Amendment No. 1 to Draft Registration Statement, as confidentially submitted to the Securities and Exchange Commission on June 15, 2021. 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

TENAYA THERAPEUTICS, INC.

(Exact name of Registrant as specified in its charter)

Delaware	**2836**	**81-3789973**
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

171 Oyster Point Boulevard, 5th Floor
South San Francisco, CA 94080
(650) 825-6990
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Faraz Ali
Chief Executive Officer
Tenaya Therapeutics, Inc.
171 Oyster Point Boulevard, 5th Floor
South San Francisco, CA 94080
(650) 825-6990
(Name, address, including zip code, and telephone number, including area code, of agent for service)

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Menlo Park, CA 94025
(650) 752-2000

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, please 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, 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 $0.0001 par value per share	$	$

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

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, as amended, or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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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.

PROSPECTUS (Subject to Completion)
Issued , 2021

Shares

TENAYA™ THERAPEUTICS

Common Stock

Tenaya Therapeutics, Inc. is offering shares of our common stock. This is the initial public offering, and no public market currently exists for our shares of common stock. We anticipate that the initial public offering price will be between $ and $ per share.

We have applied to list the common stock on the Nasdaq Stock Market under the symbol "TNYA".

We are an "emerging growth company" as defined under the federal securities laws. Investing in our common stock involves risks. See the section titled "Risk Factors" beginning on page 15.

PRICE $ A SHARE

	Price to Public	***Underwriting Discounts and Commissions(1)***
Per Share	*$*	*$*
Total	*$*	*$*

(1) See the section titled "Underwriters" for a description of the compensation payable to the underwriters.

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

Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

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

Morgan Stanley *Cowen* *Piper Sandler*

Chardan

, 2021

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Neither we nor the underwriters have authorized anyone to provide you any information or make any representations other than that contained in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the underwriters are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus is accurate only as of the date on the front cover of this prospectus. Our business, financial condition, results of operations and prospects may have changed since that date.

Through and including , 2021 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

For investors outside of the United States: we have not, and the underwriters have not done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than the United States. Persons outside of the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus outside of the United States.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. You should read this entire prospectus carefully, especially the section titled "Risk Factors" and our financial statements and the related notes appearing elsewhere in this prospectus, before making an investment decision. As used in this prospectus, unless the context otherwise requires, references to "we," "us," "our," "our company," and "Tenaya" refer to Tenaya Therapeutics, Inc.

Overview

We are a biotechnology company committed to a bold mission: to discover, develop and deliver curative therapies that address the underlying drivers of heart disease. Our vision is to change the treatment paradigm for heart disease, the leading cause of death in the world, and in doing so improve and extend the lives of millions of individuals and families fighting this debilitating disease. We are advancing a pipeline of disease-modifying therapies developed using our product platforms and core internal capabilities to target defined sub-populations of patients with rare or highly prevalent forms of heart disease.

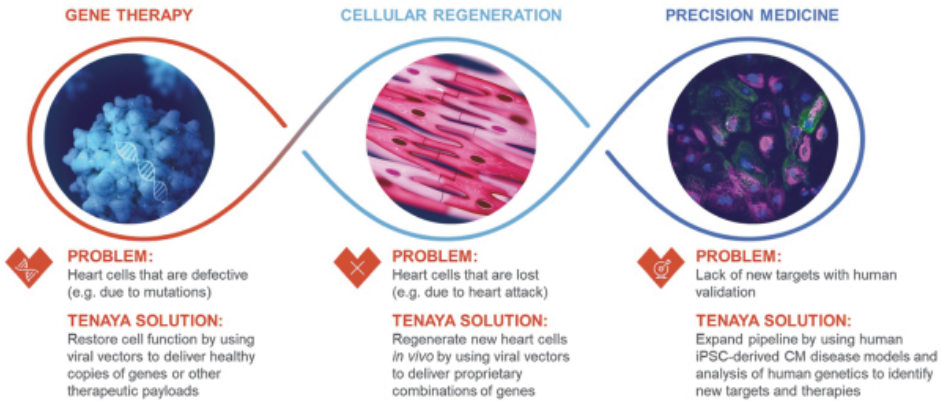
Founded by leading cardiovascular scientists from Gladstone Institutes and University of Texas Southwestern Medical Center (UTSW), we are developing therapies through scientific advancements in three distinct but interrelated product platforms: Gene Therapy, Cellular Regeneration and Precision Medicine. While our Gene Therapy and Cellular Regeneration platforms focus on the use of viral vectors for drug delivery, our Precision Medicine platform enables us to identify promising targets and product candidates in a modality-agnostic manner, including gene therapies, small molecules, and biologics.

We are advancing a deep and diverse pipeline including both gene therapies and small molecules. In 2022, we intend to submit an investigational new drug application (IND) or a clinical trial application (CTA) to the U.S. Food and Drug Administration (FDA) or European Medicines Agency (EMA), respectively, for our most advanced product candidate from our Gene Therapy platform, TN-201, an adeno-associated virus (AAV)-based gene therapy to address genetic hypertrophic cardiomyopathy (gHCM) caused by Myosin Binding Protein C3 (*MYBPC3*) gene mutations. TN-201, currently in IND-enabling studies, is designed to deliver a fully functional *MYBPC3* gene driven by our proprietary heart-specific promoter to restore normal levels of MYBPC3 protein. We also intend to submit an IND to the FDA in 2022 for our most advanced product candidate from our Precision Medicine platform, TYA-11631, an HDAC6-specific small molecule inhibitor (HDAC6i). TYA-11631, currently in IND-enabling studies, has potentially broad utility in both heart failure (HF) where the ejection fraction (EF) is greater than or equal to 50%, called preserved EF (HFpEF), and genetic dilated cardiomyopathy (gDCM). Our PKP2 program involves an AAV-based gene therapy to address genetic arrhythmogenic right ventricular cardiomyopathy (gARVC) caused by plakophilin 2 (PKP2) gene mutations, and is currently at the candidate selection stage. Our DWORF program, an AAV-based gene therapy designed to express the Dwarf Open Reading Frame (*DWORF)* gene in the heart, has potentially broad utility in dilated cardiomyopathy (DCM) and HF where the EF is below 40%, called reduced EF (HFrEF), and is currently at the candidate selection stage. Our Reprogramming program for cardiac regeneration can potentially replace heart cells lost in patients experiencing HF due to prior myocardial infarction (MI) and is currently at the candidate selection stage. In addition, we have numerous earlier-stage programs emerging from our product platforms to address other forms of HF.

Our Product Platforms

We have established three distinct but interrelated product platforms to discover novel therapies for various forms of heart disease. These platforms bring together differentiated science, capabilities, and intellectual property to enable multi-modality drug discovery. As displayed below, each of our product platforms is designed to address different problems that have historically plagued the development of novel therapies for heart disease. We believe these three product platforms together yield better insight into disease processes, create more opportunities for successful drug development, mitigate scientific risks, and differentiate our efforts relative to competitors.

Our Product Platforms Powering Multi-Modality Drug Discovery

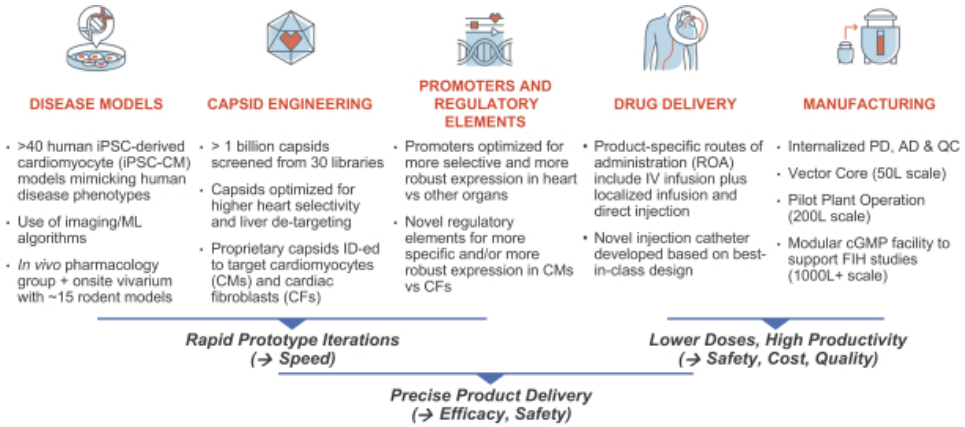


1. Our ***Gene Therapy*** platform uses AAVs to deliver genes to specific cells in the heart to correct or compensate for functional defects. We have the ability to use both known AAV capsids as well as novel capsids identified through our internal capsid engineering capabilities to target cardiomyocytes (CMs), cardiac fibroblasts (CFs) or other cells important to the proper functioning of the heart. The product candidates arising from this platform are intended to overcome the shortcomings of traditional therapies that are not able to address the underlying problems that contribute to heart disease. We believe this platform has potentially broad utility for both genetic and non-genetic forms of heart disease.
2. Our ***Cellular Regeneration*** platform uses viral vectors to deliver genes to specific cells in the heart to regenerate CMs *in vivo*. The product candidates arising from this platform are intended to overcome the shortcomings of traditional therapies that are not able to address the loss of CMs. We believe this platform has potentially broad utility across a range of heart conditions that result in the loss of CMs, including MI, chemotherapy-related toxicity, and viral infection.
3. Our ***Precision Medicine*** platform uses human induced pluripotent stem cell-derived CMs (hiPSC-CMs) as proprietary disease models and analysis of human genetics for the identification of new targets, validation of known targets, and high-throughput screening for drug discovery. This platform is intended to overcome the shortcomings of traditional drug development efforts that rely more heavily on efficacy in animal models to develop therapies intended for human heart disease. We believe this platform has potentially broad utility for the identification of targets and therapies in a modality-agnostic manner—including gene therapy, small molecules, and biologics—for both genetic and non-genetic forms of heart disease.

Our Approach and Capabilities

We have five core internal capabilities, as displayed below, to support our product platforms and our pipeline programs. We believe these integrated capabilities provide us with several advantages and differentiate our efforts relative to competitors, particularly for our AAV-based development efforts. We believe these capabilities can collectively support rapid product development, precise product delivery, and efficient production, which ultimately improves the probability of technical and regulatory success of our product candidates.

Our Core Capabilities Supporting Our Differentiated Product Platforms



Our internalized and integrated capabilities to support our product platforms include:

1. ***Disease Models***. We have internalized the ability to create and integrate proprietary *in vitro* and *in vivo* models within our research organization. For our *in vitro* hiPSC-CM disease models, we use multiple methods to induce phenotypes within cell lines that simulate human diseases and then use these models for high throughput target identification and drug discovery. For our *in vivo* disease models, we have a dedicated onsite *in vivo* pharmacology group and vivarium, where we have established approximately 15 rodent heart disease models, both genetic and non-genetic, and can dose animals, perform heart surgeries, and use non-invasive imaging to assess the impact of our therapies under development.

2. ***Capsid Engineering***. We have established in-house AAV capsid engineering capabilities and have screened over one billion variants from diverse, proprietary libraries to discover novel AAV capsids with desirable therapeutic properties to support our programs. Our capsids have improved tropism for the heart compared to other organs and for specific cells within the heart; improved transduction and expression within the heart cells; and lower susceptibility to neutralizing antibodies. We believe our capsid engineering efforts will be critical in supporting the successful clinical development of our product candidates and enabling those product candidates, if approved, to reach more patients.

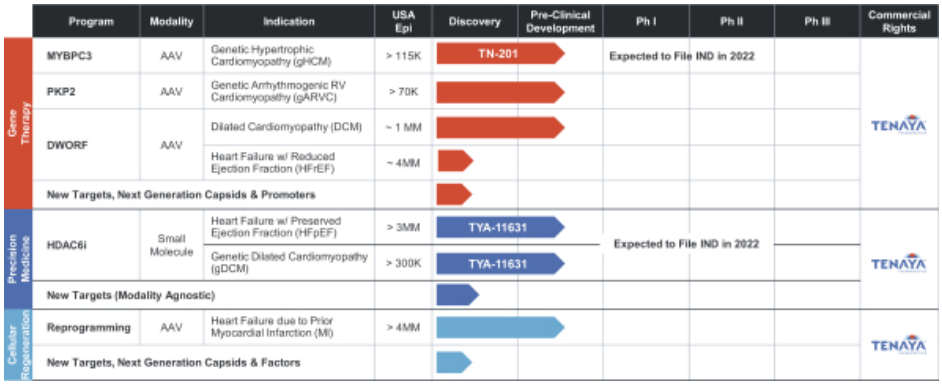
3. ***Promoters and Regulatory Elements***. We have created novel promoters and regulatory elements to support our gene therapy and cellular regeneration programs. We use these elements to help ensure a more precise expression of therapeutic payloads in different cell types in the heart. We believe our innovations in promoters and regulatory elements can support the successful clinical development of our product candidates.

4. ***Drug Delivery***. Gene delivery is considered one of the biggest challenges to successful translation of cardiac gene therapy into approved products. We believe it is important to explore different routes of administration (ROAs) as well as different infusion- or injection-based catheters to support more targeted delivery and more efficient uptake of gene therapies for the heart. We prioritize head-to-head comparison of different ROAs in large animal models. We are also developing a novel transendocardial injection catheter for precise delivery of therapeutic payloads around the scar area of an infarcted heart. We believe our discoveries in drug delivery can help widen the therapeutic index of our product candidates by reducing the dose required for a therapeutic benefit.

5. ***Manufacturing***. We have taken important steps towards internalizing AAV manufacturing capabilities, expertise and intellectual property to support our emerging portfolio of gene therapy product candidates and to have greater control over our product development. We have produced non-clinical material involving both parental and novel AAV capsids at the 50L and 200L scales to support early research and IND-enabling studies in small and large animal models. We have initiated construction of a 94,000 square-foot current Good Manufacturing Practices (cGMP) facility in the San Francisco Bay Area near our research labs to enable smooth scale-up of production to support first-in-human (FIH) studies, initially at the 1000L scale. We expect this facility will be operational by the end of 2021.

Our Pipeline

We are advancing a deep and diverse pipeline with therapeutic programs intended for rare or orphan diseases, such as genetic cardiomyopathies, as well as programs intended for larger indications, such as HFpEF. We have exclusive worldwide rights to all of our programs. Our current pipeline is summarized in the diagram below.



- **MYBPC3 Program for gHCM**. We are developing an AAV-based gene therapy designed to deliver a functional *MYBPC3* gene in adults and children with gHCM due to *MYBPC3* gene mutations. We have demonstrated significant and durable disease reversal and survival benefit in a relevant murine model, as well as tolerability in mice and non-human primates (NHPs). Our product candidate, TN-201, uses a differentiated approach designed to enable robust expression of the *MYBPC3* gene in the heart. The program is currently in IND-enabling studies, and we have obtained feedback from multiple regulatory agencies, including the FDA, to guide our path to clinical development. We intend to submit an IND or CTA to the FDA or EMA, respectively, in 2022.
- **HDAC6i Program for HFpEF and gDCM**. Inhibitors of histone deacetylases (HDACs) have long been considered promising targets for many indications in a range of therapeutic areas. Several partially selective HDAC6i are already in clinical development, but none, to our knowledge, for a heart disease indication. We have discovered a highly specific and potent HDAC6i for which medicinal chemistry has been completed and we have filed patent applications for two chemical series. We have also demonstrated *in vivo* activity of these molecules in multiple animal models, including in two different models of HFpEF as well as in a model of gDCM. Our product candidate, TYA-11631, has not demonstrated evidence of toxicity at levels dosed to date in small and large animal species. We have initiated IND-enabling activities and intend to submit an IND to the FDA in 2022.

- **PKP2 Program for gARVC**. We are developing an AAV-based gene therapy designed to deliver a functional *PKP2* gene in adults with gARVC due to *PKP2* gene mutation. We have demonstrated prevention of disease progression and survival benefit in a murine model. Based on publicly available information to date, we believe these data are the first known demonstrations of durable disease modification, survival benefit, and prevention of arrhythmia using an AAV:PKP2 gene therapy construct. This program is currently at the candidate selection stage.
- **DWORF Program for DCM and HFrEF**. We are developing an AAV-based gene therapy designed to deliver the *DWORF* gene for patients with DCM and HFrEF. DWORF is a muscle-specific micro-peptide first discovered by our co-founder Eric Olson, Ph.D., that acts on the sarcoplasmic/endoplasmic reticulum Ca2+ ATPase 2a (SERCA2a) pathway, widely considered to be a promising target in HF. We and our academic collaborators have accumulated significant preclinical *in vivo* proof-of-concept evidence for the therapeutic benefit of over-expression of the *DWORF* gene in multiple murine models, including models of DCM and HFrEF, as well as tolerability in murine models. These findings in animal models support the advancement of this program in patients with genetic cardiomyopathies due to specific mutations as well as more prevalent HF populations. This program is currently at the candidate selection stage.
- **Reprogramming Program for HF due to prior MI**. We have made significant advances in our unique approach to cellular regeneration using viral vectors to deliver genes that drive *in vivo* reprogramming of resident CFs to create new CMs. This approach was first demonstrated by our co-founder Deepak Srivastava, M.D. We have discovered a proprietary combination of three genes that can drive robust reprogramming when delivered together in a single AAV capsid. We have demonstrated significant and durable disease reversal as well as tolerability in multiple small and large animal models. Results of this approach in a pig model of HF due to prior MI were presented at the American Society of Gene & Cell Therapy conference in 2020 and represent what we believe is the first-ever successful demonstration of the therapeutic benefit of this approach in a large animal model with a human-sized heart. This program is currently at the candidate selection stage.

Overview of Heart Disease

Heart disease is the leading cause of death in the world, accounting for more deaths than from all cancers combined. In the United States, more than 30 million adults, or approximately 12% of the adult population, are diagnosed with heart disease. In addition, an adult dies from a cardiovascular-related health condition, such as a heart attack every 36 seconds, a gruesome statistic that translates to 31% of all deaths in the United States each year. The picture is equally bleak at the other end of the age spectrum, as approximately 35,000 children are born in the United States every year with congenital heart disease (CHD), and CHD is the leading cause of birth defect-related morbidity and mortality. There are over 250 known genetically defined disorders where the primary source of morbidity and mortality involves the heart. There are few approved products that target the underlying cause of such diseases. Recent analysis has shown that after decades of reduction in the mortality rate due to HF, these rates are once again rising over the last decade, highlighting the need for improved treatments.

The heart is a complex organ due to its biological structure as well as its tightly regulated and coordinated electrophysiological and biomechanical properties. Heart disease comes in many forms, affects individuals at many ages, and is a result of many factors. As depicted in the below table, heart disease can be generally categorized as either directly resulting from problems associated with the heart organ, for example, HF, arrhythmia, and heart valve disease, or indirectly resulting from problems associated with the vasculature, for example, coronary artery disease (CAD). In each case, the underlying cause could be genetic, due to normal aging or due to environmental factors.

The table below illustrates four broad categories of heart disease:

CATEGORIES	DESCRIPTION
 Heart Failure (HF)	HF is a heart condition in which the heart's pumping capacity is not adequate to meet the demands for blood and oxygen required by the rest of the body. HF can be the result of a range of conditions that lead to weakening of the heart muscle. Conditions that can be associated with the development of HF include a heart attack, uncontrolled high blood pressure, congenital heart disease (heart defects present at birth), and genetic cardiomyopathies.
 Arrhythmia	Arrhythmia is one of the most common heart conditions and is described as any change in the heart's normal electrical impulses. Electrical impulses from within the heart initiate each heartbeat and ensure its normal pumping function. Arrhythmias can cause the heart to beat too quickly, too slowly or irregularly, resulting in a broad range of symptoms as well as sudden death and stroke.
 Heart Valve Disease	Heart value disease occurs when there is a problem with one or more of the four valves that normally work in unison to make sure that blood is pumped in the proper direction through the four chambers of the heart.
 Coronary Artery Disease (CAD)	CAD is among the most common type of heart disease and occurs when plaque grows in the walls of the coronary arteries, limiting the blood flow to the heart's muscle. CAD can ultimately lead to a heart attack.

Current Challenges in the Development of Novel Therapies for Heart Disease

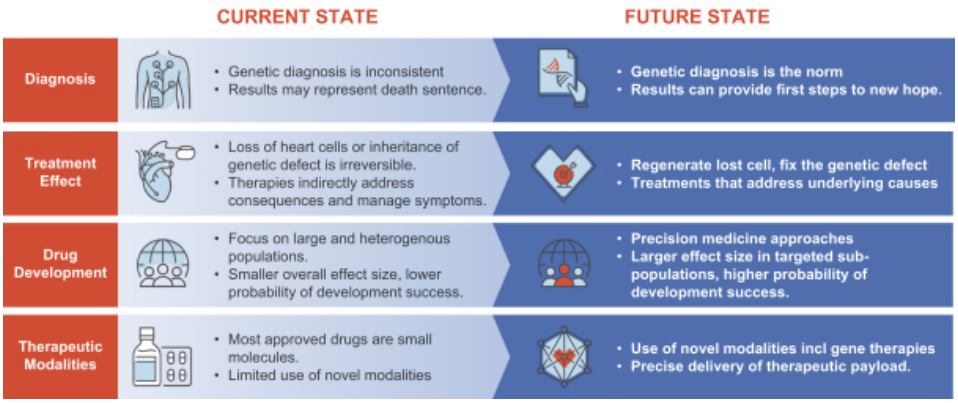
While there is significant unmet need in the field of heart disease, historically there have been challenges in developing novel therapies for the different forms of heart disease. These challenges include, but are not limited to:

- Most development efforts focus on treating symptoms rather than targeting the underlying causes of diseases;
- Identifying new disease-modifying targets is challenging;
- Genetic diagnosis and genetic counseling are limited;
- Regenerative therapy science is still in its early stages;
- Gene therapy science for the heart is still maturing;

- Regulatory requirements are stringent;
- Costs of development are high; and
- Patient access barriers are challenging.

These factors have contributed to a decline in successful heart disease drug development. However, there are recent signs of improvement, notably due to the improving rate of genetic testing, potentially from more education by physicians and patient advocacy groups, as well as increased availability of accessible genetic testing covering more than 150 relevant genes associated with inherited arrhythmia and cardiomyopathy conditions. We believe with the evolving understanding of heart disease in the scientific community and general public, there are significant opportunities where we can benefit from and support the evolution towards more precise diagnosis, drug development, and treatment for heart disease, as depicted in the diagram below.

The Evolving Landscape of Heart Disease



Our Strategy

Our goal is to become a leading, fully integrated biotechnology company delivering next-generation therapies that address the underlying causes of heart disease identified through our multi-modality product platforms. We are taking advantage of an expanded understanding of heart biology and scientific advancements to discover, develop, manufacture and ultimately commercialize a deep and diverse pipeline of novel therapies. The key components of our strategy to achieve these goals are:

- Develop disease-modifying therapies;
- Focus exclusively on heart disease;
- Discover novel therapies using three product platforms in parallel;
- Target defined sub-populations of patients most likely to respond to our therapies;
- Advance a deep and diverse pipeline of therapies;
- Internalize and integrate core capabilities to support our innovation; and
- Become a fully integrated biopharmaceutical company with commercial capabilities.

Our History and Team

We were incorporated in August 2016 by The Column Group, in partnership with leading scientific and clinical researchers in cardiovascular genetics and muscle biology at Gladstone Institutes and UTSW. Since our founding, we have attracted a talented group of industry experts and scientists as part of a highly innovative organization of over 75 employees.

We are led by a team of executives and directors with significant experience in the discovery, development, manufacture, and commercialization of novel therapeutics, specifically in the fields of rare diseases, gene therapies, and heart disease. Faraz Ali, our Chief Executive Officer since 2018, previously served as the Chief Business Officer at REGENXBIO, and prior to that accumulated relevant experiences at industry-leading companies in gene therapy and orphan drug development including at bluebird bio and Genzyme Corporation.

Since inception, we have raised approximately $248 million in equity financing from leading venture, strategic and public investors, including The Column Group, Casdin Capital, SymBiosis II, LLC, Fidelity Management & Research Company, RTW Investments, RA Capital Management, funds and accounts advised by T. Rowe Price Associates, GV and others who share our vision to build a highly innovative, integrated biotechnology company delivering next-generation therapies that address the underlying causes of heart disease.

Risks Associated with Our Business

Our ability to execute on our business strategy is subject to a number of risks, which are discussed more fully in the section titled “Risk Factors.” You should carefully consider these risks before making an investment in our common stock. These risks include, among others, the following:

- We are early in our development efforts, with a limited operating history, have not initiated or completed any clinical trials, and have no products approved for commercial sale, which may make it difficult for you to evaluate our current business and likelihood of success and future viability.
- We have not generated any product revenue to date, have incurred significant net losses since our inception, and expect to continue to incur significant net losses for the foreseeable future.
- Our ability to generate revenue and achieve profitability depends significantly on our ability to achieve several objectives relating to the discovery, development and commercialization of our product candidates, if approved.
- Even if this offering is successful, we will require substantial additional capital to finance our operations. If we are unable to raise such capital when needed, or on acceptable terms, we may be forced to delay, reduce and/or eliminate one or more of our research and drug development programs or future commercialization efforts.
- Our operations and financial results could be adversely impacted by the COVID-19 pandemic in the United States and the rest of the world.
- Our product candidates are in the early stages of development and we have no products approved for commercial sale. If we are unable to successfully develop, receive regulatory approval for, manufacture and commercialize our product candidates, or successfully develop any other product candidates, or experience significant delays in doing so, our business will be harmed.
- We intend to identify and develop gene therapy product candidates based on novel technology, and because the regulatory landscape that governs any product candidates we may develop is rigorous, complex, uncertain and subject to change, we cannot predict the time and cost of obtaining regulatory approval, if we receive it at all, for any product candidates we may develop.

- The mechanisms of action of our product candidates are unproven, and we do not know whether we will be able to develop any drug of commercial value.
- Preclinical and clinical drug development involves a lengthy and expensive process with an uncertain outcome. The clinical trials of our product candidates may not demonstrate safety and efficacy to the satisfaction of the FDA, EMA or other comparable foreign regulatory authorities or otherwise produce positive results and the results of preclinical studies and early clinical trials may not be predictive of future results. We may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.
- Our product candidates may cause serious adverse events, toxicities or other undesirable side effects when used alone or in combination with other approved products or investigational new drugs that may result in a safety profile that could prevent regulatory approval, prevent market acceptance, limit their commercial potential or result in significant negative consequences.
- Due to the significant resources required for the development of product candidates, and depending on our ability to access capital, we must prioritize development of certain programs and product candidates. Moreover, we may expend our limited resources on programs or product candidates that do not yield a successful product and fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success.
- We are in the process of building out a manufacturing facility to support future production of certain of our product candidates. We have no experience in manufacturing, and there can be no assurance that we will be able to complete our manufacturing facility or, if completed, we will be able to successfully manufacture product candidates.
- The regulatory approval processes of the FDA, EMA and other comparable foreign regulatory authorities are lengthy, time consuming and inherently unpredictable. If we are ultimately unable to obtain regulatory approval of our product candidates, we will be unable to generate product revenue and our business will be substantially harmed.
- We have in-licensed one issued patent, but we do not currently own any issued patents relating to our technology and product candidates. If we are unable to obtain, maintain, protect, defend and enforce patent and other intellectual property coverage for our technology and product candidates, our competitors could develop and commercialize technology and product candidates similar or identical to ours, and our ability to commercialize our technology and product candidates may be adversely affected.
- Our commercial success depends significantly on our ability to operate without infringing, misappropriating or otherwise violating the patents and other intellectual property and proprietary rights of third parties. Claims by third parties that we infringe, misappropriate or otherwise violate their intellectual property or proprietary rights may result in liability for damages or prevent or delay our developmental and commercialization efforts, and could have a material adverse effect on the success of our business.
- We rely on third parties to conduct our preclinical studies, and plan to rely on third parties to conduct clinical trials, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such trials, research and studies or to comply with applicable regulatory requirements, which may harm our business.

Corporate Information

We were incorporated in Delaware in August 2016. Our principal executive offices are located at 171 Oyster Point Boulevard, 5th Floor, South San Francisco, CA 94080. Our telephone number is (650) 825-6990.

Our website address is www.tenayatherapeutics.com. Information contained on, or accessible through, our website is not incorporated by reference into this prospectus and should not be considered to be part of this prospectus. The inclusion of our website address in this prospectus is an inactive textual reference only.

