Calendar Half, Licensee shall (a) [***] for the costs and expenses of the independent, certified public accountant in connection with the review and audit, and (b) [***].

6.5 Interest and Collection. Any amounts not paid by Licensee to WU when due shall accrue interest, from the date [***] days after the balance is due, at an interest rate of [***]% per month or portion of month. In addition, Licensee will reimburse WU for all reasonable costs and expenses incurred (including reasonable attorneys' fees) in collecting any overdue amounts.

6.6 Foreign Taxes. Payments shall be paid to WU free and clear of all foreign taxes. If laws, rules or regulations of any foreign jurisdiction require withholding of income taxes of other rates imposed upon payments set forth in this Agreement, Licensee shall make such withholding payments as required and without subtracting such withholding payments from such payments to WU. Licensee shall submit appropriate proof of payment of the withholding rates to WU within a reasonable period of time. Licensee shall use efforts consistent with its usual business practices to minimize the extent of any withholding taxes imposed under the provisions of the current or any future double taxation treaties or agreement between foreign countries, and the Parties shall cooperate with each other with respect thereto, with the appropriate Party under the circumstances providing the documentation required under such treaty or agreement to claim benefits thereunder.

7. Confidentiality.

7.1 Definition of Confidential Information. The Parties acknowledge that, prior to and during the Term of this Agreement, the Parties may disclose to one another scientific, technical, trade secret, business, or other information which is treated by the disclosing Party as confidential or proprietary, including but not limited to unpublished Patent Rights patent applications (hereinafter referred to as "**Confidential Information**"). Both Parties agree that in order to ensure that each Party understands which information is deemed to be confidential, all Confidential Information will be in written form and clearly marked as "Confidential," and if the Confidential Information is initially disclosed in oral or some other non-written form, it will be confirmed and summarized in writing and clearly marked as "Confidential" within [***] days of disclosure. The receiving Party shall hold such Confidential Information in confidence and shall treat such information in the same manner as it treats its own confidential information but not less than with a reasonable degree of care. In recognition that WU is a non-commercial, academic institution, Licensee agrees to limit to the extent practicable the delivery of Licensee Confidential Information to WU. WU retains the right to refuse to accept any such information or data from Licensee which it does not consider to be essential to this Agreement or which it believes to be improperly designated, for any reason, but such refusal shall not eliminate the obligation of the individual making such a determination from treating such information as confidential hereunder where such information has been read by such individual. The Confidential Information provided to the receiving Party will remain the property of the disclosing Party, and will be disclosed only to those persons necessary for the performance of this Agreement.

7.2 Exclusions. Confidential Information does not include information that (a) was known to the receiving Party without obligations of confidentiality prior to receipt from the disclosing Party as evidenced by the receiving Party's records; (b) is or becomes part of the public domain through no act by or on behalf of the receiving Party; (c) is lawfully received by the receiving Party from a third party without any obligations of confidentiality, and/or (d) comprises identical subject matter to that which had been originally and independently developed by the receiving Party personnel without knowledge or use of any Confidential Information as evidenced by the receiving Party's records.

7.3 General Obligations. Subject to Section 2.3 above and to Sections 7.5 and 7.6 below, the receiving Party agrees that during the term of this Agreement and forever thereafter it will (a) refrain from disclosing any Confidential Information of the disclosing Party to third parties, (b) disclose Confidential Information of the disclosing Party to only those directors, officers, employees, advisors, consultants and subcontractors of the receiving Party necessary for the receiving Party to use the Confidential Information

in accordance with this Agreement and who are subject to restrictions on use and disclosure at least as restrictive as those set forth in this Agreement, (c) keep confidential the Confidential Information, and (d) except for use in accordance with the licenses and other rights which are expressly granted in this Agreement, refrain from using Confidential Information.

7.4 No License. By disclosing the Confidential Information to the other Party, the disclosing Party does not grant any express or implied rights to the other Party under any patents, copyrights, trademarks, or trade secrets other than the licenses expressly granted herein. Each Party reserves, without prejudice, the ability to protect its rights under any such patents, copyrights, trademarks, or trade secrets.

7.5 Judicial and Securities Law Procedures. The receiving Party may, to the extent necessary, disclose the disclosing Party's Confidential Information in accordance with a judicial or other governmental rule, regulation or order, provided that the receiving Party (a) in the case of disclosures other than those required by securities laws, rules, regulations or orders or the rules of any securities exchange or market on which a receiving Party's securities are listed or traded, either (i) gives the disclosing Party reasonable notice (to the extent reasonably practicable and legally permissible) prior to such disclosure to allow the disclosing Party a reasonable opportunity to seek a protective order or equivalent, or (ii) obtains written assurance from the applicable judicial or governmental entity that it will afford the Confidential Information of the disclosing Party an appropriate level of protection afforded under applicable law or regulation and (b) in the case of disclosures required by securities laws, rules, regulations or orders or the rules of any securities exchange or market on which a receiving Party's securities are listed or traded, the receiving Party takes reasonable steps, upon the advice of securities counsel, to limit disclosure of or seek confidential treatment for such Confidential Information.

7.6 Permitted Disclosures. Licensee may, to the extent necessary, use and disclose the Confidential Information of WU (a) to secure governmental approval to clinically test or market a Licensed Product, (b) if applicable, to secure patent protection for an invention within the Patent Rights, (c) to actual or potential Sublicensees or contractors performing services with respect to Licensed Products, and their respective directors, officers, employees, advisors, consultants and subcontractors, provided such actual or potential Sublicensees or contractors first agree in writing to be bound by terms of confidentiality that are at least as restrictive as the terms of confidentiality set forth in this Agreement, (d) to actual or potential investors, lenders or other financing sources, licensees, sublicensees and acquirers, and their respective directors, officers, employees, advisors, consultants and subcontractors, provided such actual or potential investors, lenders or other financing sources, licensees, sublicensees and acquirers first agree in writing to be bound by terms of confidentiality that are at least as restrictive as the terms of confidentiality set forth in this Agreement. Licensee will, in any such event, take all reasonably available steps to maintain the confidentiality of the disclosed WU Confidential Information and to guard against any further disclosure.

8. Representations and Warranties.

8.1 Authority. Each of WU and Licensee represents and warrants to the other of them that (a) this Agreement has been duly executed and delivered and, as of the Effective Date, constitutes a valid and binding agreement enforceable against such Party in accordance with its terms, (b) no authorization or approval from any third party is required in connection with such Party's execution, delivery, or, as of the Effective Date, performance of this Agreement, and (c) as of the Effective Date, the execution, delivery, and performance of this Agreement does not violate the laws of any jurisdiction or the terms or conditions of any other agreement to which it is a party or by which it is otherwise bound.

8.2 Compliance with Laws. Licensee represents and warrants that it will (a) use the Patent Rights only to exploit the license rights granted in Section 2.1 in accordance with the provisions of this Agreement and with such laws, rules, regulations, government permissions and standards as may be applicable thereto in the Territory and in the Field, and (b) otherwise comply with all laws, rules, regulations, government permissions and standards as may be applicable to Licensee in the Territory with respect to the performance by Licensee of its obligations hereunder.

8.3 Reports and Statements. Licensee warrants that all reports and/or statements provided by Licensee hereunder are true and correct and are certified true and correct by Licensee upon delivery to WU.

8.4 Additional Warranties of Licensee. Licensee represents and warrants that (a) it has obtained, or will obtain Effective Date, the insurance coverage required by Article 12 below, (b) as of the Effective Date, there is no pending litigation and no claims threatened in writing against it that impair its ability or capacity to perform and fulfill its duties and obligations under this Agreement, and (c) it has as of the Effective Date raised [***] U.S. dollars through the sale of its equity.