Trademarks

We use the Tenaya logo and other marks as unregistered trademarks in the United States and certain other countries. This prospectus contains references to our trademarks and to those belonging to other entities. Solely for convenience, trademarks and trade names referred to in this prospectus, including logos, artwork and other visual displays, may appear without a trademark symbol, but such references are not intended to indicate in any way that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable owner of these trademarks and trade names. We do not intend our use or display of other entities' trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other entity.

Implications of Being an Emerging Growth Company and a Smaller Reporting Company

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, as amended (JOBS Act). We will remain an emerging growth company until the earliest to occur of: (i) the last day of the fiscal year in which we have more than $1.07 billion in annual revenue; (ii) the date we qualify as a "large accelerated filer," with at least $700 million of equity securities held by non-affiliates; (iii) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period; and (iv) the last day of the fiscal year ending after the fifth anniversary of our initial public offering. As a result of this status, we have taken advantage of reduced reporting requirements in this prospectus and may elect to take advantage of other reduced reporting requirements in our future filings with the U.S. Securities and Exchange Commission. 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. 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, delaying the adoption of these accounting standards until they would apply to private companies. We have elected to use the extended transition period to enable us to comply with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date on which we (1) are no longer an emerging growth company and (2) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

We are also a "smaller reporting company," meaning that the market value of our stock held by non-affiliates plus the proposed aggregate amount of gross proceeds to us as a result of this offering is less than $700 million and our annual revenue was less than $100 million during the most recently completed fiscal year. We may continue to be a smaller reporting company after this offering if either (i) the market value of our stock held by non-affiliates is less than $250 million or (ii) our annual revenue was less than $100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than $700 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

THE OFFERING

Common stock offered by us	shares.
Option to purchase additional shares	We have granted the underwriters an option for a period of 30 days to purchase up to additional shares of our common stock.
Common stock to be outstanding immediately after this offering	shares (or shares if the underwriters exercise in full their option to purchase additional shares).
Use of proceeds	We estimate that the net proceeds from this offering will be approximately $ million, or $ million if the underwriters exercise in full their option to purchase additional shares of common stock, 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 the 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 and cash equivalents, to fund our ongoing and planned preclinical and clinical development of our most advanced product candidates in our MYBPC3 and HDAC6i programs, the continued development of our other programs, including our PKP2, DWORF and Reprogramming programs, the expansion of our manufacturing capabilities and facilities and the remainder, if any, for working capital and other general corporate purposes. See the section titled “Use of Proceeds.”
Risk factors	See the section titled “Risk Factors” for a discussion of factors that you should carefully consider before deciding to invest in shares of our common stock.
Proposed Nasdaq Stock Market trading symbol	“TNYA”

The number of shares of our common stock to be outstanding after this offering is based on 163,948,679 shares of our common stock outstanding as of March 31, 2021 (including our convertible preferred stock on an as-converted basis), and excludes:

- 10,368,032 shares of common stock issuable upon exercise of options outstanding as of March 31, 2021 with a weighted-average exercise price of $0.51 per share;
- shares of common stock issuable upon exercise of options granted after March 31, 2021, with a weighted-average exercise price of $ per share;
- 2,275,357 shares of common stock reserved for future issuance under our Amended and Restated 2016 Equity Incentive Plan, as amended, as of March 31, 2021;
- shares of common stock reserved for future issuance under our 2021 Equity Incentive Plan (2021 Plan), which will become effective on the business day immediately prior to the date of effectiveness of the registration statement of which this prospectus forms a part, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this plan; and

- shares of common stock reserved for future issuance under our 2021 Employee Stock Purchase Plan (2021 ESPP), which will become effective on the business day immediately prior to the date of effectiveness of the registration statement of which this prospectus forms a part, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this plan.

Unless otherwise indicated, this prospectus reflects and assumes the following:

- no exercise of the outstanding options referred to above;
- no exercise by the underwriters of their option to purchase additional shares of common stock from us in this offering;
- the automatic conversion of all outstanding shares of our convertible preferred stock as of March 31, 2021 into an aggregate of 156,613,818 shares of our common stock immediately prior to the completion of this offering; and
- the filing and effectiveness of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws, each of which will occur immediately prior to the completion of this offering.

SUMMARY FINANCIAL DATA

The following tables set forth our summary financial data for the periods and as of the dates indicated. We have derived the summary statements of operations data for the years ended December 31, 2019 and 2020 from our audited financial statements included elsewhere in this prospectus. The summary statements of operations data for the three months ended March 31, 2020 and 2021 and the summary balance sheet data as of March 31, 2021 are derived from our unaudited interim condensed financial statements included elsewhere in this prospectus. We have prepared the unaudited interim condensed financial statements on the same basis as the audited financial statements. We have included, in our opinion, all adjustments, consisting only of normal recurring adjustments that we consider necessary for a fair presentation of the financial information set forth in those unaudited interim condensed financial statements.

You should read the following summary financial data together with the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and the related notes included elsewhere in this prospectus. The summary financial data in this section are not intended to replace our financial statements and are qualified in their entirety by our financial statements and related notes included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results that may be expected in the future, and our results for the three months ended March 31, 2021 are not necessarily indicative of results to be expected for the full year.

	Year Ended December 31,		Three Months Ended March 31,	
	2019	2020	2020	2021
	(in thousands, except share and per share data)			
Statements of Operations Data:				
Operating expenses:				
Research and development	$ 23,148	$ 31,099	$ 7,297	$ 9,590
General and administrative	4,564	7,813	1,969	3,515
Total operating expenses	27,712	38,912	9,266	13,105
Loss from operations	(27,712)	(38,912)	(9,266)	(13,105)
Other income (expense), net:				
Interest income	453	87	57	9
Change in fair value of convertible preferred stock tranche liability	11	75	(19)	—
Other income (expense), net	1,017	355	177	(2)
Total other income (expense), net	1,481	517	215	7
Net loss before income tax expense	(26,231)	(38,395)	(9,051)	(13,098)
Income tax expense	—	—	—	—
Net loss	$ (26,231)	$ (38,395)	$ (9,051)	$ (13,098)
Net loss per share, basic and diluted	$ (5.78)	$ (6.58)	$ (1.69)	$ (1.99)
Weighted-average shares used in computing net loss per share, basic and diluted	4,534,692	5,832,594	5,351,978	6,586,917
Pro forma net loss per share, basic and diluted(1)		$		$
Weighted-average shares used in computing pro forma net loss per share, basic and diluted(1)				

(1) The unaudited pro forma net loss per share for the year ended December 31, 2020 and the three months ended March 31, 2021 was computed using the weighted-average number of shares of common stock outstanding, including the pro forma effect of the conversation of all outstanding shares of our 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.

	As of March 31, 2021		
	Actual	Pro Forma(1)	Pro Forma as adjusted(2)(3)
		(in thousands)	
Balance Sheet Data:			
Cash and cash equivalents	$128,439	$	$
Working capital(4)	123,840		
Total assets	159,757		
Convertible preferred stock	240,735		
Additional paid-in capital	2,053		
Accumulated deficit	(95,910)		
Total stockholders' (deficit) equity	(93,943)		

(1) The pro forma balance sheet data gives effect to: (i) the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of 156,613,818 shares of our common stock immediately prior to the completion of this offering, as if such conversion had occurred on March 31, 2021; (ii) the related reclassification of our convertible preferred stock aggregate carrying value to permanent equity; and (iii) the filing and effectiveness of our amended and restated certificate of incorporation immediately prior to the closing of this offering.

(2) The pro forma as adjusted balance sheet data gives effect to: (i) the pro forma adjustments set forth in footnote (1) above; and (ii) the issuance and sale of shares of our common stock in this offering at an assumed initial public offering price of $ per share (which is the midpoint of the estimated price range set forth on the cover page of this prospectus), and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

(3) The pro forma as adjusted information 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 (decrease) in the assumed initial public offering price of $ per share (which is the midpoint of the estimated price range set forth on the cover page of this prospectus), would increase (decrease) each of cash and cash equivalents, working capital, total assets, additional paid-in capital and total stockholders' (deficit) equity by $ 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 underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase (decrease) of 1,000,000 shares in the number of shares of common stock offered by us would increase (decrease) each of cash and cash equivalents, working capital, total assets, additional paid-in capital and total stockholders' (deficit) equity by $ million, assuming the assumed initial public offering price of $ per share remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

(4) We define working capital as current assets less current liabilities. See our 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 our common stock involves a high degree of risk. You should carefully consider the risks described below, as well as the other information in this prospectus, including our audited financial statements and the related notes included elsewhere in this prospectus and the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations," before deciding whether to invest in our common stock. The occurrence of any of the events or developments described below could harm our business, financial condition, results of operations and growth prospects. In such an event, the market price of our common stock could decline, and you may lose all or part of your investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations and the market price of our common stock.

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

We are early in our development efforts, with a limited operating history, have not initiated or completed any clinical trials, and have no products approved for commercial sale, which may make it difficult for you to evaluate our current business and likelihood of success and future viability.

We are a preclinical stage biotechnology company with a limited operating history upon which you can evaluate our business and prospects. We commenced operations in 2016, have not initiated or completed any clinical trials, have no products approved for commercial sale and have not generated any revenue. We are developing therapies that address the underlying drivers of heart disease, which is an unproven and highly uncertain undertaking and involves a substantial degree of risk. All of our product candidates are still in preclinical development and have never been tested in humans. Since our inception in 2016, we have devoted substantially all of our focus and financial resources to developing our gene therapy, cellular regeneration and precision medicine platforms, identifying and developing product candidates, conducting preclinical studies, acquiring technology, organizing and recruiting management and technical staff, business planning, establishing our intellectual property portfolio, raising capital, and providing general and administrative support for these operations.

We have not yet demonstrated our ability to successfully initiate and complete any clinical trials, obtain marketing approvals, manufacture a clinical- or 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. As a result, it may be more difficult for investors to accurately predict our likelihood of success and viability than it 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 early-stage biotechnology companies in rapidly evolving fields. We also may need to transition from a company with a research and development focus to a company capable of supporting commercial activities. We have not yet demonstrated an ability to successfully overcome such risks and difficulties, or to make such a transition. If we do not adequately address these risks and difficulties or successfully make such a transition, our business will suffer.

We have not generated any product revenue to date, have incurred significant net losses since our inception, and expect to continue to incur significant net losses for the foreseeable future.

We have incurred significant net losses since our inception, have not generated any product revenue to date and have financed our operations through private placements of our convertible preferred stock. Our net loss was $38.4 million for the year ended December 31, 2020 and $13.1 million for the three months ended March 31, 2021. As of March 31, 2021, we had an accumulated deficit of $95.9 million. Substantially all of our losses have resulted from expenses incurred in connection with our research and development programs and from general and administrative costs associated with our operations. We are still in the early stages of development of our

product candidates and have not yet initiated or completed any clinical trials. Our product candidates will require substantial additional development time and resources before we will be able to apply for regulatory approvals and, if approved, begin generating revenue from product sales. As a result, we expect that it will be several years, if ever, before we receive approval to commercialize a product and generate revenue from product sales. Even if we succeed in receiving marketing approval for and commercializing one or more of our product candidates, we expect that we will continue to incur substantial research and development and other expenses in order to discover, develop and market additional potential products.

We expect to continue to incur significant expenses and increasing operating losses for the foreseeable future. The net losses we incur may fluctuate significantly from quarter to quarter such that a period-to-period comparison of our results of operations may not be a good indication of our future performance, particularly since we expect our expenses to increase if and when our product candidates progress through clinical development as product candidates in later stages of clinical development generally have higher development costs than those in earlier stages, primarily due to the increased size and duration of later-stage clinical trials. The size of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue. Our prior losses and expected future losses have had and will continue to have an adverse effect on our working capital, our ability to fund the development of our product candidates and our ability to achieve and maintain profitability and the performance of our stock.

Our ability to generate revenue and achieve profitability depends significantly on our ability to achieve several objectives relating to the discovery, development and commercialization of our product candidates, if approved.

We rely on our multi-modality drug discovery platforms to identify and develop product candidates. Our business depends entirely on the success of these platforms and the successful development, regulatory approval, manufacturing and commercialization of product candidates that we discover with these platforms. Our ability to generate revenue and achieve profitability depends significantly on our ability, or any future collaborator's ability, to achieve several objectives, including:

- successful and timely completion of preclinical and clinical development of product candidates and programs in our Gene Therapy, Cellular Regeneration and Precision Medicine platforms, and our other future product candidates and programs;
- obtaining regulatory approval to commence clinical trials of our product candidates;
- establishing and maintaining relationships with contract research organizations (CROs) and clinical sites for the clinical development of our product candidates and any other future product candidates;
- the initiation and successful patient enrollment and completion of clinical trials on a timely basis;
- acceptable frequency and severity of adverse events in the clinical trials;
- the efficacy and safety profiles that are satisfactory to the U.S. Food and Drug Administration (FDA) or any comparable foreign regulatory authority for marketing approval;
- timely receipt of marketing approvals from applicable regulatory authorities for any product candidates for which we successfully complete clinical development;
- complying with any required post-marketing approval commitments to applicable regulatory authorities;
- establishing and operating a manufacturing facility and developing an efficient and scalable manufacturing process for our product candidates;
- establishing and maintaining commercially viable supply and manufacturing relationships with third parties that can provide adequate, in both amount and quality, products and services to support clinical development and meet the market demand for our product candidates, if approved;

- successful commercial launch following any marketing approval, including the development of a commercial infrastructure, whether in-house or with one or more collaborators;
- successful outputs from our capsid engineering and promotor and regulator elements efforts;
- a continued acceptable safety profile following any marketing approval of our product candidates;
- commercial acceptance of our product candidates by patients, the medical community and third-party payors;
- satisfying any required post-marketing approval commitments to applicable regulatory authorities;
- identifying, assessing and developing new product candidates;
- obtaining, maintaining, and expanding patent and other intellectual property protection, trade secret protection and regulatory exclusivity, both in the United States and internationally;
- protecting and enforcing our rights in our intellectual property portfolio;
- defending against third-party infringement, misappropriation, or other claims, if any;
- entering into, on favorable terms, any collaboration, licensing or other arrangements that may be necessary or desirable to develop, manufacture or commercialize our product candidates;
- obtaining coverage and adequate reimbursement by third-party payors for our products and patients' willingness to pay in the absence of such coverage and adequate reimbursement;
- obtaining additional funding to develop, manufacture and commercialize our product candidates;
- addressing any competing therapies and technological and market developments;
- managing costs, including any unforeseen costs, that we may incur as a result of nonclinical study or clinical trial delays due to COVID-19 or other causes; and
- attracting, hiring and retaining qualified personnel including clinical, scientific, management and administrative personnel.

We may never be successful in achieving our objectives and, even if we are, may never generate revenue that is significant or large enough to achieve profitability. If we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would decrease the value of our company and could impair our ability to maintain or further our research and development efforts, raise additional necessary capital, grow our business and continue our operations.

We may also experience delays in establishing our manufacturing facility, developing a sustainable, reproducible and scalable manufacturing process or transferring that process to commercial partners, which may prevent us from initiating and completing our planned clinical trials or commercializing our product candidates on a timely or profitable basis, if at all.

Even if this offering is successful, we will require substantial additional capital to finance our operations. If we are unable to raise such capital when needed, or on acceptable terms, we may be forced to delay, reduce and/or eliminate one or more of our research and drug development programs or future commercialization efforts.

As of March 31, 2021, we had $128.4 million in cash and cash equivalents. Based on our current operating plan, we believe that the net proceeds from this offering, together with our existing cash and cash equivalents, will be sufficient to fund our operations . Our estimate as to how long we expect the net proceeds from this offering, together with our existing cash and cash equivalents, to be able to continue to fund our operations is based on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we currently expect. Changing circumstances, some of which may be beyond our control, could cause us to consume capital significantly faster than we currently anticipate, and we may need to seek additional funds sooner than planned.

Developing pharmaceutical 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 initiate and conduct clinical trials of, and seek marketing approval for, our programs as well as develop our proprietary drug discovery platforms. Even if one or more of the product candidates that we develop is approved for commercial sale, we anticipate incurring significant costs associated with sales, marketing, manufacturing and distribution activities. Our expenses could increase beyond expectations if we are required by the FDA, the EMA or other regulatory agencies to perform clinical trials or preclinical studies in addition to those that we currently anticipate. Other unanticipated costs may also arise. Because the design and outcome of our planned and anticipated preclinical studies and clinical trials are highly uncertain, we cannot reasonably estimate the actual amount of resources and funding that will be necessary to successfully complete the development and commercialization of any product candidate we develop. We are not permitted to market or promote any product candidate before we receive marketing approval from the FDA. Following this offering, we also expect to incur additional costs associated with operating as a public company. Accordingly, we will need to obtain substantial additional funding in order to continue our operations.

Our future capital requirements will depend on may factors, including, but not limited to:

- the scope, progress, results and costs of researching, developing and testing our product candidates including conducting preclinical studies and clinical trials;
- the costs, timing and outcome of regulatory review of our product candidates or any future candidates;
- the number and characteristics of other product candidates that we pursue or acquire;
- the costs of future activities, including product sales, medical affairs, marketing, manufacturing and distribution, for any of our product candidates for which we receive marketing approval;
- the costs of establishing and operating our own manufacturing facility;
- the costs of manufacturing commercial-grade products and sufficient inventory to support commercial launch;
- the cost of commercialization activities, include the cost of building a sales force in anticipation of product commercialization and distribution costs;
- the revenue, if any, received from commercial sale of our products, should any of our product candidates receive marketing approval;
- the cost and timing of hiring new employees to support our continued growth;
- the costs of preparing, filing and prosecuting patent applications, maintaining, protecting and enforcing our intellectual property rights and defending intellectual property-related claims;
- the effect of competing products that may limit market penetration of our products;
- the ability to establish and maintain collaborations on favorable terms, if at all;
- the extent to which we acquire or in-license other product candidates and technologies;
- the timing, receipt and amount of sales of, or milestone payments related to or royalties on, our current or future product candidates, if any;
- our need to implement additional internal systems and infrastructure, including financial and reporting systems;
- the compliance and administrative costs associated with being a public company; and
- the extent to which we acquire or invest in businesses, products, or technologies, although we currently have no commitments or agreements relating to any of these types of transactions.

A change in the outcome of any of these or other factors with respect to the development of any of our product candidates could significantly change the costs and timing associated with the development of that product candidate, and many of these factors are outside of our control. Identifying potential product candidates and conducting preclinical studies and clinical trials is a time-consuming, expensive and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain regulatory and marketing approval and achieve product sales. In addition, our product candidates, if approved, may not achieve commercial success. Accordingly, we will need to continue to rely on additional financing to achieve our business objectives.

We currently plan to use the net proceeds from this offering, together with our existing resources, as described in the section titled "Use of Proceeds." Advancing the development of our programs will require a significant amount of capital. The net proceeds from this offering, together with our cash and cash equivalents, will not be sufficient for us to fund any of our product candidates through regulatory approval, and we will need to raise additional capital to complete the development and commercialization of our product candidates.

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 failure to raise capital as and when needed or on acceptable terms would have a negative impact on our financial condition and our ability to pursue our business strategy, and we may have to delay, reduce the scope of, suspend or eliminate one or more of our platforms, programs, planned clinical trials or future commercialization efforts.

Our operations and financial results could be adversely impacted by the COVID-19 pandemic in the United States and the rest of the world.

In March 2020, the World Health Organization declared the novel coronavirus disease (COVID-19) outbreak a global pandemic. To limit the spread of COVID-19, governments have taken various actions including the issuance of stay-at-home orders and physical distancing guidelines. Accordingly, businesses have adjusted, reduced or suspended operating activities. Beginning in March 2020, the majority of our workforce began working from home. Disruptions caused by the COVID-19 pandemic, including the effects of the stay-at-home orders and work-from-home policies, have impacted productivity, have resulted in increased operational expenses, certain adjustments to our operations, delays in our development efforts, and delays in certain supply chain activities. We may experience further disruptions as a result of COVID-19 that could severely impact our business, including:

- interruptions, difficulties or delays arising in our existing operations and company culture as a result of all of our employees working remotely, including those hired during the COVID-19 pandemic;
- delays in the build out of our manufacturing facility;
- delays in receiving approval from local regulatory authorities to initiate our planned clinical trials;
- delays or difficulties in enrolling and retaining patients in clinical trials and incurrence of additional costs as a result of preclinical study and clinical trial delays and adjustments;
- challenges related to ongoing and increased operational expenses related to the COVID-19 pandemic;
- delays or difficulties in clinical site initiation, including difficulties in recruiting clinical site investigators and clinical site staff;
- delays, difficulties or increased costs to comply with COVID-19 protocols at our leased facilities and clinical sites;
- diversion of healthcare resources away from the conduct of clinical trials, including the diversion of hospitals that may serve as our potential clinical trial sites and hospital staff supporting the conduct of clinical trials;

- interruption of key clinical trial activities, such as clinical trial site monitoring, due to limitations on travel imposed or recommended by federal or state governments, employers and others;
- limitations in resources that would otherwise be focused on the conduct of our business or our clinical trials, including because of sickness or the desire to avoid contact with large groups of people or as a result of government-imposed "Stay-at-Home" orders or similar working restrictions;
- delays in preclinical and clinical sites receiving the supplies and materials needed to conduct our planned clinical trials;
- interruption in global shipping that may affect the transport of clinical trial materials, such as investigational drug product to be used in our clinical trials;
- 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, or to discontinue clinical trials altogether, or which may result in unexpected costs;
- 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;
- refusal of the FDA to accept data from clinical trials in affected geographies outside the United States;
- increased competition for CROs, contract development and manufacturing organizations (CDMOs), suppliers and vendors; and
- delays in collecting, receiving and analyzing data from patients enrolled in our clinical trials due to limited staff at potential clinical trial sites, limitation or suspension of on-site visits by patients, or patients' reluctance to visit the clinical trial sites during the pandemic.

We will continue to assess the impact that COVID-19 may have on our ability to effectively conduct our business operations as planned and there can be no assurance that we will be able to avoid a material impact on our business from the spread of COVID-19 or its consequences, including disruption to our business and downturns in business sentiment generally or in our industry.

Additionally, certain third parties with whom we engage or may engage, including our collaborators, CROs, third-party manufacturers, suppliers, clinical trial sites, regulators and other third parties with whom we conduct business have similarly adjusted their operations and are assessing their capacity in light of the COVID-19 pandemic. If these third parties experience shutdowns or continued business disruptions, our ability to conduct our business in the manner and on the timelines presently planned could be materially and negatively impacted. For example, as a result of the COVID-19 pandemic, we experienced delays in the procurement of materials needed to conduct our preclinical studies. Additionally, certain preclinical studies are conducted by CROs, some of which were delayed as a result of the COVID-19 pandemic and which could be discontinued or further delayed as the pandemic continues. Research and development expenses and general and administrative expenses may vary significantly if there is an increased impact from COVID-19 on the costs and timing associated with the conduct of our business. As we continue to actively advance our programs, we are assessing the impact of the COVID-19 pandemic, our expected timelines and costs on an ongoing basis.

Three vaccines for COVID-19 have been granted Emergency Use Authorization by the FDA, and more are likely to be authorized in the coming months. The resultant demand for vaccines and potential for manufacturing facilities and materials to be commandeered under the Defense Production Act of 1950, or equivalent foreign legislation, has made it more difficult to obtain materials and manufacturing slots for our product candidates needed for our preclinical studies and clinical trials, which could lead to delays in these studies and trials.

The global outbreak of COVID-19 continues to rapidly evolve. The extent to which the COVID-19 pandemic impacts our business will depend on future developments such as the rate of the spread of the disease, travel restrictions and social distancing in the United States and other countries, business closures or business

disruptions, supply of and demand for vaccines, and the effectiveness of actions taken in the United States and other countries to contain and treat the disease and to address its impact, including on financial markets or otherwise. Further, a lack of coordinated response on risk mitigation and vaccination deployment with respect to the COVID-19 pandemic could result in significant increases to the duration and severity of the pandemic and could have a corresponding negative impact on our business. While the extent of the impact of the current COVID-19 pandemic on our business and financial results is uncertain, a continued and prolonged public health crisis such as the COVID-19 pandemic could have a material negative impact on our business, financial condition and operating results.

To the extent the COVID-19 pandemic adversely affects our business, financial condition and operating results, it may also have the effect of heightening many of the risks described in this "Risk Factors" section.

Raising additional capital will cause dilution to our stockholders, including purchasers of our common stock in this offering, 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 revenues, we will be required to obtain further funding through public or private equity offerings, debt financings, collaborations and licensing arrangements or other sources, which may dilute our stockholders or restrict our operating activities. We do not have any committed external source of funds. Adequate additional financing may not be available to us on acceptable terms, or at all. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms may include liquidation or other preferences that adversely affect your rights as a stockholder. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making acquisitions, engaging in acquisition, merger or collaboration transactions, selling or licensing our assets, making capital expenditures, redeeming our stock, making certain investments, declaring dividends or encumbering our assets to secure future indebtedness. Such restrictions could adversely impact our ability to conduct our operations and execute our business plan.

If we raise additional funds through upfront payments or milestone payments pursuant to strategic collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies or intellectual property, future revenue streams, research programs or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Our ability to utilize our net operating loss carryforwards and certain other tax attributes to offset future taxable income may be limited.

Our net operating loss (NOL) carryforwards may be unavailable to offset future taxable income because of restrictions under U.S. tax law. Our NOLs generated in tax years ending on or prior to December 31, 2017 are only permitted to be carried forward for 20 taxable years under applicable U.S. federal tax law, and therefore could expire unused. Under tax legislation commonly referred to as the Tax Cuts and Jobs Act (Tax Act) as amended by the Coronavirus Aid, Relief, and Economic Security Act (CARES Act), our federal NOLs generated in tax years beginning after December 31, 2017 may be carried forward indefinitely, but for taxable years beginning after December 31, 2020, the deductibility of federal NOLs generated in tax years beginning after December 31, 2017 is limited to 80% of our current year taxable income. It is uncertain if and to what extent various states will conform to the Tax Act. As of December 31, 2020, we had available federal NOL carry forwards of approximately $78.5 million, of which $75.4 million do not expire.

In addition, under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended (Code), if a corporation undergoes an "ownership change" (generally defined as a cumulative change in the corporation's

ownership by "5-percent shareholders" that exceeds 50 percentage points over a rolling three-year period), the corporation's ability to use its pre-change NOLs and certain other pre-change tax attributes to offset its post-change taxable income may be limited. Similar rules may apply under state tax laws. We have experienced such ownership changes in the past, and we may experience ownership changes in the future as a result of this offering or subsequent shifts in our stock ownership, some of which are outside our control. As of December 31, 2020, a formal study was conducted and concluded that we experienced an ownership change during 2020. As a result, we have removed $3.1 million of deferred tax assets related to NOLs and research tax credit carryforwards due to Section 382 limitations. Our ability to utilize our remaining NOLs and certain other tax attributes could be further limited by a future "ownership change" as described above and consequently, we may not be able to utilize a material portion of our NOLs and certain other tax attributes, which could have a material adverse effect on our cash flows and results of operations.

Risks Related to the Discovery, Development, Manufacturing and Commercialization of Our Product Candidates

Our product candidates are in the early stages of development and we have no products approved for commercial sale. If we are unable to successfully develop, receive regulatory approval for, manufacture and commercialize our product candidates, or successfully develop any other product candidates, or experience significant delays in doing so, our business will be harmed.

We are very early in our development efforts. We have not initiated clinical trials for any of our programs. We do not have any products that are approved for commercial sale, and we may never be able to develop or commercialize marketable products. Before we generate any revenue from product sales, each of our programs and product candidates will require additional preclinical and clinical development, expansion of manufacturing capabilities and expertise, regulatory approval, building a commercial organization or successfully outsourcing commercialization, substantial investment and significant marketing efforts. We are not permitted to market or promote any product candidates before we receive approval from the FDA or comparable foreign regulatory authorities, and we many never receive such approval. Because our product candidates are in an early stage of development, there is a high risk of failure and we may never succeed in developing marketable products.

If we do not successfully initiate and complete our planned clinical trials in a timely manner or fail to achieve favorable results from the trial, we may experience significant delays or other issues in advancing our programs. We cannot be certain that our clinical trials will be initiated and completed on time, if at all, or whether our planned clinical strategy will be acceptable to the FDA or comparable foreign regulatory authorities. There is a high failure rate for biopharmaceutical products proceeding through clinical trials. A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in later stage clinical trials even after achieving promising results in earlier stage clinical trials. Data obtained from preclinical studies and clinical trials are subject to varying interpretations, which may delay, limit or prevent regulatory approval. In addition, regulatory delays or rejections may be encountered as a result of many factors, including changes in regulatory policy during the period of product development.