8.5 Additional Warranties of WU. WU represents and warrants that (a) it has in place an intellectual property policy that provides for its ownership (subject to any rights retained by the U.S. government by operation of law) of the Patent Rights and as of the Effective Date, WU solely owns the Patent Rights; (b) as of the Effective Date, there is no known pending litigation against WU or, to the knowledge of WU, any WU inventor relating to the Patent Rights, and WU has not received any notice of any third party claims against WU challenging WU's ownership or control of the Patent Rights; (c) as of the Effective Date, there are no known claims, judgments or settlements against WU, (d) it has obtained assignments from all WU inventors named in patent applications and patents within the Patent Rights assigning to WU all their right, title and interest in and to the Patent Rights and any inventions contained therein, and (e) it has the authority and right to enter into and perform its obligations under this Agreement and grant the licenses granted to Licensee herein.

9. Application, Prosecution and Maintenance of Patent Rights.

9.1 Patent Applications. [***] has the sole right to control the preparation, filing, prosecution, issue and maintenance of Patent Rights patents and applications. Subject to compliance by [***] with the terms and conditions of this Agreement (including, without limitation, Section 9.2 below), [***] will (a) prosecute and maintain the applications and patents within the Patent Rights, and (b) prepare, file and prosecute additional applications within the Patent Rights as [***] may reasonably request, in [***] name at [***] sole cost and expense. [***] will select qualified outside patent counsel and corresponding foreign associates reasonably acceptable to [***] to prepare, file, prosecute and maintain U.S. patents and patent applications and foreign counterparts within the Patent Rights. [***] will (a) instruct patent counsel to copy [***] on all substantive correspondence, or otherwise provide [***] with a copy of correspondence, in connection with the prosecution of the Patent Rights, including correspondence from the United States Patent and Trademark Office (USPTO) and any other patent office, as well as copies of proposed responses to such correspondence in order to provide [***] a reasonable opportunity to review and comment on proposed submissions to any patent office before the submission is filed, (b) consult with [***] regarding the prosecution of patent applications within the Patent Rights, (c) give [***] an opportunity to review and comment on the text of each patent application before filing, and (d) supply [***] with a copy of the application as filed, together with notice of its filing date and serial number. [***] will keep [***] reasonably informed of the status of Patent Rights patents and applications. [***] shall give [***] the opportunity to provide comments on and make requests of [***] concerning the preparation, filing, prosecution, protection, defense and maintenance of the Patent Rights, and [***] shall seriously consider such comments and requests; however, final decision-making authority shall vest in [***] . [***] shall have the exclusive right and discretion, on a Licensed Product-by-Licensed Product and jurisdiction-by-jurisdiction basis, to elect whether to obtain any patent term extension (including, e.g., a supplementary protection certificate) of the Patent Rights covering such License Product under in accordance with the applicable laws of any such jurisdiction in the Territory. [***] agrees to use commercially reasonable efforts

to execute any documents and to take any additional actions as [***] may reasonably request in connection therewith. [***] shall provide [***] with at least [***] days prior written notice before applying for any patent term extension or supplementary protection certificate for any Patent Right. All costs associated with such extensions shall be borne by [***].

9.2 Costs and Expenses. Subject to Section 9.3 below, [***] agrees to reimburse [***] for all reasonable costs and expenses incurred by [***] in connection with the preparation, filing, prosecution, issue, extension and/or maintenance of patents and applications within the Patent Rights [***] the term of this Agreement. [***] agrees to pay [***] the amount of any such reimbursement within [***] days after receipt by [***] of documentation for any such costs and expenses, which [***] shall provide to [***] from time-to-time.

9.3 Failure to Reimburse. [***] may elect not to reimburse [***] for amounts due under Section 9.2 in respect to one or more Patent Rights patents and/or patent applications in one or more jurisdictions only by giving [***] notice of such election at least [***] days before the date on which the applicable cost or expense is to be incurred by [***] (each an "**Election Notice**"). For purposes of this Section 9.3, a cost or expense shall be deemed to be incurred by [***] on the earlier of (a) the date [***] actually pays the cost or expense, or (b) the date [***] becomes obligated to pay the cost or expense (which, for example, shall be the date [***] engages a third party to perform any service which gives rise to any such cost or expense if such engagement is non-cancelable). Any such Election Notice shall specify the Patent Rights patents and/or patent applications and the jurisdictions to which such Election Notice relates ("**Elected Patent Rights**"). In the event any Election Notice is given by Licensee, the term "Patent Rights" shall be modified to exclude, as applicable, such Elected Patent Rights, in each instance as of the date the Election Notice is given. Accordingly, and for the avoidance of doubt, as of the date the Election Notice is given, [***].