Because of the early stage of development of our programs, our ability to eventually generate significant revenues from our product candidates, which we do not expect will occur for several years, if ever, will depend on a number of factors, including:

- the successful and timely completion of our ongoing preclinical studies;
- generating sufficient data to support the initiation or continuation of clinical trials;
- addressing any delays, necessary adjustments and additional costs in preclinical studies and clinical trials resulting from factors related to the COVID-19 pandemic;
- submission of INDs or other regulatory applications for our planned clinical trials and authorizations from regulators to initiate clinical trials;

- contracting with the necessary parties to conduct clinical trials;
- successful enrollment in, and completion of, clinical trials on a timely basis;
- achieving favorable results from clinical trials;
- the timely manufacture of sufficient quantities of a product candidate for use in clinical trials and, if approved, commercialization;
- successful outputs from our capsid engineering and promotor and regulator elements efforts;
- sufficiency of our financial and other resources to complete the necessary preclinical studies and clinical trials and commercialization activities;
- the frequency and severity of adverse events in clinical trials;
- demonstrating efficacy, safety and tolerability profiles that are satisfactory to the FDA, EMA or any comparable foreign regulatory authority for marketing approval;
- the timely receipt of marketing approvals from applicable regulatory authorities;
- the extent of any required post-marketing approval commitments to applicable regulatory authorities;
- the maintenance of existing or the establishment of new supply arrangements with third-party drug product suppliers and manufacturers for clinical development and, if approved, commercialization;
- maintaining consistent quality, purity, and potency across clinical supplies and commercial supplies for any approved products;
- obtaining and maintaining patent and other intellectual property protection, trade secret protection and regulatory exclusivity, both in the United States and internationally;
- protecting, enforcing and defending our rights in our intellectual property portfolio;
- our ability to expand into multiple indications;
- the successful launch of commercial sales following any marketing approval;
- a continued acceptable safety profile following any marketing approval;
- the actual market-size, ability to identify patients and the demographics of patients eligible for our product candidates, which may be different than expected;
- commercial acceptance by patients, the medical community and third-party payors, particularly since the product candidates we develop may be novel; and
- our ability to compete with other therapies.

We do not have control over many of these factors, including certain aspects of preclinical and clinical development and the regulatory submission process and potential threats to our intellectual property rights. If we are not successful with respect to one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully commercialize our product candidates, which would materially harm our business.

To become and remain profitable, we must develop, obtain approval for and eventually commercialize products candidates, if approved, that generate significant revenue. We do not expect to receive approval of any product candidates for many years and may never succeed in these activities. In addition, it is not uncommon for product candidates to exhibit unforeseen safety issues or inadequate efficacy when tested in humans despite promising results in preclinical animal models, and we may ultimately be unable to demonstrate adequate safety and efficacy of our product candidates to obtain marketing approval. Even if we obtain approval and begin commercializing one or more of our product candidates, we may never generate revenue that is significant or large enough to achieve profitability.

Even if we succeed in commercializing one or more of our product candidates, we will continue to incur substantial research and development, manufacturing and other expenditures to develop and market additional product candidates. Our failure to become or remain profitable would decrease the value of the company and could impair our ability to raise capital, maintain our research and development efforts, expand our business or continue our operations.

Even if we successfully discover and advance product candidates into clinical development, their success will be subject to all of the clinical, regulatory and commercial risks described elsewhere in this "Risk Factors" section. Accordingly, we cannot assure you that we will ever be able to discover, develop, obtain regulatory approval of, manufacture, commercialize or generate significant revenue from any product candidates.

We intend to identify and develop gene therapy product candidates based on novel technology, and because the regulatory landscape that governs any product candidates we may develop is rigorous, complex, uncertain and subject to change, we cannot predict the time and cost of obtaining regulatory approval, if we receive it at all, for any product candidates we may develop.

We intend to discover, develop, manufacture, and commercialize gene therapy product candidates for the heart. Our product candidates may use both known capsids, such as AAV9, as well as proprietary capsids developed in-house through our own capsid engineering efforts or licensed from third parties. Furthermore, our product candidates may also use novel heart-specific promoters and we may explore different routes-of-administration involving infusion- or injection-based catheters to support targeted delivery and efficient uptake of gene therapies for the heart. We are also establishing proprietary manufacturing processes for our product candidates. Our future success depends on the successful development of these novel therapeutic approaches.

To date, only three products that utilize AAV-mediated gene transfer have been approved in the United States or Europe, including Novartis Pharmaceuticals' Zolgensma (developed by AveXis), Roche's Luxturna (developed by Spark Therapeutics), and uniQure's Glybera. No AAV-based gene therapies have yet been approved for the heart, much less therapies for the heart using novel capsids or promoters or delivery methods. It is therefore difficult to determine how long it will take or how much it will cost to obtain regulatory approvals for our product candidates in the United States, the European Union or other jurisdictions.

The regulatory requirements that will govern any novel gene therapy product candidates we develop are not entirely clear, have changed over time and are subject to further change. Within the broader genetic medicine field, very few therapeutic products have received marketing authorization from the FDA, the EMA or comparable foreign regulatory authorities. Even with respect to more established products that fit into the categories of gene therapies or cell therapies, the regulatory landscape is still developing. Regulatory requirements governing gene therapy products and cell therapy products have changed frequently and will likely continue to change in the future. Moreover, there is substantial overlap in those responsible for regulation of existing gene therapy products and cell therapy products. For example, in the United States, the FDA has established the Office of Tissues and Advanced Therapies within its Center for Biologics Evaluation and Research (CBER) to consolidate the review of gene therapy and related products, and the Cellular, Tissue and Gene Therapies Advisory Committee to advise CBER on its review.

Our product candidates will need to meet safety and efficacy standards applicable to any new biologic under the regulatory framework administered by the FDA. In addition to FDA oversight and oversight by institutional review boards (IRBs), under guidelines promulgated by the National Institutes of Health (NIH), gene therapy clinical trials are also subject to review and oversight 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. 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. Although the FDA decides whether individual gene therapy protocols may proceed, the review process and determinations of other reviewing bodies can impede or delay the initiation of a clinical trial, even if the FDA has reviewed the trial and approved its initiation.

The same applies in the European Union. The EMA's Committee for Advanced Therapies (CAT) is responsible for assessing the quality, safety, and efficacy of advanced-therapy medicinal products. Advanced-therapy medicinal products include gene therapy medicines, somatic-cell therapy medicines and tissue-engineered medicines. The role of the CAT is to prepare a draft opinion on an application for marketing authorization for a gene therapy medicinal candidate that is submitted to the EMA. In the European Union, the development and evaluation of a gene therapy product must be considered in the context of the relevant EU guidelines. The EMA may issue new guidelines concerning the development and marketing authorization for gene therapy products and require that we comply with these new guidelines. As a result, the procedures and standards applied to gene therapy products and cell therapy products may be applied to any gene therapy product candidate we may develop, but that remains uncertain at this point.

Approvals by the EMA may not be indicative of what the FDA may require for approval. Delay or failure to obtain, or unexpected costs in obtaining, the regulatory approvals necessary to bring a potential product to market could decrease our ability to generate sufficient product revenue and our business, financial condition, results of operations and prospects could be materially harmed.

Adverse developments in preclinical studies or clinical trials conducted by others in the field of gene therapy and gene regulation products may cause the FDA, the EMA, and other regulatory bodies to revise the requirements for approval of any product candidates we may develop or limit the use of products utilizing gene regulation technologies, either of which could harm our business. In addition, the clinical trial requirements of the FDA, the EMA, and other regulatory authorities and the criteria these regulators use to determine the safety and efficacy of a product candidate vary substantially according to the type, complexity, novelty, and intended use and market of the potential products. The regulatory approval process for product candidates such as ours can be more expensive and take longer than for other, better known, or more extensively studied pharmaceutical or other product candidates. Further, as we are developing novel potential treatments for diseases in which, in some cases, there is little clinical experience with potential new endpoints and methodologies, there is heightened risk that the FDA, the EMA or other regulatory bodies may not consider the clinical trial endpoints to provide clinically meaningful results, and the resulting clinical data and results may be more difficult to analyze. In addition, we may not be able to identify or develop appropriate animal disease models to enable or support planned clinical development. Any natural history studies that we may conduct or rely upon in our clinical development may not be accepted by the FDA, EMA or other regulatory authorities. Regulatory agencies administering existing or future regulations or legislation may not allow production and marketing of products utilizing gene regulation technology in a timely manner or under technically or commercially feasible conditions. In addition, regulatory action or private litigation could result in expenses, delays, or other impediments to our research programs or the commercialization of resulting products. Further, approvals by one regulatory agency may not be indicative of what other regulatory agencies may require for approval.

The regulatory review committees and advisory groups described above and the new guidelines they promulgate may lengthen the regulatory review process, require us to perform additional preclinical studies or clinical trials, increase our development costs, lead to changes in regulatory positions and interpretations, delay or prevent approval and commercialization of these treatment candidates, or lead to significant post-approval limitations or restrictions. As we advance our research programs and develop future product candidates, we will be required to consult with these regulatory and advisory groups and to comply with applicable guidelines. If we fail to do so, we may be required to delay or discontinue development of any product candidates we identify and develop. These additional processes may result in a review and approval process that is longer than we otherwise would have expected. Delays as a result of an increased or lengthier regulatory approval process or further restrictions on the development of our product candidates can be costly and could negatively impact our ability to complete clinical trials and commercialize our current and future product candidates in a timely manner, if at all.

The mechanisms of action of our product candidates are unproven, and we do not know whether we will be able to develop any drug of commercial value.

We have discovered and are developing product candidates that have what we believe are novel mechanisms of action. Because no currently-approved drugs appear to operate via the same biochemical mechanisms as our compounds, we cannot be certain that our product candidates will result in commercially viable drugs that safely and effectively treat the indications for which we intend to develop them. The results we have seen for our compounds in preclinical models may not translate into similar results in humans, and results of early clinical trials in humans may not be predictive of the results of larger clinical trials that may later be conducted with our product candidates. Even if we are successful in developing and receiving regulatory approval for a product candidate for the treatment of a particular disease, we cannot be certain that it will be accepted by prescribers or be reimbursed by insurers or that we will also be able to develop and receive regulatory approval for that or other product candidates for the treatment of other diseases. If we are unable to successfully develop and commercialize our product candidates, our business will be materially harmed.

Moreover, in the event any of our competitors were to develop their own product candidates that have a similar mechanism of action to any of our product candidates, any efficacy or safety concerns identified during the development of such similar product candidates may have an adverse impact on the development of our product candidates. For example, if our competitors' product candidate having a similar mechanism of action as any of our product candidates is shown in clinical trials to give rise to serious safety concerns or have poor efficacy when administered to the target patient population, the FDA or other regulatory bodies may subject our product candidates to increased scrutiny, leading to additional delays in development and potentially decreasing the chance of ultimate approval of our product candidates.

Preclinical and clinical drug development involves a lengthy and expensive process with an uncertain outcome. The clinical trials of our product candidates may not demonstrate safety and efficacy to the satisfaction of the FDA, EMA or other comparable foreign regulatory authorities or otherwise produce positive results and the results of preclinical studies and early clinical trials may not be predictive of future results. We may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.

It is impossible to predict when or if any product candidate that we develop will prove effective or safe in humans or will receive marketing approval. Before obtaining marketing approval from the FDA, EMA or other comparable foreign regulatory authorities for the sale of our product candidates, we must complete preclinical development and extensive clinical trials to demonstrate with substantial evidence the safety and efficacy of such product candidates.

Clinical testing is expensive, difficult to design and implement, can take many years to complete and its ultimate outcome is uncertain. We cannot guarantee that any of our clinical trials will be conducted as planned or completed on schedule, or at all. Clinical trials can fail at any stage of testing and failure may result from a multitude of factors, including, among other things, flaws in study design, dose selection issues, placebo effects, patient enrollment criteria and failure to demonstrate favorable safety or efficacy traits. The outcome of preclinical studies and early-stage clinical trials may not be predictive of the success of later clinical trials. For example, our product candidates may fail to show the desired safety and efficacy in clinical development despite positive results in preclinical studies or having successfully advanced through initial clinical trials. As a result, we cannot assure you that any clinical trials that we conduct will demonstrate consistent or adequate efficacy and safety to support marketing approval.

Many companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late-stage clinical trials even after achieving promising results in preclinical testing and earlier-stage clinical trials, and we cannot be certain that we will not face similar setbacks. Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their product

candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval of their drugs. This is particularly true for clinical trials in very rare diseases, such as with certain indications we are pursuing, where the very small patient population makes it difficult or impossible to conduct two traditional, adequate and well-controlled studies, and therefore the FDA or comparable foreign regulatory authorities are often permitted to exercise flexibility in approving therapies for such diseases. 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, we may be required to expend significant resources, which may not be available to us, to conduct additional trials in support of potential approval of our product candidates. Furthermore, the failure of any of our product candidates to demonstrate safety and efficacy in any clinical trial could negatively impact the perception of our other product candidates and/or cause the FDA or comparable regulatory authorities to require additional testing before approving any of our product candidates.

To date, we have not initiated or completed any clinical trials required for the approval of our product candidates. We may experience numerous unforeseen events during, or as a result of, preclinical studies or clinical trials that could delay or prevent receipt of marketing approval or our ability to commercialize our product candidates, including:

- inability to generate sufficient preclinical, toxicology, or other *in vivo* or *in vitro* data to support the initiation of clinical trials;
- delays in sufficiently developing, characterizing or controlling a manufacturing process suitable for advanced clinical trials, including our natural history studies;
- receipt of feedback from regulatory authorities that requires us to modify the design of our clinical trials;
- clinical trial observations or results that require us to modify the design of our clinical trials;
- negative or inconclusive clinical trial results that may require us to conduct additional clinical trials or abandon certain drug development programs;
- obtaining approval from one or more IRBs;
- the number of patients required for clinical trials being larger than anticipated, enrollment in these clinical trials being slower than anticipated or participants dropping out of these clinical trials at a higher rate than anticipated;
- any failure or delay in reaching an agreement with 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;
- the suspension or termination of our clinical trials for various reasons, including non-compliance with regulatory requirements or a finding that our product candidates have undesirable side effects or other unexpected characteristics or risks;
- changes to clinical trial protocol;
- clinical sites deviating from trial protocol or dropping out of a trial;
- the cost of clinical trials of our product candidates being greater than anticipated;
- the supply or quality of our product candidates or other materials necessary to conduct clinical trials of our product candidates being insufficient or inadequate;
- subjects experiencing severe or unexpected drug-related adverse effects;
- selection of clinical end points that require prolonged periods of clinical observation or analysis of the resulting data;

- a facility manufacturing our product candidates or any of their components being ordered by the FDA or comparable foreign regulatory authorities to temporarily or permanently shut down due to violations of current good manufacturing practice (cGMPs), regulations or other applicable requirements, or infections or cross-contaminations of product candidates in the manufacturing process;
- any changes to our manufacturing process that may be necessary or desired;
- third-party clinical investigators losing the licenses or permits necessary to perform our clinical trials, not performing our clinical trials on our anticipated schedule or consistent with the clinical trial protocol, good clinical practices (GCP) or other regulatory requirements;
- third-party contractors not performing data collection or analysis in a timely or accurate manner;
- third-party contractors becoming debarred or suspended or otherwise penalized by the FDA or other government or regulatory authorities for violations of regulatory requirements, in which case we may need to find a substitute contractor, and we may not be able to use some or all of the data produced by such contractors in support of our marketing applications;
- regulators revising the requirements for approving our product candidates;
- absence in some countries of established groups with sufficient regulatory expertise for review of AAV gene therapy protocols; and
- the potential burden of complying with a variety of foreign laws, medical standards and regulatory requirements, including the regulation of pharmaceutical and biotechnology products and treatment.

If we are required to conduct additional clinical trials or other testing of our product candidates beyond those that we currently contemplate, if we are unable to successfully complete clinical trials of our product candidates or other testing in a timely manner, if the results of these trials or tests are not positive or are only modestly positive or if there are safety concerns, we may incur unplanned costs, be delayed in seeking and obtaining marketing approval, if we receive such approval at all, receive more limited or restrictive marketing approval, be subject to additional post-marketing testing requirements or have the drug removed from the market after obtaining marketing approval.

Moreover, in the future, principal investigators for our clinical trials may serve as scientific advisors or consultants to us from time to time and receive compensation in connection with such services. Under certain circumstances, we may be required to report some of these relationships to the FDA or comparable foreign regulatory authorities. The FDA or comparable foreign regulatory authority may conclude that a financial relationship between us and a principal investigator has created a conflict of interest or otherwise affected interpretation of the study. The FDA or comparable foreign regulatory authority may therefore question the integrity of the data generated at the applicable clinical trial site and the utility of the clinical trial itself may be jeopardized. This could result in a delay in approval, or rejection, of our marketing applications by the FDA or comparable foreign regulatory authority, as the case may be, and may ultimately lead to the denial of marketing approval of one or more of our product candidates.

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. Moreover, our product development costs will also increase if we experience delays in preclinical studies or clinical trials or in obtaining marketing approvals. We do not know whether any of our preclinical studies or clinical trials will begin as planned, will need to be restructured or will be completed on schedule, or at all. We may also determine to change the design or protocol of one or more of our clinical trials, which could result in increased costs and expenses and/or delays. 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.

In addition, many of the factors that cause, or lead to, termination or suspension of, or a delay in the commencement or completion of, clinical trials may also ultimately lead to the denial of regulatory approval of a

product candidate. Any delays to our clinical trials that occur as a result could shorten any period during which we may have the exclusive right to commercialize our product candidates and our competitors may be able to bring products to market before we do, and the commercial viability of our product candidates could be significantly reduced. Any of these occurrences may harm our business, financial condition and prospects significantly.

Our product candidates may cause serious adverse events, toxicities or other undesirable side effects when used alone or in combination with other approved products or investigational new drugs that may result in a safety profile that could prevent regulatory approval, prevent market acceptance, limit their commercial potential or result in significant negative consequences.

We are developing novel therapies for the treatment of heart disease. As a result, there is uncertainty as to the safety profile of product candidates we may develop. If our product candidates are associated with undesirable side effects or have unexpected characteristics in preclinical studies or clinical trials we may need to interrupt, delay or abandon their development or limit development to more narrow uses or subpopulations in which the undesirable side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective. Treatment-related side effects could also affect patient recruitment or the ability of enrolled subjects to complete the trial or result in potential product liability claims. There is no guarantee that our product candidates will not have side effects similar to those seen in other gene therapies or that we will be able to prevent side effects from escalating to an unsafe level for our patients. Any of these occurrences may prevent us from achieving or maintaining market acceptance of the affected product candidate and may harm our business, financial condition and prospects significantly.

Patients in our planned clinical trials may in the future suffer other serious adverse events or other side effects not observed in our preclinical studies or previous clinical trials. Patients treated with our other product candidates may also be undergoing other therapies which can cause side effects or adverse events that are unrelated to our product candidate but may still impact the success of our clinical trials. The inclusion of critically ill patients in our clinical trials may result in deaths or other adverse medical events due to other therapies or medications that such patients may be using or due to the gravity of such patients' illnesses. For example, it is expected that some of the patients enrolled in our clinical trials will die or experience major clinical events either during the course of our clinical trials or after participating in such trials.

If further serious adverse events or other side effects are observed in any of our current or future clinical trials, we may have difficulty recruiting patients to the clinical trials, patients may drop out of our trials, or we may be required to abandon the trials or our development efforts of that product candidate altogether. We, the FDA, EMA, other comparable regulatory authorities or an IRB may suspend clinical trials of a product candidate at any time for various reasons, including a belief that subjects in such trials are being exposed to unacceptable health risks or adverse side effects. Some potential therapeutics developed in the biotechnology industry that initially showed therapeutic promise in early-stage trials have later been found to cause side effects that prevented their further development. Even if the side effects do not preclude the product candidate from obtaining or maintaining marketing approval, undesirable side effects may inhibit market acceptance due to its tolerability versus other therapies. Any of these developments could materially harm our business, financial condition and prospects. Further, if any of our product candidates obtains marketing approval, toxicities associated with such product candidates previously not seen during clinical testing may also develop after such approval and lead to a requirement to conduct additional clinical safety trials, additional contraindications, warnings and precautions being added to the drug label, significant restrictions on the use of the product or the withdrawal of the product from the market. We cannot predict whether our product candidates will cause toxicities in humans that would preclude or lead to the revocation of regulatory approval based on preclinical studies or early stage clinical trials.

The outcome of preclinical studies and early clinical trials may not be predictive of the success of later clinical trials, and the results of our clinical trials may not satisfy the requirements of the FDA, EMA or other comparable foreign regulatory authorities.

We will be required to demonstrate with substantial evidence through well-controlled clinical trials that our product candidates are safe and effective for use in a diverse population before we can seek marketing approvals for their commercial sale. Success in preclinical studies and early-stage clinical trials does not mean that future clinical trials will be successful. For instance, we do not know whether any of our product candidates will perform in our current or future preclinical studies or future clinical trials as it has in prior preclinical studies or earlier clinical trials. Product candidates in clinical trials may fail to demonstrate sufficient safety and efficacy to the satisfaction of the FDA, EMA and other comparable foreign regulatory authorities despite having progressed through preclinical studies. Regulatory authorities may also limit the scope of later-stage trials until we have demonstrated satisfactory safety, which could delay regulatory approval, limit the size of the patient population to which we may market our product candidates, or prevent regulatory approval.

In some instances, there can be significant variability in safety and efficacy results between different clinical trials of the same product candidate due to numerous factors, including changes in trial protocols, differences in size and type of the patient populations, differences in and adherence to the dose and dosing regimen and other trial protocols and the rate of dropout among clinical trial participants. Patients treated with our product candidates may also be undergoing other therapies and may be using other approved products or investigational new drugs, which can cause side effects or adverse events that are unrelated to our product candidates. As a result, assessments of efficacy can vary widely for a particular patient, and from patient to patient and site to site within a clinical trial. This subjectivity can increase the uncertainty of, and adversely impact, our clinical trial outcomes.

We do not know whether any clinical trials we may conduct will demonstrate consistent or adequate efficacy and safety sufficient to obtain approval to market any of our product candidates.

If we experience delays or difficulties in the enrollment and/or maintenance of patients in clinical trials, our regulatory submissions or receipt of necessary marketing approvals could be delayed or prevented.

We may not be able to initiate or continue clinical trials for our product candidates if we are unable to locate and enroll a sufficient number of eligible patients to participate in these trials to such trial's conclusion as required by the FDA, EMA or other comparable foreign regulatory authorities. Patient enrollment is a significant factor in the timing of clinical trials. Our ability to enroll eligible patients may be limited or may result in slower enrollment than we anticipate.

We may experience delays if our clinical trial sites limit their onsite staff or temporarily close as a result of the COVID-19 pandemic. In addition, patients may not be able to visit clinical trial sites for dosing or data collection purposes due to limitations on travel and physical distancing imposed or recommended by federal or state governments or patients' reluctance to visit the clinical trial sites during the pandemic. These factors resulting from the COVID-19 pandemic could delay the anticipated readouts from our clinical trials and our regulatory submissions.

We are developing product candidates for the treatment of heart disease, including for certain indications, such as rare genetic diseases, with limited patient pools from which to draw for clinical trials. We also may encounter difficulties in identifying and enrolling patients with a stage of disease appropriate for our planned clinical trials and monitoring such subjects adequately during and after treatment. The process of finding and diagnosing patients may prove costly. Further, the treating physicians in our clinical trials may also use their medical discretion in advising patients enrolled in our clinical trials to withdraw from our studies to try alternative therapies.

We expect patient enrollment to be affected because our competitors have ongoing clinical trials for programs that are under development for the same indications as our product candidates, and patients who would

otherwise be eligible for our clinical trials could instead enroll in clinical trials of our competitors' programs. Patient enrollment for our current or any future clinical trials may be affected by other factors, including:

- size and nature of the patient population;
- perceived risks and benefits of novel, unproven approaches;
- severity of the disease under investigation;
- availability and efficacy of approved drugs for the disease under investigation;
- patient eligibility criteria for the trial in question as defined in the protocol;
- perceived risks and benefits of the product candidate under study;
- clinicians' and patients' perceptions as to the potential advantages of the product candidate being studied in relation to other available therapies, including any new products that may be approved or other product candidates being investigated for the indications we are investigating;
- patient referral practices of physicians;
- the ability to monitor patients adequately during and after treatment;
- the activities of key opinion leaders (KOLs) and patient advocacy groups;
- proximity and availability of clinical trial sites for prospective patients; and
- the risk that patients enrolled in clinical trials will drop out of the trials before completion or, because they may have an advanced disease, will not survive the full terms of the clinical trials.

Our inability to enroll a sufficient number of patients for our clinical trials would result in significant delays or may require us to abandon one or more clinical trials altogether. Enrollment delays in our clinical trials may result in increased development costs for our product candidates and jeopardize our ability to obtain marketing approval for the sale of our product candidates. Furthermore, even if we are able to enroll a sufficient number of patients for our clinical trials, we may have difficulty maintaining participation in our clinical trials through the treatment and any follow-up periods.

Due to the significant resources required for the development of product candidates, and depending on our ability to access capital, we must prioritize development of certain programs and product candidates. Moreover, we may expend our limited resources on programs or product candidates that do not yield a successful product and fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success.

Due to the significant resources required for the development of product candidates, in particular our product candidates in IND-enabling studies and those that begin clinical trials, we must decide which programs, product candidates and indications to pursue and advance and the amount of resources to allocate to each. Our decisions concerning the allocation of research, development, collaboration, management and financial resources toward particular programs, product candidates or therapeutic areas may not lead to the development of any viable commercial product and may divert resources away from better opportunities. Similarly, our potential decisions to delay, terminate or collaborate with third parties in respect of certain platforms, programs or product candidates may subsequently also prove to be less than optimal and could cause us to miss valuable opportunities. If we make incorrect determinations regarding the viability or market potential of any of our programs or product candidates or misread trends in the biotechnology industry, in particular in the field of cardiology, our business could be seriously harmed. As a result, we may fail to capitalize on viable commercial products or profitable market opportunities, be required to forego or delay pursuit of opportunities with other programs, product candidates or other diseases that may later prove to have greater commercial potential than those we choose to pursue, or relinquish valuable rights to our platforms or product candidates through collaboration, licensing or other royalty arrangements in cases in which it would have been advantageous for us to invest additional resources to retain sole development and commercialization rights.

We face significant competition and if our competitors develop and market technologies or products more rapidly than we do or that are more effective, safer or less expensive than the products we develop, our commercial opportunities will be negatively impacted.

The biotechnology and biopharmaceutical industries are characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary and novel products and product candidates. Our competitors have developed, are developing or may develop products, product candidates and processes competitive with our product candidates. Any product candidates that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future. We believe that a significant number of products are currently under development, and may become commercially available in the future, for the treatment of conditions for which we may attempt to develop product candidates.

We have competitors both in the United States and internationally, including major multinational pharmaceutical companies, established biotechnology companies, specialty pharmaceutical companies, emerging and start-up companies, universities and other research institutions. We also compete with other organizations to recruit management, scientists and clinical development personnel, which could negatively affect our level of expertise and our ability to execute our business plan. We will also face competition in establishing clinical trial sites, enrolling subjects for clinical trials and in identifying and in-licensing new product candidates.

We expect to face competition from existing products and products in development for each of our programs. We anticipate substantial direct competition from a variety of competitors, including:

- General cardiovascular drug development: Companies known to have approved product and active drug development efforts for cardiovascular disease include but are not limited to AstraZeneca, Bayer, Bristol Myers Squibb, Cytokinetics, Eli Lilly, Johnson & Johnson/Janssen, Maze Therapeutics, Merck, Novartis, and Novo Nordisk;
- Gene Therapy platform: Companies known to be pursuing gene therapy approaches for the heart include but are not limited to 4D Molecular Therapeutics, Bayer, Bristol Myers Squibb, BioMarin Pharmaceutical, DiNAQOR, Precigen, Renova Therapeutics, Renovacor, Rocket Pharmaceuticals, Sardicor, Stride Bio, and uniQure;
- Cellular Regeneration platform: Companies known to be pursuing approaches to cellular regeneration for the heart include but are not limited to AstraZeneca, Bayer, BioCardia, Cardior Pharmaceuticals, Jaan Biotherapeutics, Khloris Biosciences, Mesoblast, Mogrify, Sana Biotechnologies and Xylocor Therapeutics; and
- Precision Medicine platform: Companies known to be pursuing approaches to drug discovery for the heart using disease models based on iPSC-CMs include but are not limited to DiNAQOR and Tara Biosystems.

Many of these current and potential competitors have significantly greater financial, manufacturing, marketing, drug development, technical and human resources and commercial expertise than we do. Large pharmaceutical and biotechnology companies, in particular, have extensive experience in clinical testing, obtaining regulatory approvals, recruiting patients and manufacturing biotechnology products. These companies also have significantly greater research and marketing capabilities than we do and may also have products that have been approved or are in late stages of development, and collaborative arrangements in our target markets with leading companies and research institutions. Established pharmaceutical and biotechnology companies may also invest heavily to accelerate discovery and development of novel compounds or to in-license novel compounds that could make the product candidates that we develop obsolete. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies, as well as in acquiring technologies complementary to, or necessary for, our programs. As a result of all of these factors, our competitors may succeed in obtaining approval from the FDA, EMA or

other comparable foreign regulatory authorities or in discovering, developing and commercializing products in our field before we do.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer side effects, are more convenient, have a broader label, are marketed more effectively, are more widely reimbursed or are less expensive than any products that we may develop. Our competitors also may obtain marketing approval from the FDA, EMA or other comparable foreign regulatory authorities for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. Even if the product candidates we develop achieve marketing approval, they may be priced at a significant premium over competitive products if any have been approved by then, resulting in reduced competitiveness. Technological advances or products developed by our competitors may render our technologies or product candidates obsolete, less competitive or not economical. If we are unable to compete effectively, our opportunity to generate revenue from the sale of our products we may develop, if approved, could be adversely affected.

Interim, topline and preliminary data from our clinical trials that we announce or publish may change as more patient data become available 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 preliminary, interim or topline data from our clinical trials. These interim updates are 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. 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 is available. In addition, we may report interim analyses of only certain endpoints rather than all endpoints. Interim data from clinical trials that we may complete 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 changes between interim data and final data could significantly harm our business and prospects. Further, additional disclosure of interim data by us or by our competitors in the future 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 or product and our company in general. In addition, the information we choose to publicly disclose regarding a particular study or clinical trial is based on what is typically extensive information, and you or others may not agree with what we determine is material or otherwise appropriate information to include in our disclosure. If the preliminary or topline data that we report differ from late, final or actual results, or if others, including regulatory authorities, disagree with the conclusions reached, our ability to obtain approval for, and commercialize, our product candidates may be harmed, which could harm our business, financial condition, results of operations and prospects.

We may not be successful in our efforts to utilize our proprietary drug discovery platforms to develop a pipeline of product candidates.

A key element of our strategy is to leverage our proprietary drug discovery platforms to develop a pipeline of product candidates to treat heart disease. In order to do so, we must continue to invest in our proprietary drug discovery platforms and development capabilities, including our internal disease modeling and capsid

engineering efforts, our in-house cassette engineering capabilities to create novel promoters and regulatory elements to support our programs, and targeted drug delivery approaches for efficient uptake of gene therapies for the heart. Although our research and development efforts to date have resulted in a pipeline of product candidates, these product candidates may not be safe and effective. Our capsid engineering, promoter and regulatory elements may not be successful. In addition, although we expect that our proprietary drug discovery platforms and development capabilities will allow us to develop a diverse pipeline of product candidates, we may not prove to be successful at doing so. Furthermore, we may also find that the uses of our proprietary drug discovery platforms are limited because alternative uses of our therapeutics prove not to be safe or 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 products that will receive marketing approval or achieve market acceptance. Further, because our product candidates and programs are based on our proprietary drug discovery platforms, adverse developments with respect to one of our programs may have a significant adverse impact on the actual or perceived likelihood of success and value of our other programs.

In addition, the biotechnology and pharmaceutical industries are characterized by rapidly advancing technologies. Our future success will depend in part on our ability to maintain a competitive position with our approach. If we fail to stay at the forefront of technological change in utilizing our proprietary drug discovery platforms to create and develop programs and product candidates, we may be unable to compete effectively. Our competitors may render our approach obsolete or limit the commercial value of our product candidates, by advances in existing technological approaches or the development of new or different approaches, potentially eliminating the advantages in our drug discovery process that we believe we derive from our research approach and proprietary technologies. By contrast, adverse developments with respect to other companies that attempt to use a similar approach to our approach may adversely impact the actual or perceived value of our proprietary drug discovery platforms and potential of our programs and product candidates. If any of these events occur, we may be forced to abandon our development efforts for a program or programs, which would have a material adverse effect on our business and could potentially cause us to cease operations.

The manufacture of drugs is complex, and we or our third-party manufacturers may encounter difficulties in production. If we or any of our third-party manufacturers encounter such difficulties, our ability to provide adequate supply of our product candidates for preclinical studies or clinical trials or our products for patients, if approved, could be delayed or prevented.

Manufacturing drugs, especially in large quantities, is complex and may require the use of innovative technologies. Each lot of an approved drug product must undergo thorough testing for safety identity, strength, quality, purity and potency. Manufacturing drugs requires key materials and facilities specifically designed for and validated for this purpose, as well as sophisticated quality assurance and quality control procedures. Slight deviations anywhere in the manufacturing process, including manufacturing drug substance, drug product filling, labeling, packaging, storage and shipping and quality control and testing, may result in lot failures or product recalls. When changes are made to the manufacturing process, we may be required to provide preclinical and clinical data showing the comparable quality and efficacy of the products before and after such changes. If we or our third-party manufacturers are unable to produce sufficient quantities for preclinical studies or clinical trials or for commercialization as a result of these challenges, or otherwise, our development and commercialization efforts would be impaired, which would have an adverse effect on our business, financial condition, results of operations and growth prospects.

Gene therapies are novel, complex and difficult to manufacture. We could experience production problems that result in delays in development or commercialization of our product candidates, limit the supply of our products, if approved, or otherwise seriously harm our business.

Our gene therapy product candidates require processing steps that are more complex than those required for most chemical and protein pharmaceuticals. Moreover, unlike chemical pharmaceuticals, the physical and chemical properties of a biologic such as ours generally cannot be fully characterized. As a result, assays of the finished product may not be sufficient to ensure that the product will perform in the intended manner.

Accordingly, we need to employ multiple steps to control our manufacturing process to assure that the process works and the product candidate is made strictly and consistently in compliance with the process. Problems with the manufacturing process, even minor deviations from the normal process, could result in product defects or manufacturing failures that result in lot failures, product recalls, product liability claims or insufficient inventory, which could delay or prevent the initiation of clinical trials or receipt of regulatory approvals. We may encounter problems achieving adequate quantities and quality of clinical-grade materials that meet FDA, or other comparable applicable foreign regulatory authorities standards or specifications with consistent and acceptable production yields and costs.

In addition, the FDA and other comparable foreign regulatory authorities may require us to submit samples of any lot of any approved product together with the protocols showing the results of applicable tests at any time. Under some circumstances, the FDA or other comparable foreign regulatory authorities may require that we not distribute a lot until the agency authorizes its release. Slight deviations in the manufacturing process, including those affecting quality attributes and stability, may result in unacceptable changes in the product that could result in lot failures or product recalls. Lot failures or product recalls could cause us to delay clinical trials or product launches which could be costly to us and otherwise seriously harm our business.

We also may encounter problems hiring and retaining the experienced scientific, quality control and manufacturing personnel needed to operate our manufacturing process which could result in delays in our production or difficulties in maintaining compliance with applicable regulatory requirements.

Any problems in our manufacturing process or facilities or the facilities with which we contract could make us a less attractive collaborator for potential partners, including larger pharmaceutical companies, which could limit our access to additional attractive development programs. Problems in manufacturing process or facilities also could restrict our ability to meet market demand for our products, if approved. Additionally, should our agreement or agreements with other parties with whom we have manufacturing agreements be terminated for any reason, there are a limited number of manufacturers who would be suitable replacements, and it would take a significant amount of time to transition the manufacturing to a replacement.

We are in the process of building out a manufacturing facility to support future production of certain of our product candidates. We have no experience in manufacturing, and there can be no assurance that we will be able to complete our manufacturing facility or, if completed, we will be able to successfully manufacture product candidates.

We have historically relied on third parties to manufacture supplies of our product candidates. We plan to fully integrate and internalize AAV manufacturing capabilities to support our Gene Therapy and Cellular Regeneration platforms. We have established an in-house Pilot Plant Operation facility that operates at the 200L scale to support all non-clinical studies including IND-enabling pharmacology (efficacy) and toxicology (safety) studies. We have initiated construction of a dedicated cGMP facility for drug product manufacturing in the San Francisco Bay Area that we expect will be operational by the end of 2021. The facility will initially produce drug product at the 1000L scale to support FIH studies for TN-201, the most advanced product candidate from our MYBPC3 program. To optimize our use of resources and utilize extensive third-party experience in small molecule manufacturing, we intend to work with CDMOs for our small molecule programs. We intend to initiate cGMP manufacturing for our HDAC6 inhibitor program, TYA-11631, before the end of 2021.

Although some of our employees have experience in the manufacturing of biopharmaceutical products from prior employment at other companies, we as a company have no prior experience in manufacturing. We may face delays or increased costs in the build out of our manufacturing facility or the production of clinical supply at our manufacturing facility, once operational, and cannot guarantee when our facility will be able to produce sufficient quantities of product candidates needed to support our preclinical studies and planned clinical trials. In addition, government approvals will be required for us to operate our manufacturing facility and can be time-consuming to obtain, and there can be no assurance that such approval will be obtained. As a manufacturer of pharmaceutical products, we also will be required to demonstrate and maintain compliance with cGMP requirements related to

production processes, quality control and assurance and recordkeeping. Furthermore, establishing and maintaining manufacturing operations may require a reallocation of other resources and management time, as well as potentially significant capital expenditures, particularly in areas relating to operations, quality, regulatory, facilities and information technology. We also may encounter problems hiring and retaining the experienced scientific, quality control and manufacturing personnel needed to operate our manufacturing processes. If we experience unanticipated employee shortage or turnover in any of these areas, we may not be able to effectively manage our ongoing manufacturing operations and we may not achieve the operating efficiencies that we anticipate from developing these capabilities, which may negatively affect our product development timelines or result in difficulties in maintaining compliance with applicable regulatory requirements.

Any delays in developing our internal manufacturing capabilities may disrupt or delay the supply of our product candidates if we have not maintained a sufficient back-up supply of such product candidates through third-party manufacturers. Moreover, changing manufacturing facilities during the clinical development process may also require that we conduct additional studies, make notifications to regulatory authorities, make additional filings to regulatory authorities, and obtain regulatory authority approval for the new facilities, which may be delayed or which we may never receive.

Any failure or delay in the development of our manufacturing facility or capabilities may hamper our ability to further process improvement, maintain quality control, limit our reliance on contract manufacturers and protect our trade secrets and other intellectual property, and could adversely impact the development or commercialization of our product candidates.

Our manufacturing facilities will be subject to significant government regulations and approvals, which are often costly and could result in adverse consequences to our business if we fail to comply with the regulations or maintain the approvals.

We will need to comply with the FDA's and applicable foreign regulatory authorities' cGMP requirements for the production of product candidates for clinical trials and, if approved, commercial supply. We may encounter difficulties in achieving quality control and quality assurance and may experience shortages in qualified personnel. We will be subject to inspections by the FDA and comparable agencies in other jurisdictions to confirm compliance with applicable regulatory requirements. These requirements include the qualification and validation of our manufacturing equipment and processes. Any failure to follow cGMP or other regulatory requirements or delay, interruption or other issues that arise in the manufacture of our product candidates as a result of a failure of our facilities or the facilities or operations of our third-party suppliers to comply with regulatory requirements or pass any regulatory authority inspection could significantly impair our ability to develop and commercialize our product candidates, including leading to significant delays in the availability of our product candidates for our clinical trials or the termination or hold on a clinical trial, or the delay or prevention of a filing or approval of marketing applications for our product candidates. Significant noncompliance could also result in the imposition of sanctions, including fines, injunctions, civil penalties, failure of regulatory authorities to grant marketing approvals for our product candidates, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of products, operating restrictions and criminal prosecutions, any of which could damage our reputation. If we are not able to maintain regulatory compliance, we may not be permitted to market our product candidates and/or may be subject to product recalls, seizures, injunctions, or criminal prosecution.

We may not be able to successfully manufacture our product candidates in sufficient quality and quantity, which would delay or prevent us from developing our product candidates and commercializing resulting approved products, if any.

To date, our product candidates have been manufactured in quantities adequate for preclinical studies. In order to conduct clinical trials for a product candidate and for commercialization of the resulting product if that product candidate is approved for sale, we will need to manufacture product candidates in larger quantities. We may not be able to successfully repeat or increase the manufacturing capacity for any of our product candidates

in a timely or cost-effective manner or at all. Significant changes or scale-up of manufacturing may require additional validation studies, which are costly and which regulatory authorities must review and approve. In addition, quality issues may arise during those changes or scale-up activities. If we are unable to successfully manufacture of any of our product candidates in sufficient quality and quantity, the development of that product candidate and regulatory approval or commercial launch for any resulting products may be delayed or there may be a shortage in supply, which could significantly harm our business.

Changes in methods of product candidate manufacturing or formulation may result in additional costs or delay.

As product candidates progress through preclinical studies and clinical trials to marketing approval and commercialization, it is common that various aspects of the development program, such as manufacturing methods and formulation, are altered along the way in an effort to optimize yield and manufacturing batch size, minimize costs and achieve consistent quality and results. Such changes carry the risk that they will not achieve these intended objectives. Any of these changes could cause our product candidates to perform differently and affect the results of planned clinical trials or other future clinical trials conducted with the altered materials. This could delay completion of clinical trials, require the conduct of bridging clinical trials or the repetition of one or more clinical trials, increase clinical trial costs, delay approval of our product candidates and jeopardize our ability to commercialize our product candidates, if approved, and generate revenue.

Even if approved, we may not successfully commercialize our product candidates.

Our product candidates are subject to the risks of failure inherent in the development of pharmaceutical products based on new technologies, and our failure to develop safe, commercially viable products would severely limit our ability to become profitable or to achieve significant revenues. Even if one or more of our product candidates is approved, we may be unable to successfully commercialize our product candidates for several reasons, including:

- some or all of our product candidates may be found to be unsafe or ineffective or otherwise fail to meet applicable regulatory standards or receive necessary regulatory clearances; our product candidates, if safe and effective, may nonetheless not be able to be developed into commercially viable products;
- it may be difficult to manufacture or market our product candidates on a scale that is necessary to ultimately deliver our products to end-users;
- intellectual property and proprietary rights of third parties may preclude us from marketing our product candidates;
- the nature of our indications as rare diseases means that the potential market size may be limited; and
- third parties may market superior or equivalent drugs which could adversely affect the commercial viability and success of our product candidates.

Our product candidates may not achieve adequate market acceptance among physicians, patients, healthcare payors and others in the medical community necessary for commercial success.

Even if our product candidates receive regulatory approval, they may not gain adequate market acceptance among physicians, patients, third-party payors and others in the medical community. If we are unable to demonstrate sufficient safety to permit a broader use of our product candidates, we may not generate significant product revenue and we may not become profitable. The degree of market acceptance of any of our approved product candidates will depend on a number of factors, including:

- the efficacy and safety profile as demonstrated in clinical trials compared to alternative treatments;
- the timing of market introduction of the product candidate as well as competitive products;

- the clinical indications for which a product candidate is approved;
- restrictions on the use of product candidates in the labeling approved by regulatory authorities, such as boxed warnings or contraindications in labeling, or a risk evaluation and mitigation strategy, if any, which may not be required of alternative treatments and competitor products;
- physicians, hospitals, treatment centers and patients considering our product candidates as a safe, pure and effective treatment;
- the perceived prevalence and severity of any side effects for our product candidates compared to the prevalence and severity of any side effects for conventional products and other gene therapies;
- the potential and perceived advantages of our product candidates over alternative treatments;
- the cost of treatment in relation to alternative treatments;
- relative convenience and ease of administration;
- the willingness of the target patient population or their caregivers to try new therapies and of physicians to prescribe these therapies;
- the availability of coverage and adequate reimbursement by third-party payors, including government authorities;
- patients' willingness to pay for these therapies in the absence of such coverage and adequate reimbursement;
- the effectiveness of sales and marketing efforts;
- support from KOLs and patient advocacy groups;
- unfavorable publicity relating to our product candidates; and
- the approval of other new therapies for the same indications.

If any of our product candidates are approved but do not achieve an adequate level of acceptance by physicians, hospitals, healthcare payors and patients, we may not generate or derive sufficient revenue from that product candidate and our financial results could be negatively impacted.

Adverse public perception or regulatory scrutiny of gene therapy technology or precision medicine for the treatment of heart diseases may negatively impact the developmental progress or commercial success of product candidates that we develop.

The developmental and commercial success of product candidates that we develop will depend in part on public acceptance of the use of gene therapy technology, including the use of AAVs, and precision medicine for the prevention or treatment of human diseases. Adverse public perception of gene therapies or precision medicine may negatively impact our ability to raise capital or enter into strategic agreements for the development of product candidates.

Gene therapy and precision medicine remain novel technologies. The commercial success of our products, if successfully developed and approved, may be adversely affected by claims that gene therapy or precision medicine is unsafe, unethical or immoral. This may lead to unfavorable public perception and the inability of any of our product candidates to gain the acceptance of the public or the medical community. Unfavorable public perceptions may also adversely impact our ability to enroll clinical trials for our product candidates. Moreover, success in commercializing any product candidates that receive regulatory approval will depend upon physicians prescribing, and their patients being willing to receive, treatments that involve the use of such product candidates in lieu of, or in addition to, existing treatments with which they are already familiar and for which greater clinical data may be available.

Publicity of any adverse events in, or unfavorable results of, preclinical studies or clinical trials for any current or future product candidates, or with respect to the studies or trials of our competitors or of academic researchers utilizing similar technologies, even if not ultimately attributable to our technology or product candidates, could negatively influence public opinion. Negative public perception about the use of AAV technology in human therapeutics or precision medicine, whether related to our technology or our competitor's technology, could result in increased governmental regulation, delays in the development and commercialization of product candidates or decreased demand for the resulting products, any of which may seriously harm our business.

The limited number of patients who have the diseases for which our product candidates are being developed may make it more difficult for us to enroll or complete clinical trials or may result in findings in our clinical trials that do not reach levels of statistical significance sufficient for marketing approval. Even if such product candidates achieve marketing approval, because such target patient populations are small and the addressable patient population may be even smaller, we must be able to successfully identify patients and capture a significant market share to achieve profitability and growth.

Some of the indications for which we plan to evaluate our product candidates in clinical trials are rare genetic diseases. Accordingly, there are limited patient pools from which to draw for clinical trials. In addition to the rarity of these diseases, the eligibility criteria of our planned clinical trials will further limit the pool of available study participants as we will require that patients have specific characteristics that we can measure to assure their disease is either severe enough or not too advanced to include them in a trial. Moreover, the effort to identify patients with diseases we seek to treat is in early stages, and we cannot accurately predict the number of patients for whom treatment might be possible. We may not be able to initiate or continue clinical trials on a timely basis or at all for our product candidates if we are unable to locate and enroll a sufficient number of eligible patients to participate in the trials as required by applicable regulations or as needed to provide appropriate statistical power for a given trial. Similarly, because some of the conditions we intend to treat are rare in nature, we plan to design and conduct clinical trials utilizing a small number of patients in order to evaluate the safety and therapeutic activity of our product candidates. Conducting trials in smaller subject populations increases the risk that any safety or efficacy issues observed in only a few patients could prevent such trials from reaching statistical significance or otherwise meeting their specified endpoints, which could require us to conduct additional clinical trials, or delay or prevent our product candidates from receiving regulatory approval, which would seriously harm our business.

Additionally, the potentially addressable patient population for our product candidates may be limited or may not be amenable to treatment with our product candidates, and new patients may become increasingly difficult to identify or gain access to, which would adversely affect our results of operations and our business. Further, even if we obtain significant market share for our product candidates, because the potential target populations are very small, we may never achieve profitability despite obtaining such significant market share.

Any product candidates we develop may become subject to unfavorable third-party coverage and reimbursement practices, as well as pricing regulations.

The availability and extent of coverage and adequate reimbursement by third-party payors including government health administration authorities, private health coverage insurers, managed care organizations and other third-party payors is essential for most patients to be able to afford expensive treatments. The indications we are initially pursuing have small patient populations. For product candidates that are designed to treat smaller patient populations to be commercially viable, the reimbursement for such product candidates must be higher, on a relative basis, to account for the lack of volume. Accordingly, we will need to implement a coverage and reimbursement strategy for any approved product candidate that accounts for the smaller potential market size.

Sales of any of our product candidates that receive marketing approval will depend substantially, both in the United States and internationally, on the extent to which the costs of such product candidates will be covered and

reimbursed by third-party payors. If reimbursement is not available, or is available only to limited levels, we may not be able to successfully commercialize our product candidates. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us to establish or maintain pricing sufficient to realize an adequate return on our investment. Coverage and reimbursement may impact the demand for, or the price of, any product candidate for which we obtain marketing approval. If coverage and reimbursement are not available or reimbursement is available only to limited levels, we may not successfully commercialize any product candidate for which we obtain marketing approval.

There is significant uncertainty related to third-party payor coverage and reimbursement of newly approved products. In the United States, for example, principal decisions about reimbursement for new products are typically made by the Centers for Medicare & Medicaid Services (CMS), an agency within the U.S. Department of Health and Human Services (HHS). CMS decides whether and to what extent a new product will be covered and reimbursed under Medicare, and private third-party payors often follow CMS's decisions regarding coverage and reimbursement to a substantial degree. However, one third-party payor's determination to provide coverage for a product candidate does not assure that other payors will also provide coverage for the product candidate or at the same level of reimbursement. As a result, the coverage determination process is often time-consuming and costly. This process will require us to provide scientific and clinical support for the use of our products to each third-party payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance.

Increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products. Further, such payors are increasingly challenging the price, examining the medical necessity and reviewing the cost effectiveness of medical product candidates. There may be especially significant delays in obtaining coverage and reimbursement for newly approved drugs. Third-party payors may limit coverage to specific product candidates on an approved list, known as a formulary, which might not include all FDA-approved drugs for a particular indication. We may need to conduct expensive pharmaco-economic studies to demonstrate the medical necessity and cost effectiveness of our products. Nonetheless, our product candidates may not be considered medically necessary or cost effective. We cannot be sure that coverage and reimbursement will be available for any product that we commercialize and, if reimbursement is available, what the level of reimbursement will be.

Outside the United States, the commercialization of therapeutics is generally subject to extensive governmental price controls and other market regulations, and we believe the increasing emphasis on cost containment initiatives in Europe, Canada and other countries has and will continue to put pressure on the pricing and usage of therapeutics such as our product candidates. In many countries, particularly the countries of the European Union, medical product prices are subject to varying price control mechanisms as part of national health systems. In these countries, pricing negotiations with governmental authorities can take considerable time after a product receives marketing approval. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our product candidate to other available therapies. In general, product prices under such systems are substantially lower than in the United States. Other countries allow companies to fix their own prices for products but monitor and control company profits. Additional foreign price controls or other changes in pricing regulation could restrict the amount that we are able to charge for our product candidates. Accordingly, in markets outside the United States, the reimbursement for our products may be reduced compared with the United States and may be insufficient to generate commercially reasonable revenue and profits.

If we are unable to establish or sustain coverage and adequate reimbursement for any product candidates from third-party payors, the adoption of those products and sales revenue will be adversely affected, which, in turn, could adversely affect the ability to market or sell those product candidates, if approved. Coverage policies and third-party payor reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

Our business entails a significant risk of product liability and if we are unable to obtain sufficient insurance coverage, such inability could have an adverse effect on our business and financial condition. If product liability lawsuits are brought against us, we may incur substantial liabilities and may be required to limit commercialization of our products.

Our business exposes us to significant product liability risks inherent in the development, testing, manufacturing and marketing of therapeutic treatments. We currently have no product liability insurance. Any insurance we have or may obtain may not provide sufficient coverage against potential liabilities. Furthermore, clinical trial and product liability insurance is becoming increasingly expensive. As a result, we may be unable to obtain sufficient insurance at a reasonable cost to protect us against losses caused by product liability claims that could have an adverse effect on our business and financial condition. Also, our insurance policies may have various exclusions, and we may be subject to a product liability claim for which we have no coverage. We may have to pay any amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient capital to pay such amounts. Even if our agreements with any future collaborators entitle us to indemnification against losses, such indemnification may not be available or adequate should any claim arise.

We may be sued if any of our product candidates cause or are perceived to cause injury or are found to be otherwise unsuitable during clinical testing, manufacturing, marketing, or sale post-approval. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability, or a breach of warranties. Claims could also be asserted under state consumer protection laws. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit testing and commercialization of our products. Even successful defense would require significant financial and management resources.

Regardless of the merits or eventual outcome, liability claims may result in:

- delays in the development of our product candidates;
- FDA, EMA or other regulatory authority investigation of the safety and effectiveness of our products, our manufacturing processes and facilities or our marketing programs;
- decreased or interrupted demand for our products;
- injury to our reputation;
- withdrawal of clinical trial participants and inability to continue clinical trials;
- 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; and
- the inability to commercialize any products.

Risks Related to Regulatory Approval and Other Legal Compliance Matters

The regulatory approval processes of the FDA, EMA and other comparable foreign regulatory authorities are lengthy, time consuming and inherently unpredictable. If we are ultimately unable to obtain regulatory approval of our product candidates, we will be unable to generate product revenue and our business will be substantially harmed.

Our product candidates are and will continue to be subject to extensive governmental regulations relating to, among other things, research, testing, development, manufacturing, safety, efficacy, approval, recordkeeping, reporting, labeling, storage, packaging, advertising and promotion, pricing, marketing and distribution of drugs. Rigorous preclinical testing and clinical trials and an extensive regulatory approval process must be successfully completed in the United States and in many foreign jurisdictions before a new drug can be approved for marketing. Obtaining approval by the FDA, EMA and other comparable foreign regulatory authorities is costly, unpredictable, typically takes many years following the commencement of clinical trials and depends upon numerous factors, including the type, complexity and novelty of the product candidates involved. In addition, approval policies, regulations or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions, which may cause delays in the approval or the decision not to approve an application. Regulatory authorities have substantial discretion in the approval process and may refuse to accept any application or may decide that our data are insufficient for approval and require additional preclinical, clinical or other data. Even if we eventually complete clinical testing and receive approval for our product candidates, the FDA, EMA and other comparable foreign regulatory authorities may approve our product candidates for a more limited indication or a narrower patient population than we originally requested or may impose other prescribing limitations or warnings that limit the product's commercial potential. We have not submitted for, or obtained, regulatory approval for any product candidate, and it is possible that none of our product candidates will ever obtain regulatory approval. Further, development of our product candidates and/or regulatory approval may be delayed for reasons beyond our control. We cannot provide any assurance that any product candidate we may develop will progress through required clinical testing and obtain the regulatory approvals necessary for us to begin selling them.

We have not initiated, conducted, managed or completed any clinical trials nor managed the regulatory approval process with the FDA or any other regulatory authority. Applications for our product candidates could fail to receive regulatory approval for many reasons, including the following:

- the FDA, EMA or other comparable foreign regulatory authorities may disagree with the design, implementation or results of our clinical trials;
- the FDA, EMA or other comparable foreign regulatory authorities may determine that our product candidates are not safe and effective, are only moderately effective or have undesirable or unintended side effects, toxicities or other characteristics that preclude our obtaining marketing approval or prevent or limit commercial use;
- the population studied in the clinical trial may not be sufficiently broad or representative to assure efficacy and safety in the full population for which we seek approval;
- the FDA, EMA or other comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- we may be unable to demonstrate to the FDA, EMA or other comparable foreign regulatory authorities that our product candidate's risk-benefit ratio for its proposed indication is acceptable;
- the FDA, EMA or other comparable foreign regulatory authorities may fail to approve the manufacturing processes, test procedures and specifications or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; and
- the approval policies or regulations of the FDA, EMA or other 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 the results of clinical trials, 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. Any delay or failure in seeking or obtaining required approvals would have a material and adverse effect on our ability to generate revenue from any particular product candidates we are developing and for which we are seeking approval. Furthermore, any regulatory approval to market a drug may be subject to significant limitations on the approved uses or indications for which we may market, promote and advertise the drug or the labeling or other restrictions. In addition, the FDA has the authority to require a Risk Evaluation and Mitigation Strategy (REMS) plan as part of approving an NDA, or after approval, which may impose further requirements or restrictions on the distribution or use of an approved drug. These requirements or restrictions might include 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. These limitations and restrictions may significantly limit the size of the market for the drug and affect reimbursement by third-party payors.