9.4 Community of Interest. The Parties desire to avail themselves to the maximum extent possible of all applicable legal privileges. The Parties intend that information regarding the preparation, filing, prosecution and maintenance of the applications and patents within the Patent Rights ("**Shared Information**") that would otherwise be subject to one or more legal privileges or protections is and shall be subject to those same privileges and protections despite the fact that it has been developed by or exchanged between or among them and/or their joint or independent counsel. The Parties further intend that Shared Information is and shall be subject to the joint defense doctrine and common interest/community of interest doctrine. The Parties acknowledge that the legal privileges and protections pertaining to Shared Information are held jointly by all Parties, and that no individual Party is authorized to waive any such privilege or protection. Further, this Agreement shall not affect the ethical, fiduciary or other obligations inherent in those attorney-client relationships other than to extend the cloak of confidentiality and privilege to the Shared Information as provided herein. Each Party agrees that Shared Information obtained from another Party or developed jointly shall be used only for the preparation and prosecution of the Licensed Patents and for no other purpose. Each Party agrees to keep Shared Information as the Confidential Information of the other Party.

10. Infringement, Enforcement, and Defense.

10.1 Notice of Infringement. Throughout the term of this Agreement, each of WU and Licensee agree to give the other prompt notice of (a) any known or suspected infringement of the Patent Rights in the Territory, and (b) any claim that a Licensed Product infringes the intellectual property rights of a third party.

10.2 Patent Rights.

10.2.1 Enforcement. [***] will have the right, but not the obligation, at its sole expense, to attempt to stop promptly any known or suspected infringement of the Patent Rights in the Territory. [***] may initiate and prosecute actions in its own name or, if required by law and upon receipt of [***] written consent (such consent not to be unreasonably withheld), in [***] name against third parties for infringement of the Patent Rights in the Territory through outside counsel of [***] choice who are reasonably acceptable to [***]. [***] shall consult with [***] prior to and in conjunction with all significant issues, shall keep [***] informed of all proceedings, and shall provide copies to [***] of all pleadings, legal analyses, and other papers related to such actions. Upon [***] request, [***] will provide reasonable assistance to [***] in prosecuting, resolving and/or settling any such actions, including but not limited to joining as a party if necessary or desirable. If [***] fails or declines to take any action under this Section 10.2.1 within a reasonable time after learning of the infringement of the Patent Rights, [***] shall have the right (but not the obligation) to take appropriate actions including, without limitation, filing a lawsuit, at [***] cost, provided that prior to bringing any action, [***] shall consider in good faith the reasons [***] has failed to bring such action. [***] will provide reasonable assistance to [***] in prosecuting, resolving and/or settling any such actions.

10.2.2 Restrictions on Settlement. Notwithstanding anything in this Agreement to the contrary, neither Party may, without the advanced written consent of the other Party, not to be unreasonably withheld, conditioned or delayed, settle, compromise, or otherwise enter into any form of settlement (or other similar agreement) regarding any claim of action brought under Section 10.2.1 above that either (a) admits liability on the part of the other Party, (b) otherwise negatively affects the rights of the other Party or imposes any liability, restrictions or obligation upon the other Party, (c) requires any financial payment by the other Party, (d) concedes or otherwise portions the Territory and/or (e) grants rights or concessions to a third party to the Patent Rights or any Licensed Products.

10.2.3 Proceeds. If a Party obtains any value, payment or compensation of any type or kind as a result of any claim brought pursuant to Section 10.2.1 above, such Party shall pay to the other Party [***].

11. Indemnification.

11.1 Licensee agrees to indemnify, defend, reimburse and hold harmless WU, WU personnel, WU's Affiliates, and each of their respective trustees, faculty, staff, employees, students, directors, officers, agents, successors and assigns (altogether the "**WU Indemnitees**") from, for and against any and all judgments, settlements, losses, expenses, damages and/or liabilities and any and all court costs, attorneys' fees, and expert witness fees and expenses ("Losses") that a WU Indemnitee may incur from any and all allegations, claims, suits, actions or proceedings (the "**Claims**") arising out of, relating to, or incidental to [***], but excluding Losses to the extent [***]. The obligations set forth in this Section 11.1 shall survive termination of this Agreement, shall continue even after assignment of rights and responsibilities, and shall not be limited by any provision of this Agreement outside this Article 11.