We are also subject to numerous foreign regulatory requirements governing, among other things, the conduct of clinical trials, manufacturing and marketing authorization, pricing and third-party reimbursement. The foreign regulatory approval process varies among countries, and generally includes all of the risks associated with FDA and EMA approval described above as well as risks attributable to the satisfaction of local regulations in foreign jurisdictions. Moreover, the time required to obtain approval may differ from that required to obtain FDA approval.

The FDA, EMA and other comparable foreign regulatory authorities may not accept data from trials conducted in locations outside of their jurisdiction.

We are planning on undertaking clinical trials in the United States and additional clinical trials internationally. The acceptance of study data by the FDA, EMA or other comparable foreign regulatory authority from clinical trials conducted outside of their respective jurisdictions may be subject to certain conditions. In cases where data from U.S. clinical trials are intended to serve as the basis for marketing approval in the foreign countries outside the United States, the standards for clinical trials and approval may be different. There can be no assurance that any U.S. or foreign regulatory authority would accept data from trials conducted outside of its applicable jurisdiction. If the FDA, EMA or any applicable foreign regulatory authority does not accept such data, it would result in the need for additional trials, which would be costly and time-consuming and delay aspects of our business plan, and which may result in our product candidates not receiving approval or clearance for commercialization in the applicable jurisdiction.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not mean that we will be successful in obtaining regulatory approval of our product candidates in other jurisdictions.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not guarantee that we will be able to obtain or maintain regulatory approval in any other jurisdiction. For example, even if the FDA or EMA grants marketing approval of a product candidate, comparable regulatory authorities in foreign jurisdictions must also approve the manufacturing, marketing and promotion and reimbursement of the product candidate in those countries. However, a failure or delay in obtaining regulatory approval in one jurisdiction may have a negative effect on the regulatory approval process in others. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from those in the United States, including additional preclinical studies or clinical trials as clinical trials conducted in one jurisdiction may not be accepted by regulatory authorities in other jurisdictions. In many jurisdictions outside the United States, a product candidate must be approved for reimbursement before it can be approved for sale in that jurisdiction. In some cases, the price that we intend to charge for our products is also subject to approval.

Obtaining foreign regulatory approvals and establishing and maintaining compliance with foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the

introduction of our products in certain countries. If we or any future collaborator fail to comply with the regulatory requirements in international markets or fail to receive applicable marketing approvals, our target market will be reduced and our ability to realize the full market potential of our potential product candidates will be harmed.

Even if we successfully complete the necessary preclinical studies and clinical trials, we cannot predict when, or if, we will obtain regulatory approval to commercialize a product candidate and the approval may be for a narrower indication than we seek.

We cannot commercialize a product candidate until the appropriate regulatory authorities have reviewed and approved the product candidate. We have not received approval from regulatory authorities in any jurisdiction to market any of our product candidates. Even if our product candidates meet their safety and efficacy endpoints in clinical trials, the regulatory authorities may not complete their review processes in a timely manner, issue a complete response letter, or ultimately, we may not be able to obtain regulatory approval. In addition, we may experience delays or rejections if an FDA Advisory Committee recommends disapproval or restrictions on use. In addition, we may experience delays or rejections based upon additional government regulation from future legislation or administrative actions, or changes in regulatory authority policy during the period of product development, clinical trials and the review process. Regulatory authorities have substantial discretion in the approval process and may refuse to accept any application or may decide that our data are insufficient for approval and require additional preclinical, clinical or other studies. In addition, varying interpretations of data obtained from preclinical and clinical testing could delay, limit or prevent the receipt of marketing approval for a product candidate.

Regulatory authorities also may approve a product candidate for more limited indications than requested or they may impose significant limitations in the form of narrow indications, warnings or other labeling changes. These regulatory authorities may require precautions or contra-indications with respect to conditions of use or they may grant approval subject to the performance of costly post-marketing clinical trials. Regulatory authorities may impose restrictions and conditions on product distribution, prescribing, or dispensing in the form of a REMS or equivalent requirement. In addition, regulatory authorities may not approve the labeling claims that are necessary or desirable for the successful commercialization of our product candidates. Any of the foregoing scenarios could materially harm the commercial prospects for our product candidates and materially harm our business, financial condition, results of operations and prospects.

Even if our product candidates receive regulatory approval, they will be subject to significant post-marketing regulatory requirements and oversight.

Any regulatory approvals that we may receive for our product candidates will require the submission of reports to regulatory authorities and on-going surveillance to monitor the safety and efficacy of the product candidate, may contain significant limitations related to use restrictions for specified age groups, warnings, precautions or contraindications, and may include burdensome post-approval study or risk management requirements and regulatory inspection. For example, the FDA may require a REMS in order to approve our product candidates, which could entail requirements for a medication guide, physician training and communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. In addition, if the FDA or foreign regulatory authorities approve our product candidates, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion, import, export and recordkeeping for our product candidates 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 on-going compliance with cGMPs and GCPs for any clinical trials that we conduct post-approval. In addition, manufacturers of drug products and their facilities are subject to continual review and periodic, unannounced inspections by the FDA and other regulatory authorities for compliance with cGMP regulations and standards. If we or a regulatory agency discover previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the

facilities where the product is manufactured, a regulatory agency may impose restrictions on that product, the manufacturing facility or us, including requiring recall or withdrawal of the product from the market or suspension of manufacturing. In addition, failure to comply with FDA, EMA and other comparable foreign regulatory requirements may subject our company to administrative or judicially imposed sanctions, including:

- delays in or the rejection of product approvals;
- restrictions on our ability to conduct clinical trials, including full or partial clinical holds on ongoing or planned trials;
- restrictions on the products, manufacturers or manufacturing process;
- warning or untitled letters;
- civil and criminal penalties;
- injunctions;
- suspension or withdrawal of regulatory approvals;
- product seizures, detentions or import bans;
- voluntary or mandatory product recalls and publicity requirements;
- total or partial suspension of production; and
- imposition of restrictions on operations, including costly new manufacturing requirements.

The occurrence of any event or penalty described above may inhibit our ability to commercialize our product candidates, if approved, and generate revenue. Furthermore, non-compliance by us or any future collaborator with regulatory requirements, including safety monitoring and with requirements related to the development of products for the pediatric population can also result in significant financial penalties.

We may not be able to obtain orphan drug designation or obtain or maintain orphan drug exclusivity for our product candidates and, even if we do, that exclusivity may not prevent the FDA, EMA or other comparable foreign regulatory authorities, from approving competing products.

Regulatory authorities in some jurisdictions, including the United States and the European Union, may designate drugs for relatively small patient populations as orphan drugs. Under the Orphan Drug Act, the FDA may designate a product as an orphan drug if it is a drug intended to treat a rare disease or condition, which is generally defined as a patient population of fewer than 200,000 individuals annually in the United States, or a patient population greater than 200,000 in the United States where there is no reasonable expectation that the cost of developing the drug will be recovered from sales in the United States. Similarly, in Europe, the European Commission, upon the recommendation of the EMA's Committee for Orphan Medicinal Products, grants orphan drug designation to promote the development of drugs that are intended for the diagnosis, prevention or treatment of life-threatening or chronically debilitating conditions affecting not more than five in 10,000 persons in Europe and for which no satisfactory method of diagnosis, prevention, or treatment has been authorized (or the product would be a significant benefit to those affected). Additionally, designation is granted for drugs intended for the diagnosis, prevention, or treatment of a life-threatening, seriously debilitating or serious and chronic condition and when, without incentives, it is unlikely that sales of the drug in Europe would be sufficient to justify the necessary investment in developing the drug. In Europe, orphan drug designation entitles a party to financial incentives such as reduction of fees or fee waivers. However, there can be no assurances that we will be able to obtain orphan designations for our product candidates.

In the United States, orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages and user-fee waivers. In addition, if a product that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such

designation, the product is entitled to orphan drug exclusivity. Orphan drug exclusivity in the United States provides that the FDA may not approve any other applications, including a full NDA, to market the same drug for the same indication for seven years, except in limited circumstances. The applicable exclusivity period is 10 years in Europe. The European exclusivity period can be reduced to six years if a drug no longer meets the criteria for orphan drug designation or if the drug is sufficiently profitable so that market exclusivity is no longer justified.

The FDA has granted orphan drug designation for TN-201, the most advanced product candidate from our *MYBPC3* program, and we may seek orphan drug designation for other product candidates in the United States, Europe and other jurisdictions. Even if we obtain orphan drug designation for a product candidate, we may not be able to obtain or maintain orphan drug exclusivity for that product candidate. We may not be the first to obtain marketing approval of any product candidate for which we have obtained orphan drug designation for the orphan-designated indication due to the uncertainties associated with developing pharmaceutical products. In addition, exclusive marketing rights in the United States may be limited if we seek approval for an indication broader than the orphan-designated indication or may be lost if the FDA later determines that the request for designation was materially defective or if we are unable to ensure that we will be able to manufacture sufficient quantities of the product to meet the needs of patients with the rare disease or condition. Further, even if we obtain orphan drug exclusivity for a product, that exclusivity may not effectively protect the product from competition because different drugs with different active moieties may be approved for the same condition. Even after an orphan drug is approved, the FDA can subsequently approve the same drug with the same active moiety for the same condition if the FDA concludes that the later drug is clinically superior in that it is shown to be safer, more effective or makes a major contribution to patient care or the manufacturer of the product with orphan exclusivity is unable to maintain sufficient product quantity. Orphan drug designation neither shortens the development time or regulatory review time of a drug nor gives the product candidate any advantage in the regulatory review or approval process or entitles the product candidate to priority review.

We may face difficulties from changes to current FDA and healthcare regulations and future legislation.

Existing regulatory policies 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 action, either in the United States or abroad. 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.

We also 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 current U.S. administration may impact our business and industry, which could impose significant burdens on, or otherwise materially delay, the FDA's ability to engage in routine regulatory and oversight activities such as implementing statutes through rulemaking, issuance of guidance, and review and approval of marketing applications. It is difficult to predict how current and future legislation, executive actions, and litigation, including the executive orders referenced below, will be implemented, and the extent to which they will impact our business, our clinical development, and the FDA's and other agencies' ability to exercise their regulatory authority, including FDA's pre-approval inspection and timely review of any regulatory filings or applications we submit to the FDA. If these executive actions impose constraints on FDA's ability to engage in oversight and implementation activities in the normal course or constraints on our business operations, including operations of our contractors, our business may be negatively impacted.

For example, in March 2010, the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010 (collectively, the ACA), was passed, which substantially changed the way healthcare is financed by both the government and private insurers, and continues to

significantly impact the U.S. pharmaceutical industry. Since its enactment, there have been judicial and Congressional challenges to certain aspects of the ACA. For example, various portions of the ACA are currently undergoing legal and constitutional challenges in the United States Supreme Court. Although the Supreme Court has not yet ruled on the constitutionality of the ACA, on January 28, 2021, President Biden issued an executive order to initiate a special enrollment period for purposes of obtaining health insurance coverage through the ACA marketplace. The executive order also instructs certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare, including among others, reexamining Medicaid demonstration projects and waiver programs that include work requirements, and policies that create unnecessary barriers to obtaining access to health insurance coverage through Medicaid or the ACA. We cannot predict how the Supreme Court will rule on these challenges, how future litigation will impact our business, or what other healthcare measures and regulations will ultimately be implemented at the federal or state level or the effect of any future legislation or regulation may have on our business.

In addition, other legislative changes have been proposed and adopted in the United States since the ACA was enacted. These changes included aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, effective April 1, 2013, which will remain in effect through 2030, with the exception of a temporary suspension implemented under various COVID-19 relief legislation from May 1, 2020 through the end of 2021, unless additional congressional action is taken. In January 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, which, among other things, reduced Medicare payments to several providers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These laws may result in additional reductions in Medicare and other healthcare funding, which could have a material adverse effect on customers for our drugs, if approved, and accordingly, our financial operations.

Moreover, there has been heightened governmental scrutiny recently over the manner in which drug manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed and enacted federal and state legislation 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. For example, in May 2019, CMS issued a final rule to allow Medicare Advantage Plans the option of using step therapy for Part B drugs beginning January 1, 2020. This final rule codified CMS's policy change that was effective January 1, 2019. At the federal level, the Trump administration used several means to propose or implement drug pricing reform, including through federal budget proposals, executive orders and policy initiatives. For example, in 2020, HHS and CMS issued various rules that are expected to impact, among others, price reductions from pharmaceutical manufacturers to plan sponsors under Part D, fee arrangements between pharmacy benefit managers and manufacturers, manufacturer price reporting requirements under the Medicaid Drug Rebate Program, including regulations that affect manufacturer-sponsored patient assistance programs subject to pharmacy benefit manager accumulator programs and Best Price reporting related to certain value-based purchasing arrangements. Multiple lawsuits have been brought against the HHS challenging various aspects of the rules. In January 2021, the Biden administration issued a "regulatory freeze" memorandum that directs department and agency heads to review new or pending rules of the prior administration. It is unclear whether these new regulations will be withdrawn or when they will become fully effective under the Biden administration. Under the American Rescue Plan Act of 2021, effective January 1, 2024, the statutory cap on Medicaid Drug Rebate Program rebates that manufacturers pay to state Medicaid programs will be eliminated. Elimination of this cap may require pharmaceutical manufacturers to pay more in rebates than it receives on the sale of products, which could have a material impact on our business. The impact of these lawsuits as well as legislative, executive, and administrative actions of the Biden administration on us and the pharmaceutical industry as a whole is unclear.

At the state level, legislatures have increasingly passed legislation and implemented 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. We are unable to predict the future course of federal or state healthcare legislation in the United States directed at broadening the availability

of healthcare and containing or lowering the cost of healthcare. These and any further changes in the law or regulatory framework that reduce our revenue or increase our costs could also have a material and adverse effect on our business, financial condition and results of operations.

We expect that the ACA, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and in additional downward pressure on the price that we receive for any approved product. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability or commercialize our product candidates. It is also possible that additional governmental action is taken to address the COVID-19 pandemic.

Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for biotechnology products. We cannot be sure whether additional legislative changes will be enacted, or whether FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals of our product candidates, if any, may be. In addition, increased scrutiny by Congress of the FDA's approval process may significantly delay or prevent marketing approval, as well as subject us to more stringent product labeling and post-marketing testing and other requirements.

We are subject to stringent laws, rules, regulations, policies, industry standards and contractual obligations regarding data privacy and security and may be subject to additional related laws and regulations in jurisdictions into which we expand. Many of these laws and regulations are subject to change and reinterpretation and could result in claims, changes to our business practices, monetary penalties, increased cost of operations or other harm to our business.

The regulatory framework for privacy and personal information security issues worldwide is rapidly evolving and is likely to remain uncertain for the foreseeable future. The U.S. federal and various state, local and foreign government bodies and agencies have adopted or are considering adopting laws, rules, regulations and standards limiting, or laws, rules, regulations and standards regarding, the collection, distribution, use, disclosure, storage, security and other processing of personal information.

Outside of the United States, legal requirements relating to the collection, storage, processing and transfer of personal data continue to evolve. For example, the collection and use of health data and other personal data is governed in the European Union by the General Data Protection Regulation (GDPR), which extends the geographical scope of EU data protection law to entities and operations outside of the European Union under certain conditions and imposes substantial obligations upon companies and new rights for individuals, and by certain EU member state-level legislation. For example, the GDPR requires data controllers to implement stringent operational requirements for processors and controllers of personal data, including transparent and expanded disclosure to data subjects about how their personal data is to be used, limitations on retention of information, mandatory data breach notification requirements, and higher standards for data controllers to demonstrate that they have obtained valid consent for certain data processing activities. Failure to comply with the GDPR may result in fines up to €20,000,000 or 4% of the total worldwide annual turnover of the preceding financial year, whichever is higher, and other administrative penalties. The GDPR may increase our responsibility and liability in relation to personal data that we may process, and we may be required to implement additional measures in an effort to comply with the GDPR and with other laws, rules, regulations and standards in the European Union, including those of EU member states, relating to privacy and data protection. This may be onerous and if our efforts to comply with GDPR or other applicable EU laws, rules, regulations and standards are not successful, or are perceived to be unsuccessful, it could adversely affect our business. Further, in July 2020, the European Court of Justice (ECJ) invalidated the EU-U.S. Privacy Shield, which had enabled the transfer of personal data from the European Union to the United States for companies that had self-certified to the Privacy Shield. The ECJ decision also raised questions about the continued validity of one of the primary

alternatives to the EU-U.S. Privacy Shield, namely the European Commission's Standard Contractual Clauses, and EU regulators have issued additional guidance regarding considerations and requirements that we and other companies must consider and undertake when using the Standard Contractual Clauses. Although the European Union has presented a new draft set of contractual clauses, at present, there are few, if any, viable alternatives to the EU-U.S. Privacy Shield and the Standard Contractual Clauses and it remains to be seen whether additional means for lawful data transfers will become available. To the extent that we were to rely on the EU-U.S. or Swiss-U.S. Privacy Shield programs, we will not be able to do so in the future, and the ECJ's decision and other regulatory guidance or developments otherwise may impose additional obligations with respect to the transfer of personal data from the European Union and Switzerland to the United States, each of which could restrict our activities in those jurisdictions, limit our ability to provide our products and services in those jurisdictions, or increase our costs and obligations and impose limitations upon our ability to efficiently transfer personal data from the European Union and Switzerland to the United States.

Further, the exit of the United Kingdom from the European Union, often referred to as Brexit, has created uncertainty with regard to data protection regulation in the United Kingdom. Specifically, the United Kingdom exited the European Union on January 1, 2020, subject to a transition period that ended December 31, 2020. The United Kingdom has implemented legislation similar to the GDPR, referred to as the UK GDPR, which provides for significant fines of up to the greater of £17.5 million or 4% of global turnover and exposes us to two parallel regimes with potentially divergent enforcement actions for certain violations. Additionally, under the post-Brexit Trade and Cooperation Agreement between the European Union and the United Kingdom, the United Kingdom and European Union have agreed that transfers of personal data to the United Kingdom from EEA member states will not be treated as 'restricted transfers' to a non-EEA country for a period that, including an extension, has a maximum duration of six months from January 1, 2021 (the "Extended Adequacy Assessment Period"). Although the current maximum duration of the Extended Adequacy Assessment Period is six months, it may end sooner, for example, in the event that the European Commission adopts an 'adequacy decision' in respect of the United Kingdom, or the United Kingdom amends the UK GDPR and/or makes certain changes regarding data transfers under the UK GDPR/Data Protection Act 2018 without the consent of the European Union (unless those amendments or decisions are made simply to keep relevant UK laws aligned with the EU's data protection regime). If the European Commission does not adopt an 'adequacy decision' in respect of the United Kingdom prior to the expiry of the Extended Adequacy Assessment Period, from that point onwards the United Kingdom will be an 'inadequate third country' under the GDPR and transfers of personal data from the EEA to the United Kingdom will require a 'transfer mechanism' such as the Standard Contractual Clauses. As of January 1, 2021, the United Kingdom is a 'third country' under the GDPR, and the relationship between the United Kingdom and European Union in relation to aspects of data protection law in the medium and longer term remains unclear, including with respect to cross-border data transfers and the role of the UK Information Commissioner's Office with respect to the European Union, which exposes us to further compliance risk. We may incur liabilities, expenses, costs, and other operational losses relating to the GDPR, the UK GDPR, and other laws and regulations in the European Union and United Kingdom relating to privacy and data protection, including those of applicable EU member states in connection with any measures we take to comply with them.

Finally, federal, state and foreign laws, rules, regulations and standards may apply generally to the privacy and security of information we maintain, and may differ from each other in significant ways, thus complicating compliance efforts and potentially requiring us to undertake additional measures to comply with them. In the United States, there are a broad variety of data privacy, protection and security laws, rules, regulations and standards that may apply to our activities, such as state data breach notification laws, state personal data privacy laws (for example, the California Consumer Privacy Act of 2018 (CCPA)), state health information privacy laws, and federal and state consumer protection laws (for example, Section 5(c) of the Federal Trade Commission Act). A range of enforcement agencies exist at both the state and federal levels that can enforce these laws, rules, regulations and standards. For example, the CCPA, which took effect on January 1, 2020, requires covered businesses that process personal information of California residents to disclose their data collection, use and sharing practices. Further, the CCPA provides California residents with new data privacy rights (including the ability to opt out of certain disclosures of personal information), imposes new operational requirements for

covered businesses, provides for significant civil penalties for violations as well as a private right of action for certain data breaches and statutory damages (that is expected to increase data breach class action litigation and result in significant exposure to costly legal judgements and settlements). Aspects of the CCPA and its interpretation and enforcement remain uncertain. In addition, California voters passed the California Privacy Rights Act of 2020 (CPRA) in November 2020, which becomes effective in most material respects on January 1, 2023. The CPRA will, among other things, give California residents the ability to limit use of certain sensitive personal information, further restrict the use of cross-contextual advertising, establish restrictions on the retention of personal information, expand the types of data breaches subject to the CCPA's private right of action, provide for increased penalties for CPRA violations concerning California residents under the age of 16, and establish a new California Privacy Protection Agency to implement and enforce the new CCPA and CPRA. Although there are limited exemptions for clinical trial data under the CCPA, the CCPA and other similar laws could impact our business activities, depending on their interpretation. Further, laws in all 50 states require businesses to provide notice to customers whose personal data has been disclosed as a result of a data breach.

With the GDPR, CCPA, CRPA and other laws, regulations and other obligations relating to privacy and data protection imposing new and relatively burdensome obligations, and with substantial uncertainty over the interpretation and application of these and other obligations, we may face challenges in addressing their requirements and making necessary changes to our policies and practices, and may incur significant costs and expenses in an effort to do so. We are currently in the process of developing and updating our policies and procedures in accordance with requirements under the CCPA and the GDPR, as well as other applicable data privacy and protection laws and regulations. Additionally, the CPRA and the CCPA may lead other states to pass comparable legislation, with potentially greater penalties and more rigorous compliance requirements relevant to our business. Additionally, if third parties we work with, such as vendors or service providers, violate applicable laws, rules or regulations or our policies, such violations may also put our or our customers' data, including personal data, at risk, which could in turn have an adverse effect on our business.

We make public statements about our use, collection, disclosure and other processing of personal data through our privacy policies, information provided on our website and press statements. Although we endeavor to comply with our public statements and documentation, we may at times fail to do so or be alleged to have failed to do so. The publication of our privacy policies and other statements that provide promises and assurances about data privacy and security can subject us to potential government or legal action if they are found to be deceptive, unfair or misrepresentative of our actual practices. Any failure or perceived failure by us or our vendors or service providers to comply with our applicable policies or notices relating to privacy or data protection, our contractual or other obligations to third parties, or any of our other legal obligations, laws, rules, regulations and standards relating to privacy or data protection, may result in governmental investigations or enforcement actions, litigation, claims and other proceedings, harm our reputation, and could result in significant liability.

Inadequate funding for the FDA, the SEC and other government agencies could hinder their ability to hire and retain key leadership and other personnel, prevent new products and services from being developed or commercialized in a timely manner or otherwise prevent those agencies from performing normal business functions on which the operation of our business may rely, 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, ability to hire and retain key personnel and accept the payment of user fees, and statutory, regulatory, and policy changes. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of the U.S. Securities and Exchange Commission (SEC) and other government agencies on which our operations may rely, including those 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 drugs to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, in

recent years, including in 2018 and 2019, the U.S. government shut down several times and certain regulatory agencies, such as the FDA and the SEC, had to furlough critical employees and stop critical activities. If a prolonged government shutdown occurs, it could significantly impact the ability of the FDA to timely review and process our regulatory submissions, which could have a material adverse effect on our business. Further, upon completion of this offering and in our operations as a public company, future government shutdowns could impact our ability to access the public markets and obtain necessary capital in order to properly capitalize and continue our operations.

Our relationships with healthcare professionals, clinical investigators, CROs and third-party payors in connection with our current and future business activities may be subject to federal and state healthcare fraud and abuse laws, false claims laws, transparency laws, government price reporting, and health information privacy and security laws, which could expose us to significant losses, including, among other things, criminal sanctions, civil penalties, contractual damages, exclusion from governmental healthcare programs, reputational harm, administrative burdens and diminished profits and future earnings.

Healthcare providers and third-party payors 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, clinical investigators, CROs, third-party payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we research, as well as market, sell and distribute our products for which we obtain marketing approval. Restrictions under applicable federal and state healthcare laws and regulations may include the following:

- the federal Anti-Kickback Statute prohibits, among other things, persons and entities from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made under a federal healthcare program such as Medicare and Medicaid;
- the federal false claims laws, including the civil False Claims Act, which can be enforced by private citizens through civil whistleblower or qui tam actions, and civil monetary penalties laws, prohibit individuals or entities from, among other things, knowingly presenting, or causing to be presented, to the federal government, claims for payment that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government;
- the federal Health Insurance Portability and Accountability Act of 1996 (HIPAA), prohibits, among other things, executing or attempting to execute a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters;
- the Civil Monetary Penalty Act of 1981 and implementing regulations, which impose penalties against any person or entity that, among other things, is determined to have presented or caused to be presented a claim to a federal healthcare program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent, or offered or transferred remuneration to a federal healthcare beneficiary that a person knows or should know is likely to influence the beneficiary's decision to order or receive items or services reimbursable by the government from a particular provider or supplier;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act (HITECH) and their implementing regulations, also imposes obligations, including mandatory contractual terms, on covered entities, which are health plans, healthcare clearinghouses, and certain health care providers, as those terms are defined by HIPAA, and their respective business associates and their subcontractors, with respect to safeguarding the privacy, security and transmission of individually identifiable health information;
- federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers;

- the federal Physician Payments Sunshine Act requires applicable manufacturers of covered drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program, with specific exceptions, to annually report to CMS information regarding payments and other transfers of value to physicians, defined to include doctors, dentists, optometrists, podiatrists and chiropractors, and teaching hospitals as well as information regarding ownership and investment interests held by physicians and their immediate family members. Beginning with data reporting in 2022, reporting obligations with respect to covered recipients will be expanded to include physician assistants, nurse practitioners, clinical nurse specialists, certified registered nurse anesthetists and anesthesiologist assistants, and certified nurse midwives for payments and transfers of value made during the previous year; and
- analogous state and foreign laws and regulations, such as state anti-kickback and false claims laws, may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance regulations promulgated by the federal government and may require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers, marketing expenditures, or drug pricing; state and local laws that require the registration of pharmaceutical sales and medical representatives; state laws that govern the privacy and security of health information in some circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Efforts to ensure that our current and future business arrangements with third parties will comply with applicable healthcare and data privacy and security laws and regulations will involve substantial ongoing costs, and may require us to undertake or implement additional policies or measures. We may face claims and proceedings by private parties, and claims, investigations and other proceedings by governmental authorities, relating to allegations that our business practices do not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations, and it is possible that courts or governmental authorities may conclude that we have not complied with them, or that we may find it necessary or appropriate to settle any such claims or other proceedings. In connection with any such claims, proceedings, or settlements, we may be subject to significant penalties, including civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from participation in government funded healthcare programs, such as Medicare and Medicaid, integrity oversight and reporting obligations, contractual damages, reputational harm, diminished profits and future earnings and the curtailment or restructuring of our operations. Defending against any such actions can be costly, time-consuming and may require significant financial and 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. Further, if any of the physicians or other healthcare providers or entities with whom we expect to do business is found to be not in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs.

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

We are exposed to the risk that our employees, independent contractors, consultants, commercial collaborators, principal investigators, CROs, CDMOs, suppliers and vendors may engage in misconduct or other improper activities. Misconduct by these parties could include failures to comply with FDA regulations, provide accurate information to the FDA, comply with federal and state health care fraud and abuse laws and regulations, accurately report financial information or data or disclose unauthorized activities to us. In particular, research, sales, marketing and business arrangements in the health care industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion,

sales commission, customer incentive programs and other business arrangements. Misconduct by these parties 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. We will adopt a code of conduct, which will become effective as of the date of the effectiveness of the registration statement of which this prospectus forms a part, but it is not always possible to identify and deter misconduct by these parties, 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 comply with these 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 significant impact on our business, including the imposition of significant penalties, including civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from participation in government funded healthcare programs, such as Medicare and Medicaid, integrity oversight and reporting obligations, contractual damages, reputational harm, diminished profits and future earnings and the curtailment or restructuring of our operations.