11.2 A WU Indemnitee seeking indemnification under this Agreement shall: (a) give Licensee prompt written notice of the Claim; (b) cooperate with the Licensee, at Licensee's expense, in connection with the defense and settlement of the Claim; and (c) permit Licensee to control the defense, settlement or compromise of such Claim, including the right to select defense counsel. In no event shall Licensee compromise or settle any Claim in a manner which admits fault or negligence on the part of WU or a WU Indemnitee without the prior written consent of WU, such consent not to be unreasonably withheld, conditioned or delayed. Neither Party shall have any liability under this Article 11 with respect to Claims settled or compromised without complying with the terms of this Article 11.

12. Insurance.

12.1 Throughout the Term of this Agreement and for a period of [***] years thereafter, Licensee shall obtain and maintain comprehensive general liability and product liability insurance, naming WU as an additional insured, with carrier(s) having at least A.M. Best ratings/class sizes of A/VII and in the following minimum annual limits: [***].

12.2 Licensee will provide WU with a certificate of insurance within [***] of WU's written request following execution of this Agreement. The certificates must provide that Licensee's insurer will notify WU in writing at least [***] days prior to cancellation or material change in coverage. The specified minimum insurance coverage and limits do not constitute a limitation on Licensee's liability or obligation to indemnify or defend under this Agreement.

12.3 Notwithstanding the foregoing to the contrary, Licensee shall not be required to maintain such insurance if it maintains a reasonable and customary program of self-insurance that covers the liabilities described in Section 12.1 and such program of self-insurance is reasonably acceptable to WU.

13. Term and Termination.

13.1 Term. The Term of this Agreement is defined in the Preamble and is subject to earlier termination as provided herein.

13.2 Termination By Licensee. Licensee may terminate this Agreement without cause by giving ninety [***] advance written notice thereof to WU. Licensee shall pay WU within [***] days of such termination notice all amounts due and owing to WU under this Agreement (absent termination) under Sections 5.2, 5.4, 5.5 above during the [***] day notice period.

13.3 Termination by WU. WU may terminate this Agreement by giving notice thereof to Licensee upon the occurrence of any one or more of the following events (in which event this Agreement shall terminate on the date such notice is given): (a) upon [***] days written notice if Licensee fails to achieve the diligence milestones as set forth in Section 4.1 (as may be extended pursuant to the last paragraph of Exhibit D) and is unable to resolve WU's concerns through good faith negotiations as set forth in Section 4.2, and/or (b) Licensee (i) becomes insolvent, bankrupt, or is otherwise unable to pay its debt(s) to WU by the due date(s), or (ii) suffers the appointment of a receiver, receiver and manager, or administrative receiver of the whole or any part of its assets or undertaking, or (iii) an order is made or a notice issued convening a meeting of shareholders to consider the passing of a resolution for Licensee's winding up (other than for the purpose of amalgamation or reconstruction) or (iv) a resolution is passed for Licensee's winding up (other than for the purpose of amalgamation or reconstruction).

13.4 Termination for Breach and Failure to Cure. WU may terminate this Agreement by giving notice thereof to Licensee in the event Licensee commits a material breach of this Agreement (other than a breach of the type contemplated by Section 13.3 above) and fails to cure such breach within [***] days after the day that WU gives Licensee notice of such breach. Such termination shall be effective on the date such notice of termination is given. Licensee may terminate this Agreement by giving notice thereof to WU in the event WU commits a breach of any provision of this Agreement and fails to cure such breach within [***] days after the day that Licensee gives notice to WU of such breach, and such termination shall be effective on the date such notice of termination is given.

13.5 Duties Upon Expiration or Earlier Termination. For the avoidance of doubt, on the date of expiration or earlier termination of this Agreement, all license rights granted to Licensee under Article 2 above shall terminate. After the termination of this Agreement, Licensee agrees to, promptly deliver to WU all originals, copies, reproductions and summaries of all Confidential Information of WU, in each instance in the format in which it exists at the time of expiration or earlier termination of this Agreement, or in another mutually agreed format. Notwithstanding the foregoing, a Party, and in the case of Licensee, its Affiliates and Sublicensees, (a) shall have the right to keep one (1) copy of any of the Confidential Information of the other Party for its legal archives solely for the purpose of determining compliance with the terms and conditions of this Agreement and (b) shall not have any obligation to destroy originals, copies, reproductions and summaries of Confidential Information of the other Party that are stored in the ordinary course of business in laboratory notebooks or electronic databases consistent with good business practices. Within [***] days after the termination of this Agreement for any reason whatsoever, Licensee agrees to deliver a written report to WU of all Licensed Products in inventory. If this Agreement terminates before the expiration of the last-to-expire Patent Rights, then, upon the termination of this Agreement, Licensee agrees (a) to promptly discontinue the exportation of Licensed Products that were made in the Territory, (b) to promptly discontinue the manufacture, Sale and distribution of the Licensed Products in the Territory, (c) to promptly destroy all Licensed Products in inventory, and (d) not to manufacture, sell and/or distribute Licensed Products in the Territory until the expiration of applicable last-to-expire Patent Rights.

13.6 Effect of Expiration or Earlier Termination. For the avoidance of doubt, the expiration or earlier termination of this Agreement shall not relieve Licensee of its obligation to account for and make payment to WU of any amount due hereunder including, without limitation, any royalties accrued during the Term of this Agreement and amounts under Section 9.2 above.

14. Disclaimer and Limitation of Liability. NOTWITHSTANDING ANYTHING HEREIN TO THE CONTRARY, EVERYTHING PROVIDED BY WU UNDER THIS AGREEMENT IS UNDERSTOOD TO BE EXPERIMENTAL IN NATURE, MAY HAVE HAZARDOUS PROPERTIES, AND IS PROVIDED WITHOUT ANY WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT OF ANY THIRD-PARTY PATENT, TRADEMARK, COPYRIGHT OR ANY OTHER THIRD-PARTY RIGHT. WU MAKES NO WARRANTIES REGARDING THE QUALITY, ACCURACY, COMMERCIAL VIABILITY OR ANY OTHER ASPECT OF ITS PERFORMANCE PURSUANT TO THIS AGREEMENT OR REGARDING THE PERFORMANCE, VALIDITY, SAFETY, EFFICACY OR COMMERCIAL VIABILITY OF ANYTHING PROVIDED BY WU UNDER THIS AGREEMENT. IN NO EVENT SHALL WU OR LICENSEE BE LIABLE FOR ANY INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS AGREEMENT, WHETHER IN BREACH OF CONTRACT, TORT OR OTHERWISE, EVEN IF THE PARTY IS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. EXCEPT FOR THEIR RESPECTIVE INDEMNITY OBLIGATIONS, EACH OF WU'S AND LICENSEE'S AGGREGATE LIABILITY TO THE OTHER UNDER THIS AGREEMENT SHALL NOT EXCEED [***].

15. General Provisions.

15.1 Import/Export Controls. In performing their respective obligations under the Agreement, the Parties will comply with United States export control and asset control laws, regulations, and orders, as they may be amended from time to time, applicable to the export or re-export of goods or services, including software, processes, or technical data. Such regulations include without limitation the Export Administration Regulations ("EAR"), International Traffic in Arms Regulations ("ITAR"), and regulations and orders administered by the Treasury Department's Office of Foreign Assets Control (collectively, "Export Control Laws"). WU is not transferring any information or material outside of the United States under this Agreement and is providing no representation regarding the export control status or classification of any information or materials provided hereunder.

15.2 Entire Agreement; Amendment. This Agreement embodies the entire understanding of the parties and supersedes all other past and present communications and agreements relating to the subject matter. No amendment or modification of this Agreement shall be valid unless made in writing and signed by authorized representatives of both parties.