If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could have a material adverse effect on our business.

We are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our operations involve the use of hazardous and flammable materials, including chemicals and biological materials. Our operations also produce hazardous waste products. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from our use of hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties.

Although we maintain workers' compensation insurance to cover us for costs and expenses, we may incur due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. We do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us in connection with our storage or disposal of hazardous and flammable materials, including chemicals and biological materials.

In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or commercialization efforts. Failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

Our business activities may be subject to the U.S. Foreign Corrupt Practices Act and similar anti-bribery and anti-corruption laws of other countries in which we operate, as well as U.S. and certain foreign export controls, trade sanctions, and import laws and regulations. Compliance with these legal requirements could limit our ability to compete in foreign markets and subject us to liability if we violate them.

Our business activities are subject to 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, and similar anti-bribery or anti-corruption laws, regulations or rules of other countries in which we operate. These laws generally prohibit companies and their employees, agents, representatives, business partners, and third-party intermediaries from, directly or indirectly, offering, promising, giving or authorizing others to give anything of value, either directly or indirectly, to recipients in the public or private sector in order to influence official action or otherwise obtain or retain business. Our business is heavily regulated and therefore involves significant interaction with public officials, including officials of non-U.S. governments. Additionally, in many other countries, hospitals are owned and operated by the government, and doctors and other hospital employees would be considered foreign officials under the FCPA. Recently, the SEC and Department of Justice (DOJ) have increased their FCPA enforcement activities with respect to biotechnology and pharmaceutical companies.

We sometimes leverage third parties to assist with the conduct of our business abroad. We, our employees, agents, representatives, business partners and our third-party intermediaries may have direct or indirect interactions with officials and employees of government agencies or state-owned or affiliated entities and may be held liable for the corrupt or other illegal activities of these employees, agents, representatives, business partners or third-party intermediaries even if we do not explicitly authorize such activities. We cannot assure you that all of our employees, agents, representatives, business partners and third-party intermediaries will not take actions in violation of applicable law for which we may be ultimately held responsible. As we increase our international sales and business, our risks under these laws may increase.

These laws also require that we make and keep books and records that accurately and fairly reflect the transactions of the corporation and to devise and maintain an adequate system of internal accounting controls and compliance procedures designed to prevent violations of anti-corruption laws. There is no certainty that all of our employees, agents, representatives, business partners and third-party intermediaries, or those of our affiliates, will comply with applicable laws and regulations, for which we may be ultimately held responsible.

Violations of these laws and regulations could result in whistleblower complaints, fines, severe civil or criminal sanctions, settlements, prosecution, enforcement actions, damages, adverse media coverage, investigations, loss of export privileges, disgorgement, and other remedial measures and prohibitions on the conduct of our business including our ability to offer our products in one or more countries. Responding to any investigation or action will likely result in a materially significant diversion of management's attention and resources and significant defense costs and other professional fees. As a general matter, investigations, enforcement actions and sanctions could damage our reputation, our brand, our international activities, our ability to attract and retain employees and our business, prospects, operating results and financial condition.

In addition, our products may be subject to U.S. and foreign export controls, trade sanctions and import laws and regulations. Governmental regulation of the import or export of our products, or our failure to obtain any required import or export authorization for our products, when applicable, could harm our international sales and adversely affect our revenue. Compliance with applicable regulatory requirements regarding the export of our products may create delays in the introduction of our products in international markets or, in some cases, prevent the export of our products to some countries altogether. Furthermore, U.S. export control laws and economic sanctions prohibit the shipment of certain products and services to countries, governments, and persons targeted by U.S. sanctions. If we fail to comply with export and import regulations and such economic sanctions, penalties could be imposed, including fines and/or denial of certain export privileges. Moreover, any new export or import restrictions, new legislation or shifting approaches in the enforcement or scope of existing regulations, or in the countries, persons, or products targeted by such regulations, could result in decreased use of our products by, or in our decreased ability to export our products to, existing or potential customers with international operations. Any decreased use of our products or limitation on our ability to export or sell our products would likely adversely affect our business.

Comprehensive U.S. tax reform legislation could increase the tax burden on our orphan drug programs and adversely affect our business and financial condition.

In 2017, the U.S. government enacted the Tax Act, which as modified by the CARES Act, includes significant changes to the taxation of business entities. These changes include, among others, (i) a permanent reduction to the corporate income tax rate, (ii) a partial limitation on the deductibility of business interest expense and NOL carryforwards and (iii) a shift of the U.S. taxation of multinational corporations from a tax on worldwide income to a territorial system (along with certain rules designed to prevent erosion of the U.S. income tax base). Further, the comprehensive tax legislation reduces the orphan drug tax credit from 50% to 25% of qualifying expenditures. When and if we become profitable, this reduction in tax credits may result in an increased federal income tax burden on our orphan drug programs as it may cause us to pay federal income taxes earlier under the revised tax law than under the prior law and, despite being partially off-set by a reduction in the corporate tax rate from a top marginal rate of 35% to a flat rate of 21%, may increase our total federal tax liability attributable to such programs.

Additionally, President Biden has proposed an increase of the corporate tax rate from 21% to 28%, which, if enacted would further increase our total federal tax liability when and if we become profitable.

Notwithstanding the changes in the corporate income tax rate, the overall impact of this comprehensive tax legislation resulted in an overall reduction in our deferred tax assets, and our business and financial condition could still be adversely affected as additional guidance and regulations are issued with respect to the original tax law change. In addition, it is uncertain if and to what extent various states will conform to this comprehensive tax legislation, and states may enact suspensions or limitations on the use of NOLs and tax credits (including, without limitation, California legislation enacted in 2020 that suspends the use of California NOLs and limits the use of certain California tax credits for certain periods). The impact of this comprehensive tax legislation on holders of our common stock is also uncertain and could be adverse. Investors should consult with their legal and tax advisors with respect to this comprehensive tax legislation and the potential tax consequences of investing in or holding our common stock.

Risks Related to Employee Matters, Managing Our Growth and Other Risks Related to Our Business

Our success is highly dependent on our ability to attract and retain highly skilled executive officers and employees.

To succeed, we must recruit, retain, manage and motivate qualified clinical, scientific, technical and management personnel, and we face significant competition for experienced personnel. We are highly dependent on the principal members of our management and scientific and medical staff, particularly Faraz Ali, our Chief Executive Officer. Additionally, the COVID-19 pandemic may interfere with our ability to hire or retain personnel. If we do not succeed in attracting and retaining qualified personnel, particularly at the management level, it could adversely affect our ability to execute our business plan and harm our operating results. In particular, the loss of one or more of our executive officers could be detrimental to us if we cannot recruit suitable replacements in a timely manner. We do not maintain “key person” insurance for any of our executives or other employees. We could in the future have difficulty attracting and retaining experienced personnel and may be required to expend significant financial resources in our employee recruitment and retention efforts.

Many of the other biotechnology companies that we compete against for qualified personnel have greater financial and other resources, different risk profiles and a longer history in the industry than we do. They also may provide higher compensation, more diverse opportunities and better prospects for career advancement. Some of these characteristics may be more appealing to high-quality candidates than what we have to offer. If we are unable to continue to attract and retain high-quality personnel, the rate and success at which we can discover, develop and commercialize our product candidates will be limited and the potential for successfully growing our business will be harmed.

Additionally, we rely on our scientific founders and other scientific and clinical advisors and consultants to assist us in formulating our research, development and clinical strategies. These advisors and consultants are not our employees and may have commitments to, or consulting or advisory contracts with, other entities that may limit their availability to us. In addition, these advisors and consultants typically will not enter into non-compete agreements with us. If a conflict of interest arises between their work for us and their work for another entity, we may lose their services. Furthermore, our advisors may have arrangements with other companies to assist those companies in developing products or technologies that may compete with ours. In particular, if we are unable to maintain consulting relationships with our scientific founders or if they provide services to our competitors, our development and commercialization efforts will be impaired and our business will be significantly harmed.

In order to successfully implement our plans and strategies, we will need to grow the size of our organization, and we may experience difficulties in managing this growth.

As of March 31, 2021, we had more than 75 full-time employees. Of these employees, approximately 45 are engaged in research and development activities and approximately 20 are engaged in manufacturing activities. In

order to successfully implement our development and commercialization plans and strategies, and as we transition into operating as a public company, we expect to need additional managerial, operational, sales, marketing, financial and other personnel. Future growth would impose 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, FDA, EMA and other comparable foreign regulatory agencies' review process for our product candidates, while complying with any contractual obligations to contractors and other third parties we may have; and
- improving our operational, financial and management controls, reporting systems and procedures.

Our future financial performance and our ability to successfully develop and, if approved, commercialize our product candidates will depend, in part, on our ability to effectively manage any future growth, and our management may also have to divert a disproportionate amount of its attention away from day-to-day activities in order to devote a substantial amount of time to managing these growth activities.

We currently rely, and for the foreseeable future will continue to rely, in substantial part on certain independent organizations, advisors and consultants to provide certain services, including key aspects of our research and development, clinical development, manufacturing and operations. We cannot assure you 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 third-party service providers is compromised for any reason, our preclinical studies and the initiation and conduct of our planned clinical trials may be extended, delayed or terminated, and we may not be able to obtain marketing approval of our product candidates or otherwise advance our programs and business. We cannot assure you that we will be able to manage our existing third-party service providers or find other competent outside contractors and consultants on economically reasonable terms, or at all.

If we are not able to effectively expand our organization by hiring new employees and/or engaging additional third-party service providers, we may not be able to successfully implement the tasks necessary to develop and commercialize our product candidates and, accordingly, may not achieve our research, development and commercialization goals.

If we are unable to establish sales or marketing capabilities or enter into agreements with third parties to sell or market our product candidates, we may not be able to successfully sell or market our product candidates that obtain regulatory approval.

We currently do not have and have never had a marketing or sales team. In order to commercialize any product candidates, if approved, we must build marketing, sales, distribution, managerial and other non-technical capabilities or make arrangements with third parties to perform these services for each of the territories in which we may have approval to sell or market our product candidates. We may not be successful in accomplishing these required tasks.

Establishing an internal sales or marketing team with technical expertise and supporting distribution capabilities to commercialize our product candidates will be expensive and time-consuming and will require significant attention of our executive officers to manage. Any failure or delay in the development of our internal sales, marketing and distribution capabilities could adversely impact the commercialization of any of our product candidates that we obtain approval to market, if we do not have arrangements in place with third parties to provide such services on our behalf. Alternatively, if we choose to collaborate, either globally or on a territory-by-territory basis, with third parties that have direct sales forces and established distribution systems, either to augment our own sales force and distribution systems or in lieu of our own sales force and distribution systems, we will be required to negotiate and enter into arrangements with such third parties relating to the proposed collaboration and such arrangements may prove to be less profitable than commercializing the product

on our own. If we are unable to enter into such arrangements when needed, on acceptable terms, or at all, we may not be able to successfully commercialize any of our product candidates that receive regulatory approval, or any such commercialization may experience delays or limitations. If we are unable to successfully commercialize our approved product candidates, 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.

Our computer systems, or those of any of our CROs, manufacturers, contractors, consultants or other third parties or potential future collaborators, may fail or suffer security incidents or data privacy breaches or other unauthorized or improper access to, use of, or destruction of our proprietary or confidential data, employee data, or personal data, which could result in additional costs, loss of revenue, significant liabilities, harm to our brand and material disruption of our operations.

Despite the implementation of security measures in an effort to protect systems that store our information, given their size and complexity and the increasing amounts of information maintained on our internal information technology systems, and those of our third-party CROs, other contractors (including sites performing our clinical trials), consultants and other third parties, such systems are vulnerable to breakdown or other damage or interruption from, among other things, service interruptions, system malfunctions, natural disasters, terrorism, war, telecommunication and electrical failures, security breaches from inadvertent or intentional actions by our employees, contractors, consultants, business partners, and other third parties, cyber-attacks by malicious third parties (including supply chain cyber-attacks or attacks by nation-state or nation-state supported actors, or the deployment of harmful malware, ransomware, denial-of-service attacks, phishing attacks, social engineering and other means to affect service reliability and threaten the confidentiality, integrity and availability of information), which may compromise our system infrastructure or lead to the loss, destruction, alteration, prevention of access to, disclosure, dissemination of, or damage or unauthorized access to, our data (including trade secrets or other confidential information, intellectual property, proprietary business information and personal data) or data that is processed or maintained on our behalf, or other assets, which could result in financial, legal, business and reputational harm to us.

We have in the past and may in the future experience phishing attempts, and companies have, in general, experienced an increase in phishing and social engineering attacks from third parties in connection with the COVID-19 pandemic, and the increase in remote working further increases security threats. To the extent that any data breach, disruption or security incident were to result in any loss, destruction, unavailability, alteration, disclosure, dissemination of, or damage or unauthorized access to, our personal data, applications, assets or any other data processed or maintained on our behalf, or for it to be believed or reported that any of the foregoing occurred, we could incur significant liability, financial harm and reputational damage and the development and commercialization of our product candidates could be delayed. We cannot ensure that our data protection efforts and our investment in information technology, or the efforts or investments of CROs, consultants or other third parties, will prevent breakdowns or breaches in our or their systems or other cybersecurity incidents that cause loss, destruction, unavailability, alteration, dissemination of, or damage or unauthorized access to, our data, including personal data, assets and other data processed or maintained on our behalf, that could have a material adverse effect upon our reputation, business, operations or financial condition. We also rely on third parties to manufacture our product candidates, and any data breaches or other security events relating to their computer systems could also have a material adverse effect on our business. Controls employed by our information technology department and our CROs, consultants and other third parties could prove inadequate, and our ability to monitor such third parties' data security practices is limited. Due to applicable laws, rules, regulations and standards or contractual obligations, we may be held responsible for any information security failure or cyber-attack attributed to our third-party service providers as they relate to the information we share with them.

If any data breach or other security incident 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. Further, any such event that

leads to loss, damage, or unauthorized access to, or use, alteration, disclosure or dissemination of, personal data, including personal data regarding our clinical trial subjects or employees, could harm our reputation directly, compel us to comply with federal and state breach notification laws and foreign law equivalents, subject us to mandatory corrective action, and otherwise subject us to substantial liability under laws, rules, regulations and standards that protect the privacy and security of personal data, which could result in significant legal and financial exposure and reputational damages that could potentially have an adverse effect on our business. Additionally, we do not currently maintain cybersecurity insurance and therefore the successful assertion of one or more large claims against us in connection with a breach or other cybersecurity-related matter could adversely affect our business, financial condition, results of operations and prospects.

Notifications and follow-up actions related to a data breach or other security incident could impact our reputation and cause us to incur significant costs, including significant legal expenses and remediation costs. 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 lost data. We expect to incur significant costs in an effort to detect and prevent security incidents, and we may face increased costs and requirements to expend substantial resources in the event of an actual or perceived security incident. However, we cannot guarantee that we will be able to detect or prevent any such incidents, or that we can remediate any such incidents in an effective or timely manner. Our efforts to improve security and protect data from compromise may also identify previously undiscovered instances of data breaches or other cybersecurity incidents. To the extent that any data breach, disruption or security incident were to result in any loss, destruction, or alteration of, damage, unauthorized access to or inappropriate or unauthorized disclosure of or dissemination of, our data, including personal data, or other information that is processed or maintained on our behalf, we could be exposed to litigation and governmental investigations and inquiries, the further development and commercialization of our product candidates could be delayed, and we could be subject to significant fines or penalties for any noncompliance with certain state, federal and international privacy and security laws, rules, regulations and standards.

Our operations are vulnerable to interruption by fire, earthquakes, power loss, telecommunications failure, terrorist activity, pandemics and other events beyond our control, which could harm our business.

Our facilities are located in the San Francisco Bay Area. We have not undertaken a systematic analysis of the potential consequences to our business and financial results from a major flood, blizzard, wildfire, earthquake, power loss, terrorist activity, pandemics or other disasters and do not have a recovery plan for such disasters. In addition, we do not carry sufficient insurance to compensate us for actual losses from interruption of our business that may occur, and any losses or damages incurred by us could harm our business. Also, our CDMOs and suppliers' facilities are located in multiple locations where other natural disasters or similar events which could severely disrupt our operations, could expose us to liability and could have a material adverse effect on our business. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses.

A variety of risks associated with marketing our product candidates internationally could materially adversely affect our business.

We may seek regulatory approval of our product candidates outside of the United States and, accordingly, we expect that we will be subject to additional risks related to operating in foreign countries if we obtain the necessary approvals, including:

- differing regulatory requirements and reimbursement regimes in foreign countries;
- unexpected changes in tariffs, trade barriers, price and exchange controls and other regulatory requirements;
- economic weakness, including inflation, or political instability in particular foreign economies and markets;

- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- foreign taxes, including withholding of payroll taxes;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country;
- difficulties staffing and managing foreign operations;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- potential liability under the FCPA or comparable foreign regulations;
- challenges obtaining, maintaining, protecting, defending and enforcing our contractual and intellectual property rights, especially in those foreign countries that do not respect and protect intellectual property rights to the same extent as the United States;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad; and
- business interruptions resulting from geo-political actions, including war and terrorism.

These and other risks associated with our international operations may materially adversely affect our ability to attain or maintain profitable operations.

Risks Related to Our Intellectual Property

We have in-licensed one issued patent, but we do not currently own any issued patents relating to our technology and product candidates. If we are unable to obtain, maintain, protect, defend and enforce patent and other intellectual property coverage for our technology and product candidates, our competitors could develop and commercialize technology and product candidates similar or identical to ours, and our ability to commercialize our technology and product candidates may be adversely affected.

Our commercial success depends in large part on our ability to obtain, maintain, protect, defend and enforce patents, trade secrets and other intellectual property for our product candidates and proprietary technologies and their uses, as well as our ability to operate without infringing, misappropriating or otherwise violating the intellectual property and proprietary rights of others. We rely on patent, copyright, trade secret and trademark laws in the United States and certain other countries to protect our proprietary technology, and we generally seek to protect our proprietary position by filing patent applications in the United States and abroad related to our product candidates, proprietary technologies and their uses that are important to our business. We also seek to protect our proprietary position by acquiring or in-licensing relevant issued patents or pending applications from third parties, but the efforts we and our licensors take to protect our intellectual property may provide only limited protection. In particular, the development of our product candidates and technology is at an early stage and consequently, our patent portfolio is also at an early stage. For example, although we exclusively in-license one issued patent from The University of Texas Southwestern Medical Center related to our DWORF (Dwarf Open Reading Frame) program, we do not own or license any other issued patents relating to any of our product candidates and technology and many of our and our licensors' patent applications are either at the provisional stage or at an early stage in prosecution. Accordingly, there can be no assurance that we or our licensors will obtain any additional issued patents or that any issued patents we or our licensors obtain will provide us with any competitive advantage. Any failure to obtain adequate patent protection for our product candidates and technology would have a material adverse effect on our business, financial condition, results of operations and prospects.

Pending patent applications cannot be enforced against third parties practicing the technology claimed in such applications unless, and until, patents issue from such applications, and then only to the extent the issued claims cover the technology. There can be no assurance that our patent applications or the patent applications of

our licensors will result in additional patents being issued or that any such issued patents will afford sufficient protection against competitors with similar technology, nor can there be any assurance that the patents issued will not be infringed, designed around, or invalidated by third parties.

Even issued patents may later be found invalid or unenforceable or may be modified, narrowed in scope, or revoked in proceedings instituted by third parties before various patent offices or in courts in the United States and abroad. The degree of future protection for our and our licensor's intellectual property and proprietary rights is uncertain. Only limited protection may be available and may not adequately protect our rights or permit us to gain or keep any competitive advantage. These uncertainties and limitations in our ability to properly protect the intellectual property rights relating to our product candidates could have a material adverse effect on our financial condition and results of operations.

Presently, we own one allowed and two other pending non-provisional U.S. patent applications, seven non-expired Patent Cooperation Treaty (PCT) applications, nine pending foreign patent applications and at least five pending provisional U.S. patent applications, but we do not own any issued patents. We cannot be certain that the claims in our U.S. pending patent applications, corresponding international patent applications and patent applications in certain foreign jurisdictions, or those of our licensors, will be considered patentable by the United States Patent and Trademark Office (USPTO), courts in the United States or by the patent offices and courts in foreign countries, nor can we be certain that any issued claims will not be found invalid or unenforceable if challenged. Additionally, our provisional applications may never result in issued patents. A U.S. provisional patent application expires twelve months from its filing date, and its subject matter can only be claimed in an issued patent if, among other things, we file a non-provisional patent application making a valid priority claim to that provisional patent application before it expires. If we do not timely file a non-provisional patent application, we may lose the benefit of the priority dates of our provisional patent application, and intervening prior art may jeopardize patent protection on the inventions disclosed in such a provisional patent application. While we intend to timely file non-provisional patent applications claiming the benefit of the priority dates of our provisional patent applications, and otherwise diligently prosecute our patent rights, we cannot predict whether any of our future patent applications for our technology and product candidates will result in the issuance of patents that effectively protect our technology and product candidates. Additionally, our owned pending PCT patent applications are not eligible to become issued patents until, among other things, we file a national stage patent application within 30 months in the countries in which we seek patent protection. If we do not timely file any national stage patent applications, we may lose our priority date with respect to our PCT patent applications and any patent protection on the inventions disclosed in such PCT patent applications. If we or our licensors do not successfully obtain patent protection, or if the scope of the patent protection we or our licensors obtain is not sufficiently broad, valid, and enforceable, we may be unable to prevent others from using our technology, developing or commercializing similar or identical technology and products, or marketing competing products and technologies. Any failure to obtain or maintain patent protection with respect to our technology and product candidates would have a material adverse effect on our business, financial condition, results of operations and prospects.

The patent application process is subject to numerous risks and uncertainties, and there can be no assurance that we or any of our potential future licensors or collaborators will be successful in protecting our product candidates by obtaining and defending adequate patent coverage. These risks and uncertainties include the following:

- the USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other provisions during the patent process, the noncompliance with which can result in abandonment or lapse of a patent or patent application, and partial or complete loss of patent rights in the relevant jurisdiction;
- patent applications may not result in any patents being issued;
- patents may be challenged, invalidated, modified, revoked, circumvented, found to be unenforceable, narrowed in scope or otherwise may not provide any competitive advantage;

- our competitors, many of whom have substantially greater resources than we do and many of whom have made significant investments in competing technologies, may seek or may have already obtained patents that will limit, interfere with or eliminate our ability to make, use and sell our potential product candidates;
- there may be significant pressure on the U.S. government and international governmental bodies to limit the scope of patent protection both inside and outside the United States for disease treatments that prove successful, as a matter of public policy regarding worldwide health concerns; and
- countries other than the United States may have patent laws less favorable to patentees than those upheld by U.S. courts, allowing foreign competitors a better opportunity to create, develop and market competing product candidates and limiting the scope of our protection in countries outside the United States.

The patent prosecution process is also expensive and time-consuming, and we and our licensors may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner or in all jurisdictions where protection may be commercially advantageous. It is also possible that we or our licensors will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. We may not be able to obtain or maintain patent applications and patents due to the subject matter claimed in such patent applications and patents being in disclosures in the public domain.

In addition, although we enter into non-disclosure and confidentiality agreements with parties who have access to confidential or patentable aspects of our research and development output, such as our employees, outside scientific collaborators, CROs, third-party manufacturers, consultants, advisors and other third parties, any of these parties may breach such agreements and disclose such output before a patent application is filed, thereby jeopardizing our ability to seek patent protection. Consequently, we may not be able to prevent any third parties, including our competitors, from using any of our technology that is in the public domain to compete with our technology and product candidates.

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. As a result, our intellectual property may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

If the scope of any patent protection we obtain is not sufficiently broad, or if we lose any of our patent protection, our ability to prevent our competitors from commercializing similar or identical product candidates would be adversely affected.

The patent position of biotechnology companies generally is highly uncertain, involves complex legal and factual questions, and has been the subject of much litigation in recent years. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain. Our pending and future patent applications and those of our licensors may not result in patents being issued which protect our product candidates or which effectively prevent others from commercializing competitive product candidates or otherwise provide any commercial advantage.

Moreover, the coverage claimed in a patent application can be significantly reduced before the patent is issued, and its scope can be reinterpreted after issuance. Even if patent applications we own or in-license currently or in the future issue as patents, they may not issue in a form that will provide us with any meaningful protection, prevent competitors or other third parties from competing with us, or otherwise provide us with any competitive advantage. Our competitors or other third parties may avail themselves of safe harbor under the Drug Price Competition and Patent Term Restoration Act of 1984 (Hatch-Waxman Amendments) to conduct research and clinical trials and may be able to circumvent our patent rights by developing similar or alternative technologies or products in a non-infringing manner. Any patents that we may own or in-license may be challenged or circumvented by third parties or may be narrowed, rendered unenforceable, or invalidated as a

result of challenges by third parties. Consequently, we do not know whether our product candidates will be protectable or remain protected by valid and enforceable patents. Our competitors or other third parties may be able to circumvent our potential future patents or the patents of our licensors by developing similar or alternative technologies or products in a non-infringing manner which could materially adversely affect our business, financial condition, results of operations and prospects.

While we believe our intellectual property allows us to pursue our current development programs, several companies and academic institutions are pursuing alternate approaches to gene therapy and have built intellectual property around these approaches and methods. In addition, we may not be aware of all third-party intellectual property rights potentially relating to our technology and product candidates. Publications of discoveries in the scientific literature often lag the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing or, in some cases, not at all. Therefore, we cannot be certain that we were the first to make the inventions claimed in any owned or any licensed patents or pending patent applications, or that we were the first to file for patent protection of such inventions. If a third party can establish that we or our licensors were not the first to make or the first to file for patent protection of such inventions, our owned or licensed patent applications may not issue as patents and even if issued, may be challenged and invalidated or rendered unenforceable. Furthermore, applications filed before November 29, 2000 and certain applications filed after that date that will not be filed outside the United States may remain confidential until a patent issues.

The issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and the inventorship, scope, validity or enforceability of our potential future patents or the patents of our licensors 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 opposition, derivation, revocation, reexamination, post-grant review (PGR) and inter partes review (IPR), or other similar proceedings challenging any patents that we may own or in-license. Such submissions may also be made prior to a patent's issuance, precluding the granting of a patent based on one of our owned or licensed pending patent applications. A third party may also claim that our potential future owned patents or licensed patent rights are invalid or unenforceable in a litigation. The outcome following legal assertions of invalidity and unenforceability is unpredictable. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate or render unenforceable, our potential future owned patents or licensed patent rights, allow third parties to commercialize our product candidates and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize products without infringing third-party patent rights. Moreover, our potential future patents or the patents of our licensors may become subject to post-grant challenge proceedings, such as oppositions in a foreign patent office, that challenge our priority of invention or other features of patentability with respect to our potential future patents and patent applications and those of our licensors. Such challenges may result in loss of patent rights, loss of exclusivity or in patent claims being narrowed, invalidated or held unenforceable, 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 product candidates. Such proceedings also may result in substantial cost and require significant time from our scientists and management, even if the eventual outcome is favorable to us. In addition, if the breadth or strength of protection provided by our potential future patents and patent applications or the patents and patent applications of our licensors is threatened, regardless of the outcome, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates.

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

The degree of current and 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 develop products that are similar to our product candidates but that are not covered by the claims of the patent applications that we own or license;

- we or our current or future licensors or collaborators might not have been the first to make the inventions covered by the patent applications that we own or license now or may own or license in the future;
- we or our current or future licensors or 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 the pending patent applications we own or license will not lead to issued patents;
- issued patents that we may hold rights to may be held invalid or unenforceable, including as a result of legal challenges by our competitors or other third parties;
- others may have access to the same intellectual property rights licensed to us in the future on a nonexclusive basis;
- 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;
- the patents of others may have an adverse effect on our business; and
- 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.

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

Our commercial success depends significantly on our ability to operate without infringing, misappropriating or otherwise violating the patents and other intellectual property and proprietary rights of third parties. Claims by third parties that we infringe, misappropriate or otherwise violate their intellectual property or proprietary rights may result in liability for damages or prevent or delay our developmental and commercialization efforts, and could have a material adverse effect on the success of our business.