15.3 Governing Law, Jurisdiction and Venue. This Agreement shall be governed by and construed in accordance with the laws of the State of New York, without regard to its rules or procedures involving conflicts of laws. All actions relating to this Agreement shall be brought [***] if no federal subject matter jurisdiction exits. The Parties irrevocably waive all present and future objections to personal jurisdiction, forum or venue in such courts.

15.4 Survival. Each provision of this Agreement that would by its nature or terms survive, shall survive any termination or expiration of this Agreement, regardless of the cause. Such provisions include, without limitation, Sections 1, 2.7.3, 7, 8, 10, 11, 14 and 15.

15.5 Notices. Notices pursuant to this Agreement shall be to the following contacts and are effective when sent if sent by a commercial carrier's overnight delivery service or when received if sent otherwise:

If to WU:

[***]

If to Licensee:

[***]

A Party may update or amend its contact information set forth above by written notice given in accordance with this Section 15.5.

15.6 Assignment. This Agreement is binding upon and inures to the benefit of the Parties and their successors, but this Agreement may not be assigned by either Party without the prior written consent of the other Party; provided, however, that notwithstanding the foregoing, a Party may at any time assign this Agreement in whole, but not in part, without the other Party's consent, to an acquiring entity in connection with the sale or transfer of all or substantially all of the business or assets of such Party to which this Agreement relates, whether by sale of assets, merger, consolidation or otherwise provided that (i) Licensee shall not be released of its obligations existing at the time of such assignment and (ii) the assignee or successor to this Agreement confirms, in writing, that it will be subject to and must comply with all terms, conditions and obligations of this Agreement.

15.7 Construction; Execution. The recitals and preamble to this Agreement, if any, are hereby incorporated as an integral part of this Agreement as if restated herein in full. Headings are included for convenience and reference only and are not incorporated as an integral part of this Agreement. This Agreement may be executed in any number of counterparts each of which shall be deemed an original and as executed shall constitute one agreement, binding on both parties, even though both parties do not sign the same counterpart. Each Party agrees that the respective signatures of the Parties hereto may be delivered by facsimile, electronic mail (including .pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, e.g., www.docusign.com) or other transmission method and that the Parties may rely on a signature so delivered as an original, duly and validly delivered, and valid and effective for all purposes.

15.8 Relationship of the Parties. Each Party is an independent contractor and not a partner or agent of the other Party. This Agreement will not be interpreted or construed as creating or evidencing any partnership or agency between the Parties or as imposing any partnership or agency obligation or liability upon either Party. Further, neither Party is authorized to, and will not, enter into or incur any agreement, contract, commitment, obligation or liability in the name of or otherwise on behalf of the other Party.

15.9 Severability. If any provision in this Agreement is held invalid, illegal, or unenforceable in any respect, such holding shall not affect any other provisions of this Agreement, and this Agreement shall be construed as if it had never contained the invalid, illegal, or unenforceable provisions.

15.10 Remedies. The failure of either Party to insist upon or enforce strict performance by the other Party of any provision of this Agreement, or to exercise any right or remedy under this Agreement will not be interpreted or construed as a waiver or relinquishment of that Party's right to assert or rely upon any such provision, right or remedy in that or any other instance; rather, the same will be and remain in full force and effect. All rights and remedies under this Agreement are cumulative of every other such right or remedy and may be exercised concurrently or separately from time-to-time.

15.11 Use of Names. Neither Party may use the trademarks or name of the other Party or its employees for any commercial, advertisement, or promotional purposes without the prior written consent of an authorized corporate officer of the other Party. If either Party is required by law, governmental regulation, or its own authorship or conflict of interest policies to disclose its relationship with the other Party, including, but not limited to, in SEC filings, scientific publications or grant submissions, it shall provide the other Party with a copy of the disclosure. Notwithstanding the provisions of this Section 15.11, either party may publicize the existence of, and the Parties to, this Agreement.

15.12 Force Majeure. Neither WU nor Licensee will be liable for failure of or delay in performing obligations set forth in this Agreement, and neither will be deemed in breach of its obligations, other than for Payments, if such failure or delay is due to natural disasters or other causes reasonably beyond the control of a Party and reasonable notice of the delay is provided to the other Party.

15.13 WU Personnel. Licensee agrees that for all WU faculty or staff members who serve Licensee in the capacity of consultant, officer, employee, board member, advisor, or otherwise through a personal relationship with Licensee and not through a sponsored research or other relationship with WU (a "Consultant") (i) such Consultant shall serve the Licensee in his or her individual capacity, as an independent contractor, and not as an agent, employee or representative of WU; (ii) WU exercises no authority or control over such Consultant while acting in such capacity; (iii) WU receives no benefit from such activity; (iv) neither Licensee nor the Consultant may use WU resources in the course of such service; (v) WU makes no representations or warranties regarding such service and otherwise assumes no liability or obligation in connection with any such work or service undertaken by such Consultant; and (vi) any breach, error, or omission by a Consultant acting in the capacity set forth in this paragraph shall not be imputed or otherwise attributed to WU, and shall not constitute a breach of this Agreement by WU.

15.14 Further Acts. Each Party shall, at the reasonable request of the other, execute and deliver to the other such instruments and/or documents and shall take such actions as may be required to more effectively carry out the terms of this Agreement.

15.15 Impact on Tax-Exempt Status. WU advises (a) that it is exempt from federal income tax under Section 501(c) (3) of the Internal Revenue Code, (b) that maintenance of such exempt status is of critical importance to WU and to its members, and (c) that WU has entered into this Agreement with the expectation that there will be no adverse impact on its tax exempt status. As such, and if it becomes necessary, the parties agree to amend, modify or reform this Agreement as necessary (i) in order to ensure that there is no material adverse impact on WU's tax exempt status, and (ii) in a manner that preserves the economic terms of the Agreement as such are set forth in this Agreement.

SIGNATURE PAGE FOLLOWS

In Witness Whereof, the Parties have by duly authorized persons executed this Agreement as of the Effective Date.

WASHINGTON UNIVERSITY

By: /s/ Nichole Mercier

Name: Nichole Mercier

Title: Managing Director OTM and Assistant Vice Chancellor

Date: September 1, 2020

SANA BIOTECHNOLOGY, INC.

By: /s/ Steve Harr

Name: Steve Harr

Title: CEO

Date: September 1, 2020

Exhibit A
Initial Development Plan

[***]

Exhibit B
Sublicense Agreement Provisions

Sublicensee agrees to indemnify and hold harmless WU Indemnitees to the same extent and under terms no less favorable to WU Indemnitees as Licensee's obligations under Article 11 of this Agreement.

Sublicensee agrees to maintain insurance for WU's benefit to the same extent and under terms no less favorable to WU as Licensee's obligations under Article 12 of this Agreement.

Sublicensee agrees to maintain books and records and allow audits for WU's benefit to the same extent and under terms no less favorable to WU as Licensee's obligations under this Agreement.

If Licensee enters bankruptcy or receivership, voluntarily or involuntarily, sublicensing revenue then or thereafter due to Licensee will, upon notice from WU to any Sublicensee, become directly due and owing to WU for the account of Licensee. WU will remit to Licensee any amounts received that exceed the sum actually owed by Licensee to WU.

Washington University is a third party beneficiary of this Sublicense Agreement. Accordingly, Washington University may enforce this Agreement against Sublicensee to the same extent as the Sublicensor.

Exhibit C
Patent Rights

[***]

Exhibit D
Diligence Milestones

To be considered diligent, Licensee must meet each of the following milestones, [***].

Technical Diligence:
[***]

Licensee may elect to extend the date for achievement of any Diligence Milestone by a period of [***] months, by paying WU a non-refundable fee in the amount of [***] dollars (the "Milestone Extension Fee"). Upon WU's receipt of the Milestone Extension Fee, the applicable Diligence Milestone will become due [***] months after the original deadline for such Diligence Milestone, and the deadline for each subsequent Diligence Milestone, if any, shall also be extended by [***] months. For avoidance of doubt, Licensee may exercise no more than [***] separate extensions of Diligence Milestones during the term of this Agreement.