Our commercial success depends in part on avoiding infringement, misappropriation or other violation of the patents, intellectual property and proprietary rights of third parties. However, our research, development and commercialization activities may be subject to claims that we infringe, misappropriate or otherwise violate patents or other intellectual property rights owned or controlled by third parties. Other entities may have or obtain patents or proprietary rights that could limit our ability to make, use, sell, offer for sale or import our product candidates and products that may be approved in the future, or impair our competitive position. There is a substantial amount of litigation, both within and outside the United States, involving patent and other intellectual property rights in the biotechnology industry, including patent infringement lawsuits, oppositions, reexaminations, IPR proceedings and PGR proceedings before the USPTO and corresponding foreign patent offices. Numerous third-party U.S. and foreign issued patents and pending patent applications exist in the fields in which we are developing product candidates. There are and in the future may be third-party patents or patent applications with claims to materials, formulations, methods of manufacture or methods for treatment related to the use or manufacture of our product candidates. Given the vast number of patents in our field of technology, we cannot be certain or guarantee that we do not infringe existing patents or that we will not infringe patents that may be granted in the future.

For example, we are aware of third-party patent rights that could be construed to cover the use of our TN-201 product candidate. We believe that if these third-party patent rights were to be asserted against us, we would

have valid defenses against such assertions, including that such patent rights are invalid and not infringed. However, if such third-party patent rights were asserted against us and found to be valid, enforceable and infringed, we could be liable for damages and be required to obtain a license to such patent rights prior to commercializing TN-201 in the United States, and such license may not be available on commercially reasonable terms or at all. Additionally, we are aware of third-party patent rights related to the use of certain AAV vectors, which have been asserted against others, including in at least one instance against a company for pre-approval activities. If these patent rights were to be asserted against us, we believe we would have valid defenses to such assertions, however such defenses may not be successful and we could be liable for damages and need to secure a license to such patent rights, which may not be available on commercially reasonable terms or at all. In the event any of the foregoing were to occur, we may be prevented from further developing and commercializing any affected product candidates, including TN-201.

As the biotechnology industry expands and more patents are issued, the risk increases that our product candidates may be subject to claims of infringement, misappropriation or other violation of the patent or other intellectual property rights of third parties. If any third-party claims that we infringe any of the above-referenced patent rights or any other patent rights, such claims would be time consuming and could:

- result in costly litigation that may cause negative publicity;
- divert the time and attention of our technical personnel and management;
- cause development delays;
- prevent us from commercializing any of our product candidates until the asserted patent expires or is held finally invalid or not infringed in a court of law;
- require us to develop non-infringing technology, which may not be possible on a cost-effective basis;
- subject us to significant liability and damages to third parties, including treble damages if we are found to willfully infringe third-party intellectual property; or
- require us to enter into royalty or licensing agreements, which may not be available on commercially reasonable terms, or at all, or which might be non-exclusive, which could result in our competitors gaining access to the same technology.

Although no third party has asserted a claim of patent infringement against us as of the date of this prospectus, there can be no assurance that we will not be subject to claims of patent or other intellectual property infringement in the future that could prevent our product candidates from being marketed. Furthermore, we may fail to identify relevant patents or patent applications or may identify pending patent applications of potential interest but incorrectly predict the likelihood that such patent applications may issue with claims of relevance to our technology. In addition, we may incorrectly conclude that a third-party patent is invalid, unenforceable or not infringed by our activities. Additionally, pending patent applications that have been published can, subject to certain limitations, be later amended in a manner that could cover our technology and product candidates. Because patent applications are maintained as confidential for a certain period of time, until the relevant application is published, we may be unaware of third-party patents that may be infringed by commercialization of any of our product candidates, and we cannot be certain that we were the first to file a patent application related to a product candidate or technology. Moreover, 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, identification of third-party patent rights that may be relevant to our technology is difficult because patent searching is imperfect due to differences in terminology among patents, incomplete databases and the difficulty in assessing the meaning of patent claims. There is also no assurance that there is not prior art of which we are aware, but which we do not believe is relevant to our business, which may, nonetheless, ultimately be found to limit our ability to make, use, sell, offer for sale or import our products that may be approved in the future, or impair our competitive position. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents.

Third parties may assert claims of patent infringement against us directed at any of our product candidates based on our existing patent applications or patents that may be granted in the future, regardless of their merit. Any patent-related legal action against us claiming damages and seeking to enjoin commercial activities relating to our products, treatment indications, or processes could subject us to significant liability for damages, including treble damages if we were determined to willfully infringe, and require us to obtain a license to manufacture or market our product candidates. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of management and employee resources from our business. We cannot predict whether we would prevail in any such actions or that any license required under any of these patents would be made available on commercially acceptable terms, if at all. Moreover, even if we or our future strategic partners were able to obtain a license, the rights may be nonexclusive, which could result in our competitors gaining access to the same intellectual property. In addition, we cannot be certain that we could redesign our product candidates, treatment indications, or processes to avoid infringement, if necessary, and we could encounter delays in our product introductions while we attempt to develop alternative technology and product candidates to avoid infringing third-party intellectual property rights. Accordingly, an adverse determination in a judicial or administrative proceeding, or the failure to obtain necessary licenses, could prevent us from developing and commercializing our product candidates, which could harm our business, financial condition and operating results. In addition, intellectual property litigation, regardless of its outcome, may cause negative publicity and could prohibit us from marketing or otherwise commercializing our product candidates and technology.

Parties making claims against us may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation or administrative proceedings, there is a risk that some of our confidential information could be compromised by disclosure. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise additional funds or otherwise have a material adverse effect on our business, results of operations, financial condition and prospects.

Because of the inevitable uncertainty in intellectual property litigation, we could lose a patent infringement or other action asserted against us regardless of our perception of the merits of the case. Patent and other types of intellectual property litigation can involve complex factual and legal questions, and their outcome is uncertain. There is no assurance that a court would find in our favor on questions of infringement, validity, enforceability, or priority. A court of competent jurisdiction could hold that these third-party patents are valid, enforceable, and infringed, which could materially and adversely affect our ability to commercialize any future products we may develop and any other future products or technologies covered by the asserted third-party patents. In order to successfully challenge the validity of any such U.S. patent in federal court, we would need to overcome a presumption of validity. As this burden is a high one requiring us to present clear and convincing evidence as to the invalidity of any such U.S. patent claim, there is no assurance that a court of competent jurisdiction would invalidate the claims of any such U.S. patent or find that our technology did not infringe any such claims. Further, even if we were successful in defending against any such claims, such claims could require us to divert substantial financial and management resources that we would otherwise be able to devote to our business.

We may in the future pursue invalidity proceedings with respect to third-party patents. The outcome following legal assertions of invalidity is unpredictable. Even if resolved in our favor, these legal proceedings may cause us to incur significant expenses and could distract our technical and management personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and 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. Such 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 conduct such proceedings adequately. Some of these third parties may be able to sustain the costs of such proceedings more effectively than we can because of their greater financial resources. Uncertainties resulting

from the initiation and continuation of patent proceedings could compromise our ability to compete in the marketplace. If we do not prevail in the patent proceedings the third parties may assert a claim of patent infringement directed at our product candidates.

In addition, our agreements with some of our suppliers or other entities with whom we do business require us to defend or indemnify these parties to the extent they become involved in infringement claims, including the types of claims described above. We could also voluntarily agree to defend or indemnify third parties in instances where we are not obligated to do so if we determine it would be important to our business relationships. If we are required or agree to defend or indemnify third parties in connection with any infringement claims, we could incur significant costs and expenses that could adversely affect our business, operating results or financial condition.

We may not be successful in obtaining or maintaining necessary rights to our product candidates through acquisitions and in-licenses.

Many pharmaceutical companies, biotechnology companies, and academic institutions may have patents and patent applications potentially relevant to our business. We may find it necessary or prudent to obtain licenses to such patents from such third-party intellectual property holders, for example, in order to avoid infringing these third-party patents. We may also require licenses from third parties for certain technologies for use with future product candidates. We may be unable to acquire or in-license any compositions, methods of use, processes or other third-party intellectual property rights from third parties that we identify as necessary for our product candidates. The licensing and acquisition of third-party intellectual property rights is a competitive area, and a number of more established companies may pursue strategies to license or acquire third-party intellectual property rights that we may consider attractive or necessary. These established companies may have a competitive advantage over us due to their size, capital resources and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. We also expect that competition for the in-licensing or acquisition of third-party intellectual property rights for future products that are attractive to us may increase in the future, which may mean fewer suitable opportunities for us as well as higher acquisition or licensing costs. We may be unable to license or acquire third-party intellectual property rights on terms that would allow us to make an appropriate return on our investment or at all. 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 program or product candidate, which could have a material adverse effect on our business, financial condition, results of operations, and prospects.

We may be involved in lawsuits to protect or enforce our potential future patents or our licensors' patents, which could be expensive, time consuming and unsuccessful. Further, our potential future patents or our licensors' patents could be found invalid or unenforceable if challenged in court.

Competitors and other third parties may infringe, misappropriate or otherwise violate our intellectual property rights. To prevent infringement, misappropriation, unauthorized use or other violation, we may be required to file infringement claims, which can be expensive and time-consuming. In addition, our potential future patents also may become involved in inventorship, priority or validity disputes. In a patent infringement proceeding, a court may decide that a patent we may own or in-license is not valid, is unenforceable or is not infringed, or may refuse to stop the other party from using the technology at issue on the grounds that our potential future patents do not cover such technology. If we or any of our potential future collaborators were to initiate legal proceedings against a third party to enforce a patent directed at one of our product candidates, the defendant could counterclaim that our potential future patent or the patent of our licensor is invalid or unenforceable in whole or in part. In patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge include an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness, lack of sufficient written description, non-enablement, or obviousness-type double patenting. Grounds for an unenforceability assertion could include an allegation 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 invalidity claims before the USPTO or patent offices abroad, even outside the context of litigation. Such mechanisms include re-examination, PGR, IPR, derivation proceedings, and equivalent proceedings in foreign jurisdictions (e.g., opposition proceedings). Such proceedings could result in the revocation or cancellation of or amendment to our potential future patents in such a way that they no longer cover our technology or product candidates or prevent third parties from competing with our technology or product candidates. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we, our licensor, and the patent examiners are unaware during prosecution. There is also no assurance that there is not prior art of which we are aware, but which we do not believe affects the validity or enforceability of a claim in our potential future patents and patent applications or the patents and patent applications of our licensors, which may, nonetheless, ultimately be found to affect the validity or enforceability of a claim. If a third party were to prevail on a legal assertion of invalidity or unenforceability, we would lose at least part, and perhaps all, of the patent protection on our technology or proprietary drug discovery platform, or any product candidates that we may develop. Such a loss of patent protection would have a material adverse impact on our business, financial condition, results of operations and prospects.

In addition, if the breadth or strength of protection provided by our patent applications or the patents and patent applications of our licensors is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates.

Even if resolved in our favor, litigation or other legal proceedings relating to our intellectual property rights may cause us to incur significant expenses and could distract our technical and management personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and 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. 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 conduct such litigation or proceedings adequately. 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. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could compromise our ability to compete in the marketplace.

In addition, the issuance of a patent does not give us the right to practice the patented invention. Third parties may have blocking patents that could prevent us from marketing our own potential future patented product and practicing our own potential future patented technology.

Intellectual property litigation may lead to unfavorable publicity that harms our reputation and causes the market price of our common shares to decline.

During the course of any intellectual property litigation, there could be public announcements of the initiation of the litigation as well as results of hearings, rulings on motions, and other interim proceedings in the litigation. If securities analysts or investors regard these announcements as negative, the perceived value of our existing products, programs or intellectual property could be diminished. Accordingly, the market price of shares of our common stock may decline. Such announcements could also harm our reputation or the market for our future products, which could have a material adverse effect on our business.

Derivation proceedings may be necessary to determine priority of inventions, and an unfavorable outcome may require us to cease using the related technology or to attempt to license rights from the prevailing party.

Derivation proceedings provoked by third parties or brought by us or declared by the USPTO may be necessary to determine the priority of inventions with respect to our patent applications or the patents or patent

applications of our licensors. An unfavorable outcome 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 or at all. Our defense of derivation proceedings may fail and, even if successful, may result in substantial costs and distract our management and other employees. In addition, the uncertainties associated with such proceedings could have a material adverse effect on our ability to raise the funds necessary to continue our clinical trials, continue our research programs, license necessary technology from third parties or enter into development or manufacturing partnerships that would help us bring our product candidates to market.

Changes in U.S. patent law, or laws in other countries, could diminish the value of patents in general, thereby impairing our ability to protect our product candidates.

As is the case with other biotechnology and pharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biotechnology and pharmaceutical industries involve a high degree of technological and legal complexity. Therefore, obtaining and enforcing biotechnology and pharmaceutical patents is costly, time consuming and inherently uncertain. Changes in either the patent laws or in the interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property and may increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents. We cannot predict the breadth of claims that may be allowed or enforced in our potential future patents or in third-party patents. In addition, Congress or other foreign legislative bodies may pass patent reform legislation that is unfavorable to us.

Patent reform legislation could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents. In 2011, the Leahy-Smith America Invents Act (Leahy-Smith Act) was signed into law. 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 and also may affect patent litigation. These also include provisions that switched the United States from a first-to-invent system to a first inventor-to-file system, allow third-party submission of prior art to the USPTO during patent prosecution and set forth additional procedures to attack the validity of a patent by the USPTO administered post grant proceedings, including post-grant review, *inter partes* review and derivation proceedings. Under a first-inventor-to-file system, assuming the other requirements for patentability are met, the first inventor to file a patent application generally will be entitled to the patent on an invention regardless of whether another inventor was the first to invent the claimed invention. The USPTO recently developed new regulations and procedures to govern administration of the Leahy- Smith Act, and many of the substantive changes to patent law associated with the Leahy-Smith Act, and in particular, the first-to-file provisions, became effective in 2013. 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 and results of operations. In addition, patent reform legislation may pass in the future that could lead to additional uncertainties and increased costs surrounding the prosecution, enforcement and defense of our patent applications.

Furthermore, the U.S. Supreme Court and the U.S. Court of Appeals for the Federal Circuit have made, and will likely continue to make, changes in how patent laws in the United States are interpreted. The U.S. Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening 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. Similarly, foreign courts have made, and will likely continue to make, changes in how the patent laws in their respective jurisdictions are interpreted. We cannot predict future changes in the interpretation of patent laws or changes to patent laws that might be enacted into law by United States and foreign legislative bodies. Depending on decisions by the U.S. Congress, the U.S. federal courts, the USPTO, or similar authorities in foreign jurisdictions, 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 patent and the patents we might obtain or license in the future.

We may be subject to claims challenging the inventorship or ownership of our owned patent applications or in-licensed patent rights and other intellectual property.

We or our licensors may be subject to claims that former employees or other third parties have an ownership interest in our owned patent applications or in-licensed patents, trade secrets or other intellectual property rights as an inventor or co-inventor. For example, we or our licensors may have inventorship disputes arise from conflicting obligations of employees, consultants or other third parties who are involved in developing our current or future products. Litigation may be necessary to defend against these and other claims challenging inventorship or ownership of our patent applications or our licensors' owned or in-licensed patents, trade secrets or other intellectual property rights. If we or our licensors 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, intellectual property rights that are important to our current or future product candidates. It may be necessary or we may desire to enter into a license to settle any such claim; however, there can be no assurance that we would be able to obtain a license on commercially reasonable terms, if at all. 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 distraction to management and other employees, and any litigation or the threat of litigation may adversely our reputation, or affect our ability to hire employees or contract with independent contractors.

In addition, while it is our policy to require our employees, consultants, advisors, contractors and other third parties who may be involved in the conception or development of intellectual property rights to execute agreements assigning such intellectual property rights to us, we or our licensors may be unsuccessful in executing such agreements with each party who, in fact, conceives or develops intellectual property rights that we regard as our own. The assignment of intellectual property rights may not be self-executing or sufficient in scope, or the assignment agreements may be breached, and we or our licensors 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 rights. Furthermore, individuals executing agreements with us may have preexisting or competing obligations to a third party, such as an academic institution, and thus an agreement with us or our licensors may be ineffective in perfecting ownership of inventions developed by that individual. Such claims could have a material adverse effect on our business, financial condition, results of operations, and prospects.

Patent terms may be inadequate to protect our competitive position on our product candidates for an adequate amount of time.

Patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest U.S. non-provisional filing date. Various extensions may be available, but the life of a patent, and the protection it affords, is limited. Even if patents covering our product candidates are obtained, once the patent life has expired, we may be open to competition from competitive products. 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. As a result, our patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

If we do not obtain patent term extension for our product candidates, our business may be materially harmed.

Depending upon the timing, duration and specifics of FDA marketing approval of our product candidates, one or more of our U.S. patents or those of our licensors may be eligible for limited patent term restoration under the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent restoration term of up to five years as compensation for patent term lost during product development and the FDA regulatory review process. A maximum of one patent may be extended per FDA approved product as compensation for the patent term lost during the FDA regulatory review process. A patent term extension cannot extend the remaining term

of a patent beyond a total of 14 years from the date of product approval and only those claims covering such approved drug product, a method for using it or a method for manufacturing it may be extended. Patent term extension may also be available in certain foreign countries upon regulatory approval of our product candidates.

We may not be granted any extensions for which we apply in the United States or any other jurisdiction because of, for example, failing to exercise due diligence during the testing phase or regulatory review process, failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents or otherwise failing to satisfy applicable requirements. Moreover, the applicable time period or the scope of patent protection afforded could be less than we request. In addition, to the extent we wish to pursue patent term extension based on a patent that we in-license from a third party, we would need the cooperation of that third party. If we are unable to obtain patent term extension or restoration, or the foreign equivalent, or if the term of any such extension is less than we request, our competitors may obtain approval of competing products following our patent expiration, and our revenue could be reduced, possibly materially. Further, if this occurs, our competitors may take advantage of our investment in development and trials by referencing our clinical and preclinical data and launch their product earlier than might otherwise be the case. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

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

Filing, prosecuting and defending patents in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States, even in jurisdiction where we do pursue patent protection. Consequently, we may not be able to prevent third parties from practicing our or our licensors' inventions in all countries outside the United States, even in jurisdictions where we or our licensors due pursue patent protection, 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 is not as strong as that in the United States. These products may compete with our product candidates, and our potential future patents, the patents of our licensors, or other intellectual property rights may not be effective or sufficient 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 many foreign countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property protection, which could make it difficult for us to stop the infringement of our potential future patents or our licensor's patents, if pursued and obtained, or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our or our licensors' patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our potential future patents or the patents of our licensors at risk of being invalidated or interpreted narrowly and our patent applications or the patent applications of our licensors at risk of not issuing and could provoke third parties to assert claims against us. We or our licensors may not prevail in any lawsuits that we or our licensors initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful. 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.

Many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If we are forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position may be impaired, and our business, financial condition, results of operations and prospects may be adversely affected.

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

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents and/or patent applications will be due to the USPTO and various foreign patent offices outside of the United States at various points over the lifetime of our potential future patents and patent applications and those of our licensors. We have systems in place to remind us to pay these fees, and we rely on our outside patent annuity service to pay these fees when due. Additionally, the USPTO and various foreign patent offices require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. We are also dependent on our licensors to take the necessary action to comply with these requirements with respect to our licensed intellectual property. An inadvertent lapse or non-compliance with such requirements can sometimes be cured by payment of a late fee or by other means in accordance with rules applicable to the particular jurisdiction. However, 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. If such an event were to occur, it could have a material adverse effect on our business, financial condition and results of operations.

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.

We intend to use registered or unregistered trademarks or trade names to brand and market ourselves and our products, but we do not yet own a U.S. registered trademark for our corporate name, “Tenaya”. Our future trademark applications in the United States and in foreign jurisdictions may not be allowed or may subsequently be opposed. Once filed and registered, our potential future trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. We may not be able to protect our rights to these potential future trademarks and trade names, which we need to build name recognition among potential partners or customers in our markets of interest. At times, competitors may adopt trade names or trademarks similar to ours, thereby impeding our ability to build brand identity and possibly leading to market confusion. As a means to enforce our potential future trademark rights and prevent infringement, we may be required to file trademark claims against third parties or initiate trademark opposition proceedings, which can be expensive and time-consuming. 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 potential future registered or unregistered trademarks or trade names. Over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively, and our business may be adversely affected.

Additionally, our potential future registered trademarks may not be maintained or enforced. During trademark registration proceedings, we may receive rejections. 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 potential future trademark applications and registrations, and our potential future trademarks may not survive such proceedings. If we do not secure registrations for our potential future trademarks, we may encounter more difficulty in enforcing them against third parties than we otherwise would. Our efforts to enforce or protect our proprietary rights related to trademarks, domain names or other intellectual property may be ineffective and could result in substantial costs and diversion of resources and could adversely affect our financial condition or results of operations.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.

In addition to seeking patent protection to protect the intellectual property underlying our technology and product candidates, we also rely on the protection of our trade secrets, including unpatented know-how, technology and other proprietary information to maintain our competitive position. Although we have taken steps to protect our trade secrets and unpatented know-how, including entering into confidentiality agreements with third parties who have access to such information, and confidential information and invention assignment agreements with employees, consultants, advisors and other third parties involved in the development of intellectual property, we cannot guarantee that we and our licensors have entered into such agreements with each party that may have had access to our trade secrets or proprietary information or that has been involved in the development of intellectual property. Additionally, we cannot provide any assurances that all such agreements have been duly executed, and any of these parties may breach such agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. We may not be able to prevent the unauthorized disclosure or use of our technical know-how or other trade secrets by the parties to these agreements. Monitoring unauthorized uses and disclosures is difficult and we do not know whether the steps we have taken to protect our proprietary technologies will be effective. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside the United States are less willing or unwilling to protect trade secrets.

Moreover, third parties may still obtain this information or may come upon this or similar information independently, and we would have no right to prevent them from using that technology or information to compete with us. Furthermore, we expect these trade secrets, know-how and proprietary information to over time be disseminated within the industry through independent development, the publication of journal articles describing the methodology and the movement of personnel from academic to industry scientific positions. Consequently, we may be unable to prevent our proprietary technology from being exploited in the United States and abroad, which could affect our ability to expand in domestic and international markets or require costly efforts to protect our technology. We also seek to preserve the integrity and confidentiality of our data and trade secrets by maintaining physical security of our premises and physical and electronic security of our information technology systems, but such security measures may be breached, and we may not have adequate remedies for any such breach. If any of these events occurs or if we otherwise lose protection for our trade secrets, the value of this information may be greatly reduced, and our competitive position would be harmed. If we do not apply for patent protection prior to such publication or if we cannot otherwise maintain the confidentiality of our proprietary technology and other confidential information, then our ability to obtain patent protection or to protect our trade secret information may be jeopardized.

We may be subject to claims that we or our employees, consultants, advisors or contractors have wrongfully used or disclosed alleged confidential information or trade secrets.

We have entered into and may enter in the future into non-disclosure and confidentiality agreements to protect the proprietary positions of third parties, such as outside scientific collaborators, CROs, third-party manufacturers, consultants, advisors, potential partners, lessees of shared multi-company property and other third parties. We may become subject to litigation where a third party asserts that we or our employees or other third parties inadvertently or otherwise breached the agreements and used or disclosed trade secrets or other information proprietary to the third parties. Defense of such matters, regardless of their merit, could involve substantial litigation expense and be a substantial diversion of employee resources from our business. We cannot predict whether we would prevail in any such actions. Moreover, intellectual property litigation, regardless of its outcome, may cause negative publicity and could prohibit us from marketing or otherwise commercializing our product candidates and technology. Failure to defend against any such claim could subject us to significant liability for monetary damages or prevent or delay our developmental and commercialization efforts, which could adversely affect our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to our management team and other employees.

Parties making claims against us may be able to sustain the costs of complex intellectual property litigation more effectively than we can because they have substantially greater resources. 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. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise additional funds or otherwise have a material adverse effect on our business, operating results, financial condition and prospects.

We may be subject to claims that we have wrongfully hired an employee from our competitors or that we or our employees have wrongfully used or disclosed alleged confidential information or trade secrets of their former employers.

As is common in the biotechnology and pharmaceutical industry, in addition to our employees, we engage the services of consultants to assist us in the development of our product candidates. Many of these consultants, and many of our employees, were previously employed at, or may have previously provided or may be currently providing consulting services to, other biotechnology and pharmaceutical companies including our competitors or potential competitors. We may become subject to claims that we, our employees or consultants inadvertently or otherwise used or disclosed trade secrets or other information proprietary to their former employers or their former or current clients. Litigation may be necessary to defend against these claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel, which could adversely affect our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to our management team and other employees.

Our rights to develop and commercialize our technology and product candidates may be subject, in part, to the terms and conditions of licenses granted to us by others.

We have entered into a license agreement with UTSW pursuant to which we have acquired the exclusive right to certain patents and patent applications relating to therapeutics overexpressing the peptide named Dwarf Open Reading Frame, and have entered into various other license agreements with other third parties. We may enter into additional license agreements in the future with other third parties to advance our research or allow commercialization of product candidates. These and other licenses may not provide exclusive rights to use such intellectual property and technology in all relevant fields of use and in all territories in which we may wish to develop or commercialize our technology and products in the future.

In addition, subject to the terms of any such license agreements, we may not have the right to control the preparation, filing, prosecution, maintenance, enforcement, and defense of patents and patent applications covering the technology that we license from third parties. In such an event, we cannot be certain that these patents and patent applications will be prepared, filed, prosecuted, maintained, enforced, and defended in a manner consistent with the best interests of our business. If our licensors fail to prosecute, maintain, enforce, and defend such patents, or lose rights to those patents or patent applications, the rights we have licensed may be reduced or eliminated, and our right to develop and commercialize any of our products that are subject of such licensed rights could be adversely affected.

Our licensors may have relied on third-party consultants or collaborators or on funds from third parties such that our licensors are not the sole and exclusive owners of the patents we in-licensed. If other third parties have ownership rights to our 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.

Additionally, our licenses may be subject to certain rights of third parties, and, as a result, our current and future licenses may not provide us with exclusive rights to use the licensed intellectual property and technology. For example, the intellectual property we license from UTSW is subject to certain non-commercial rights

reserved by UTSW and certain rights retained by the U.S. government, including march-in rights. Patents licensed to us could be put at risk of being invalidated or interpreted narrowly in litigation filed by or against our licensors or another licensee or in administrative proceedings brought by or against our licensors or another licensee in response to such litigation or for other reasons. As a result, we may not be able to prevent competitors or other third parties from developing and commercializing competitive products, including in territories covered by our licenses.

It is possible that we may be unable to obtain additional licenses at a reasonable cost or on reasonable terms, if at all. 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 redesign our technology, product candidates, or the methods for manufacturing them or to develop or license replacement technology, all of which may not be feasible on a technical or commercial basis. If we are unable to do so, we may be unable to develop or commercialize the affected product candidates, which could harm our business, financial condition, results of operations, and prospects significantly. We cannot provide any assurances that third-party patents do not exist which might be enforced against our current technology, manufacturing methods, product candidates, or future methods or products resulting in either an injunction prohibiting our manufacture or future sales, or, with respect to our future sales, an obligation on our part to pay royalties and/or other forms of compensation to third parties, which could be significant.

Our current licenses impose, and our future licenses likely will impose, various diligence, royalty payment, milestone payment, insurance and other obligations on us. If we fail to comply with any of these or other obligations in our license agreements, we may be required to pay damages and the licensor may have the right to terminate the licenses. Termination by the licensor would cause us to lose valuable rights, and could prevent us from developing and commercializing our product candidates and proprietary technologies. Our business would be seriously harmed if any current or future licenses terminate, if the 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. Furthermore, if any current or future licenses terminate, or if the underlying patents fail to provide the intended exclusivity, competitors or other third parties may gain the freedom to seek regulatory approval of, and to market, products identical to ours. If our license agreements terminate, or we experience a reduction or elimination of licensed rights under these agreements, we may have to negotiate new or reinstated licenses with less favorable terms or we may not have sufficient intellectual property rights to operate our business.

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 royalty obligations we would be required to pay on the 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 product candidates that we successfully develop and commercialize, if any. Therefore, even if we successfully develop and commercialize any product candidates, we may be unable to achieve or maintain profitability.

If we fail to comply with our obligations in the agreements under which we license intellectual property rights from third parties or otherwise experience disruptions to our business relationships with our licensors, we could lose license rights that are important to our business.

Disputes may arise between us and our current or future licensors regarding intellectual property subject to a license agreement, including:

- 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 licensing agreement;

- our right to sublicense patents and other rights to third parties;
- whether third parties are entitled to compensation or equitable relief, such as an injunction, for our use of the intellectual property rights without their authorization;
- our involvement or lack of involvement in the prosecution, defense, and enforcement of licensed patents and our licensors' overall patent enforcement strategy;
- our diligence obligations under the license agreement and what activities satisfy those diligence obligations;
- the amounts of royalties, milestones or other payments due under the license agreement;
- our right to transfer or assign the license;
- the inventorship and ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our partners; and
- the priority of invention of patented technology.

In addition, the agreements under which we license intellectual property or technology 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, or are insufficient to provide us the necessary rights to use the intellectual property rights, we may be unable to successfully develop and commercialize the affected product candidates, which could have a material adverse effect on our business, financial conditions, results of operations, and prospects.

In spite of our efforts, our current and future licensors might conclude that we have materially breached our obligations under our license agreements and might therefore terminate such license agreements, thereby removing our ability to develop and commercialize products and technology covered by these license agreements. If these in-licenses are terminated, or if the underlying patents fail to provide the intended exclusivity, competitors would have the freedom to seek regulatory approval of, and to market, products identical to ours. This could have a material adverse effect on our competitive position, business, financial conditions, results of operations, and prospects.

The patent protection and patent prosecution for some of our product candidates may be dependent on third parties.

While we normally seek to obtain the right to control prosecution, maintenance and enforcement of the patents relating to our product candidates, there may be times when the filing and prosecution activities for patents relating to our product candidates are controlled by our licensor, potential licensors or collaboration partners. If any of our licensor, potential licensors or collaboration partners fail to prosecute, maintain and enforce such patents and patent applications in a manner consistent with the best interests of our business, including by payment of all applicable fees for patents covering our product candidates, we could lose our rights to the intellectual property or our exclusivity with respect to those rights, 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 and selling competing products. In addition, even where we have the right to control patent prosecution of patents and patent applications we have licensed to and from third parties, we may still be adversely affected or prejudiced by actions or inactions of our licensees, our licensors and their counsel that took place prior to the date upon which we assumed control over patent prosecution.

Intellectual property discovered through government funded programs may be subject to federal regulations such as "march-in" rights, certain reporting requirements and a preference for U.S.-based companies. Compliance with such regulations may limit our exclusive rights and limit our ability to contract with non-U.S. manufacturers.

We have in-licensed certain patents and patent applications that were generated through the use of U.S. government funding or grants, and we may acquire or license in the future intellectual property rights that have been generated through the use of U.S. government funding or grants. Pursuant to the Bayh-Dole Act of 1980, the U.S. government has certain rights in inventions developed with government funding. These U.S. government rights include a non-exclusive, non-transferable, irrevocable worldwide license to use inventions for any governmental purpose. In addition, the U.S. government has the right, under certain limited circumstances, to require us to grant exclusive, partially exclusive, or non-exclusive licenses to any of these inventions to a third-party if it determines that: (1) adequate steps have not been taken to commercialize the invention; (2) government action is necessary to meet public health or safety needs; or (3) government action is necessary to meet requirements for public use under federal regulations (also referred to as march-in rights). For example, the intellectual property we license from UTSW is subject to certain rights retained by the U.S. government, including march-in rights. If the U.S. government exercises its march-in rights in our current or future intellectual property rights that are generated through the use of U.S. government funding or grants, we could be forced to license or sublicense intellectual property developed by us or that we license on terms unfavorable to us, and there can be no assurance that we would receive compensation from the U.S. government for the exercise of such rights. The U.S. government also has the right to take title to these inventions if the grant recipient fails to disclose the invention to the government or fails to file an application to register the intellectual property within specified time limits. Intellectual property generated under a government funded program is also subject to certain reporting requirements, compliance with which may require us or the applicable licensor to expend substantial resources. In addition, the U.S. government requires that any products embodying any of these inventions or produced through the use of any of these inventions be manufactured substantially in the United States. This preference for U.S. industry may be waived by the federal agency that provided the funding if the owner or assignee of the intellectual property can show that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible. This preference for U.S. industry may limit our ability to contract with non-U.S. product manufacturers for products covered by such intellectual property. Any failure by us to comply with federal regulations regarding intellectual property rights that were developed through the use of U.S. government funding could have a material adverse effect on our business, financial condition, results of operations, and prospects.

Risks Related to Our Dependence on Third Parties

We rely on third parties to conduct our preclinical studies, and plan to rely on third parties to conduct clinical trials, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such trials, research and studies or to comply with applicable regulatory requirements, which may harm our business.

We utilize and depend upon independent investigators and collaborators, such as medical institutions, CROs and strategic partners to conduct and support our preclinical studies and plan to continue to do so for our future clinical trials. These third parties have had and will continue to have a significant role in the conduct of our preclinical studies and planned clinical trials and the subsequent collection and analysis of data.

These third parties are not our employees, and except for remedies available to us under our agreements with such third parties, we have limited ability to control the amount or timing of resources that any such third party will devote to our preclinical studies or our planned clinical trials. Furthermore, the competition for third parties has increased as a result of COVID-19. The third parties we rely on for these services may also have relationships with other entities, some of which may be our competitors, for whom they may also be conducting clinical trials or other drug development activities, which could affect their performance on our behalf. Some of

these third parties may terminate their engagements with us at any time. We also expect to have to negotiate budgets and contracts with CROs and clinical trial sites and we may not be able to do so on favorable terms, which may result in delays to our development timelines and increased costs. If we need to enter into alternative arrangements with, or replace or add any third parties, it would involve substantial cost and require extensive management time and focus, or involve a transition period, and may delay our drug development activities, as well as materially impact our ability to meet our desired clinical development timelines.

Our heavy reliance on these third parties for such drug development activities will reduce our control over these activities. As a result, we will have less direct control over the conduct, timing and completion of preclinical studies and clinical trials and the management of data developed through preclinical studies and clinical trials than would be the case if we were relying entirely upon our own staff. Nevertheless, we are responsible for ensuring that each of our studies and trials is conducted in accordance with applicable protocol, legal and regulatory requirements and scientific standards, and our reliance on third parties does not relieve us of our regulatory responsibilities. For example, we will remain responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA requires us to comply with GCP standards, regulations for conducting, recording and reporting the results of clinical trials to assure that data and reported results are reliable and accurate and that the rights, integrity and confidentiality of trial participants are protected. The EMA also requires us to comply with similar standards. Regulatory authorities enforce these GCP requirements through periodic inspections of trial sponsors, principal investigators and trial sites. If we or any of our CROs fail to comply with applicable GCP requirements, the clinical data generated in our clinical trials may be deemed unreliable and the FDA, EMA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. There can be no assurance that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our clinical trials substantially comply with GCP regulations. In addition, our clinical trials must be conducted with product produced under current cGMP regulations and will require a large number of test patients. Our failure or any failure by these third parties to comply with these regulations or to recruit a sufficient number of patients, may require us to repeat clinical trials, which would delay the regulatory approval process. Moreover, our business may be implicated if any of these third parties violates federal or state fraud and abuse or false claims laws and regulations or healthcare privacy and security laws.

If these third parties do not successfully carry out their contractual duties, meet expected deadlines or conduct our clinical trials in accordance with regulatory requirements or our stated protocols, we will not be able to obtain, or may be delayed in obtaining, marketing approvals for our product candidates and will not be able to, or may be delayed in our efforts to, successfully commercialize our product candidates.

We contract with third parties for the production of our product candidates for preclinical studies and expect to continue to do so for additional preclinical studies, clinical trials and ultimately for commercialization for certain of our product candidates. This reliance on third parties increases the risk that we will not have sufficient quality and quantities of our product candidates or such quantities at an acceptable cost, which could delay, prevent or impair our development or commercialization efforts.

We do not currently have the infrastructure or internal capability to manufacture supplies of our product candidates for use in development and commercialization. We plan to fully integrate and internalize AAV manufacturing capabilities to support our Gene Therapy and Cellular Regeneration platforms, and have initiated construction of a cGMP manufacturing facility. Until our manufacturing facility is complete and operational, we will continue to rely on third-party manufacturers for our Gene Therapy and Cellular Regeneration platforms. Moreover, to optimize our use of resources and utilize extensive third-party experience in small molecule manufacturing, we intend to continue to rely on third-party manufacturers for our small molecule programs.

Competition for third-party manufacturers and supplies has increased as a result of COVID-19. Changing third-party manufacturers could result in delays in our manufacturing supply chain which could delay or otherwise impact development of our programs and result in increased costs.

We do not have long-term supply agreements, and we purchase our required drug product on a purchase order basis, which means that aside from any binding purchase orders we have from time to time, our supplier could cease supplying to us or change the terms on which it is willing to continue supplying to us at any time. If we were to experience an unexpected loss of supply of our product candidates for any reason, whether as a result of manufacturing, supply or storage issues or otherwise, we could experience delays, disruptions, suspensions or terminations of, or be required to restart or repeat, any pending or ongoing preclinical studies or clinical trials.

We may be unable to maintain or establish required agreements with third-party manufacturers or to do so on acceptable terms. Even if we are able to establish agreements with third-party manufacturers, reliance on third-party manufacturers entails additional risks, including:

- the failure of the third party to manufacture our product candidates according to our schedule and specifications, or at all, including if our third-party contractors give greater priority to the supply of other products over our product candidates or otherwise do not satisfactorily perform according to the terms of the agreements between us and them;
- the termination or nonrenewal of arrangements or agreements by our third-party contractors at a time that is costly or inconvenient for us;
- the breach by the third-party contractors of our agreements with them;
- the failure of third-party contractors to comply with applicable regulatory requirements, including cGMPs;
- the failure of the third party to manufacture our product candidates according to our specifications;
- the mislabeling of clinical supplies, potentially resulting in the wrong dose amounts being supplied or active drug or placebo not being properly identified;
- clinical supplies not being delivered to clinical sites on time, leading to clinical trial interruptions, or of drug supplies not being distributed to commercial vendors in a timely manner, resulting in lost sales; and
- the infringement, misappropriation or other violation of our intellectual property or proprietary information, including our trade secrets and know-how.

We do not have complete control over all aspects of the manufacturing process of our CDMOs and are dependent on these CDMOs for compliance with cGMP regulations for manufacturing active pharmaceutical ingredients (API), drug substance and finished drug products. We are in the process of developing our supply chain for each of our product candidates and intend to put in place framework agreements under which CDMOs will generally provide us with necessary quantities of API, drug substance and drug product on a project-by-project basis based on our development needs. As we advance our product candidates through development, we will consider our lack of redundant supply for the API, drug substance and drug product for each of our product candidates to protect against any potential supply disruptions. However, we may be unsuccessful in putting in place such framework agreements or protecting against potential supply disruptions.

Third-party manufacturers may not be able to comply with cGMP regulations or similar regulatory requirements outside of the United States. If our CDMOs cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA, EMA or others, they will not be able to secure and/or maintain marketing approval for their manufacturing facilities. In addition, we do not have control over the ability of our CDMOs to maintain adequate quality control, quality assurance, facilities, equipment and qualified personnel. If the FDA, EMA or a comparable foreign regulatory authority does not approve these facilities for the manufacture of our product candidates or if it withdraws any such approval in the future, we will need to find alternative manufacturing facilities, and those new facilities would need to be inspected and approved by FDA, EMA or comparable regulatory authority prior to commencing manufacturing, which would significantly impact our ability to develop, obtain marketing approval for or market our product

candidates, if approved. Our failure, or the failure of our third-party manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates or drugs, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of our product candidates or drugs and harm our business and results of operations.

We rely on third-party suppliers for the raw materials required for the production of our product candidates for all of our programs. Our reliance on third-party supplies will continue even after we operationalize our cGMP manufacturing facility to support our Gene Therapy and Cellular Regeneration platforms. Our dependence on these third-party suppliers and the challenges we may face in obtaining adequate supplies of raw materials involve several risks, including limited control over pricing, availability, quality and delivery schedules. As a small company, our negotiation leverage is limited and we are likely to get lower priority than our competitors who are larger than we are. We cannot be certain that our suppliers will continue to provide us with the quantities of these raw materials that we require or satisfy our anticipated specifications and quality requirements. Any interruption in supply of raw materials could materially harm our ability to manufacture our product candidates until a new source of supply, if any, could be identified and qualified. We may be unable to find a sufficient alternative supplier in a reasonable time or on commercially reasonable terms. Any performance failure on the part of our suppliers could delay the development and potential commercialization of our product candidates, including limiting supplies necessary for clinical trials and regulatory approvals, which would seriously harm our business.

Our current and anticipated future dependence upon others for the manufacture of our product candidates may adversely affect our future profit margins and our ability to commercialize any product candidates that receive marketing approval on a timely and competitive basis.

Our reliance on third parties may require us to share our trade secrets, which increases the possibility that our competitors will discover them or that our trade secrets will be misappropriated or disclosed.

Because we currently rely on third parties in the course of our business, we may share our proprietary technology and confidential information, including trade secrets, with them. We seek to protect our proprietary technology, in part, by entering into confidentiality agreements, and, if applicable, material transfer agreements, collaborative research agreements, consulting agreements, invention assignment or other similar agreements with our collaborators, advisors, employees, consultants and other third parties prior to beginning research or disclosing trade secrets or proprietary information. These agreements typically limit the rights of the third parties to use or disclose our trade secrets and confidential information. Despite the contractual provisions employed when working with third parties, the need to share trade secrets and other confidential information increases the risk that such trade secrets become known by our competitors, are intentionally or inadvertently incorporated into the technology of others or are disclosed or used in violation of these agreements. Given that our proprietary position is based, in part, on our know-how and trade secrets and despite our efforts to protect our trade secrets, our competitors' discovery of our proprietary technology, trade secrets or confidential information or other unauthorized use or disclosure of such information would impair our competitive position and may have a material adverse effect on our business, financial condition, results of operations and prospects.

If we engage in future acquisitions or strategic partnerships, this may increase our capital requirements, dilute our stockholders, cause us to incur debt or assume contingent liabilities, and subject us to other risks.

From time to time, we evaluate various acquisition opportunities and strategic partnerships, including licensing or acquiring complementary products, intellectual property rights, technologies or businesses. Any potential acquisition or strategic partnership may entail numerous risks, including:

- increased operating expenses and cash requirements;
- the assumption of additional indebtedness or contingent liabilities;

- the issuance of our equity securities;
- assimilation of operations, intellectual property and products of an acquired company, including difficulties associated with integrating new personnel;
- the diversion of our management's attention from our existing programs and initiatives in pursuing such a strategic merger or acquisition;
- retention of key employees, the loss of key personnel and uncertainties in our ability to maintain key business relationships;
- risks and uncertainties associated with the other party to such a transaction, including the prospects of that party and their existing products or product candidates and marketing approvals; and
- our inability to generate revenue from acquired technology and/or products sufficient to meet our objectives in undertaking the acquisition or even to offset the associated acquisition and maintenance costs.

In addition, if we undertake acquisitions or pursue partnerships in the future, we may issue dilutive securities, assume or incur debt obligations, incur large one-time expenses and acquire intangible assets that could result in significant future amortization expense.

If we decide to establish collaborations, but are not able to establish those collaborations on commercially reasonable terms, we may have to alter our development and commercialization plans.

Our drug development programs and the potential commercialization of our product candidates will require substantial additional cash to fund expenses. We strategically evaluate collaborations and partnerships with biopharmaceutical companies that may have more robust and complementary capabilities and resources to accelerate the development and maximize the availability and potential of our product candidates, particularly for more prevalent indications. The relationships may require us to incur non-recurring and other charges, increase our near- and long-term expenditures, issue securities that dilute our existing stockholders, or disrupt our management and business.

We would face significant competition in seeking appropriate collaborators and the negotiation process is time-consuming and complex. Whether we 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 a number of factors. Those factors may include the design or results of clinical trials, the likelihood of approval by the FDA, EMA or comparable foreign regulatory authorities, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, the potential of competing drugs, the existence of uncertainty with respect to our ownership of intellectual property and industry and market conditions generally. The potential collaborator may also consider alternative product candidates or technologies for similar indications that may be available to collaborate on and whether such collaboration could be more attractive than the one with us for our product candidate. Further, we may not be successful in our efforts to establish a collaboration or other alternative arrangements for 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 them as having the requisite potential to demonstrate safety and efficacy.

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. Even if we are successful in entering into a collaboration, the terms and conditions of that collaboration may restrict us from entering into future agreements on certain terms with potential collaborators.

If and when we seek to enter into collaborations, 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 a

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 any 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 may not be able to further develop our product candidates or bring them to market and generate product revenue.

We may enter into collaborations with third parties for the development and commercialization of product candidates. If those collaborations are not successful, we may not be able to capitalize on the market potential of these product candidates.

If we enter into any collaboration arrangements with any third parties, we will likely have limited control over the amount and timing of resources that our collaborators dedicate to the development or commercialization of our product candidates. Our ability to generate revenues from these arrangements will depend on our collaborators' abilities and efforts to successfully perform the functions assigned to them in these arrangements. Collaborations involving our product candidates would pose numerous risks to us, including the following:

- collaborators have significant discretion in determining the efforts and resources that they will apply to, and the manner in which they perform their obligations under, these collaborations and may not perform their obligations as expected;
- collaborators may deemphasize or not pursue development and commercialization of our product candidates or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the collaborators' strategic focus, including as a result of a business combination or sale or disposition of a business unit or development function, or available funding or external factors such as an acquisition that diverts resources or creates competing priorities;
- 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;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our product candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- a collaborator with marketing and distribution rights to multiple products may not commit sufficient resources to the marketing and distribution of our product relative to other products;
- we may grant exclusive rights to our collaborators that would prevent us from collaborating with others;
- collaborators may not properly obtain, maintain, defend, protect or enforce our intellectual property rights or may use our proprietary information and intellectual property in such a way as to invite litigation or other intellectual property-related proceedings that could jeopardize or invalidate our proprietary information and intellectual property or expose us to potential litigation or other intellectual property related proceedings;
- 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;
- 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;
- collaboration agreements may not lead to development or commercialization of product candidates in the most efficient manner or at all;

- collaborators may not provide us with timely and accurate information regarding development progress and activities under the collaboration or may limit our ability to share such information, which could adversely impact our ability to report progress to our investors and otherwise plan our own development of our product candidates;
- collaborators may own or co-own intellectual property covering our products that results from our collaborating with them, and in such cases, we would not have the exclusive right to develop or commercialize such intellectual property; and
- a collaborator's sales and marketing activities or other operations may not be in compliance with applicable laws resulting in civil or criminal proceedings.

If we enter into collaborations to develop and potentially commercialize any product candidates, we may not be able to realize the benefit of such transactions if we or our collaborator elect not to exercise the rights granted under the agreement or if we or our collaborator are unable to successfully integrate a product candidate into existing operations and company culture. In addition, if our agreement with any of our collaborators terminates, our access to technology and intellectual property licensed to us by that collaborator may be restricted or terminate entirely, which may delay our continued development of our product candidates utilizing the collaborator's technology or intellectual property or require us to stop development of those product candidates completely. We may also find it more difficult to find a suitable replacement collaborator or attract new collaborators, and our development programs may be delayed or the perception of us in the business and financial communities could be adversely affected. Any collaborator may also be subject to many of the risks relating to product development, regulatory approval, and commercialization described in this "Risk Factors" section, and any negative impact on our collaborators may adversely affect us.

If, in the future, we are unable to establish sales and marketing capabilities or enter into agreements with third parties to sell and market any product candidates we may develop, we may not be successful in commercializing those product candidates if and when they are approved.

We do not have a sales or marketing infrastructure and have no experience in the sale, marketing or distribution of pharmaceutical products. To achieve commercial success for any approved product for which we retain sales and marketing responsibilities, we must either develop a sales and marketing organization or outsource these functions to third parties. In the future, we may choose to build a focused sales, marketing and commercial support infrastructure to sell, or participate in sales activities with collaborators for, some of our product candidates if and when they are approved.

There are risks involved with both establishing our own commercial capabilities and entering into arrangements with third parties to perform these services. For example, recruiting and training a sales force or reimbursement specialists is expensive and time consuming and could delay any product launch. If the commercial launch of a product candidate for which we recruit a sales force and establish marketing and other commercialization capabilities is delayed or does not occur for any reason, we would have prematurely or unnecessarily incurred these commercialization expenses. This may be costly, and our investment would be lost if we cannot retain or reposition our commercialization personnel.

Factors that may inhibit our efforts to commercialize any approved product on our own include:

- our inability to recruit and retain adequate numbers of effective sales, marketing, reimbursement, compliance, customer service, medical affairs and other support personnel;
- our inability to recruit and build a commercial infrastructure due to the impacts of COVID-19;
- the inability of sales personnel to obtain access to physicians or persuade adequate numbers of physicians to prescribe any future approved products;
- the inability of reimbursement professionals to negotiate arrangements for formulary access, reimbursement, and other acceptance by payors;

- the inability to price our products at a sufficient price point to ensure an adequate and attractive level of profitability;
- restricted or closed distribution channels that make it difficult to distribute our products to segments of the patient population;
- the lack of complementary products to be offered by sales personnel, which may put us at a competitive disadvantage relative to companies with more extensive product lines; and
- unforeseen costs and expenses associated with creating an independent commercialization organization.

If we enter into arrangements with third parties to perform sales, marketing, commercial support and distribution services, our product revenue or the profitability of product revenue may be lower than if we were to market and sell any products we may develop ourselves. In addition, we may not be successful in entering into arrangements with third parties to commercialize our product candidates or may be unable to do so on terms that are favorable to us. We may have little control over such third parties, and any of them may fail to devote the necessary resources and attention to sell and market our products effectively. If we do not establish commercialization capabilities successfully, either on our own or in collaboration with third parties, we will not be successful in commercializing our product candidates if approved and our business would be seriously harmed.

Risks Related to This Offering and Ownership of Our Common Stock

We do not know whether an active, liquid and orderly trading market will develop for our common stock or what the market price of our common stock will be and as a result it may be difficult for you to sell your shares of our common stock.

Prior to this offering, no market for shares of our common stock existed and an active trading market for our shares may never develop or be sustained following this offering. We will determine the initial public offering price for our common stock through negotiations with the representatives of the underwriters, and the negotiated price may not be indicative of the market price of our common stock after this offering. The market value of our common stock may decrease from the initial public offering price. As a result of these and other factors, you may be unable to resell your shares of our common stock at or above the initial public offering price. The lack of an active market may impair your ability to sell your shares at the time you wish to sell them or at a price that you consider reasonable. The lack of an active market may also reduce the fair market value of your shares. Furthermore, an inactive market may also impair our ability to raise capital by selling shares of our common stock and may impair our ability to enter into strategic collaborations or acquire companies, technologies or other assets by using our shares of common stock as consideration.

The price of our stock may be volatile, and you could lose all or part of your investment.

The trading price of our common stock following this offering is likely to be highly volatile and subject to wide fluctuations in response to various factors, some of which we cannot control. The stock market in general, and pharmaceutical and biotechnology 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. In addition to the factors discussed in this “Risk Factors” section and elsewhere in this prospectus, these factors include:

- the timing and results of preclinical studies and clinical trials of our product candidates, those conducted by third parties or those of our competitors;

- the success of competitive products or announcements by potential competitors of their product development efforts;
- regulatory actions with respect to our products or our competitors' products;
- actual or anticipated changes in our growth rate relative to our competitors;
- regulatory or legal developments in the United States and other countries;
- developments or disputes concerning patent applications, issued patents or other intellectual property or proprietary rights;
- the recruitment or departure of key personnel;
- announcements by us or our competitors of significant acquisitions, strategic collaborations, joint ventures, collaborations or capital commitments;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- market conditions in the pharmaceutical and biotechnology sector;
- changes in the structure of healthcare payment systems;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our shares;
- announcement or expectation of additional financing efforts;
- sales of our common stock by us, our insiders or our other stockholders;
- expiration of market stand-off or lock-up agreements;
- the impact of any natural disasters or public health emergencies, such as the COVID-19 pandemic;
- the availability of fiscal and monetary stimulus measures to counteract the impact of natural disasters or public health emergencies, such as the COVID-19 pandemic; and
- general economic, political, industry and market conditions.

The realization of any of the above risks or any of a broad range of other risks, including those described in this "Risk Factors" section, could have a dramatic and adverse impact on the market price of our common stock.

Our operating results may fluctuate significantly, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or our guidance.

Our quarterly and annual operating results may fluctuate significantly in the future, which makes it difficult for us to predict our future operating results. From time to time, we may enter into license or collaboration agreements or strategic partnerships with other companies that include development funding and significant upfront and milestone payments and/or royalties, which may become an important source of our revenue. These upfront and milestone payments may vary significantly from period to period and any such variance could cause a significant fluctuation in our operating results from one period to the next.

In addition, we measure compensation cost for stock-based awards made to employees at the grant date of the award, based on the fair value of the award as determined by our board of directors, and recognize the cost as an expense over the employee's requisite service period. As the variables that we use as a basis for valuing these awards change over time, including, after the closing of this offering, our underlying stock price and stock price volatility, the magnitude of the expense that we must recognize may vary significantly.

Furthermore, our operating results may fluctuate due to a variety of other factors, many of which are outside of our control and may be difficult to predict, including the following:

- the timing and cost of, and level of investment in, research and development activities relating to our programs, product candidates and any future programs and product candidates, which will change from time to time;
- our ability to enroll patients in clinical trials and the timing of enrollment;
- the cost of establishing and operating a manufacturing facility and manufacturing our product candidates and any future product candidates, which may vary depending on FDA, EMA or other comparable foreign regulatory authority guidelines and requirements, the quantity of production and the terms of our agreements with manufacturers;
- expenditures that we will or may incur to acquire or develop additional product candidates and technologies or other assets;
- the timing and outcomes of clinical trials for our product candidates, or competing product candidates;
- the need to conduct unanticipated clinical trials or trials that are larger or more complex than anticipated;
- competition from existing and potential future products that compete with our programs and product candidates, and changes in the competitive landscape of our industry, including consolidation among our competitors or partners;
- any delays in regulatory review or approval of our product candidates;
- the level of demand for our product candidates, if approved, which may fluctuate significantly and be difficult to predict;
- the risk/benefit profile, cost and reimbursement policies with respect to our product candidates, if approved, and existing and potential future products that compete with any of our product candidates;
- our ability to commercialize any of our product candidates, if approved, inside and outside of the United States, either independently or working with third parties;
- our ability to establish and maintain collaborations, licensing or other arrangements;
- our ability to adequately support future growth;
- potential unforeseen business disruptions that increase our costs or expenses;
- future accounting pronouncements or changes in our accounting policies;
- the changing and volatile global economic and political environment; and
- increased impact from COVID-19 on the costs and timing associated with the conduct of our clinical trial and other related business activities.

The cumulative effect of these factors could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance. This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If our revenue or operating results fall below the expectations of analysts or investors or below any forecasts we may provide to the market, or if the forecasts we provide to the market are below the expectations of analysts or investors, the price of our common stock could decline substantially. Such a stock price decline could occur even when we have met any previously publicly stated guidance we may provide.

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.

As of March 31, 2021, our executive officers, directors, holders of 5% or more of our capital stock and their respective affiliates beneficially owned approximately 66.3% of our common stock and, upon the closing of this offering, that same group will beneficially own approximately % of our outstanding common stock (based on the number of shares of common stock outstanding as of March 31, 2021 assuming no exercise of the underwriters' option to purchase additional shares, no exercise of outstanding options and no purchases of shares in this offering by any of this group), in each case assuming the conversion of all outstanding shares of our convertible preferred stock into shares of our common stock immediately prior to the closing of this offering. These stockholders, acting together, may be able to control matters requiring stockholder approval. For example, they 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 transactions. This concentration of ownership control may delay, discourage or prevent a change of control, including unsolicited acquisition proposals or offers for our common stock that you may feel are in your best interest as one of our stockholders, entrench our management and board of directors or delay or prevent a merger, consolidation, takeover or other business combination involving us that other stockholders may desire. The interests of this group of stockholders may not always coincide with your interests or the interests of other stockholders and they may act in a manner that advances their best interests and not necessarily those of other stockholders, including seeking a premium value for their common stock, and might affect the prevailing market price for our common stock.

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

To the extent certain of our existing stockholders who are our affiliates or their affiliated entities participate in this offering, such purchases would reduce the non-affiliate public float of our common stock after this offering, which is the number of shares of our common stock that are not held by officers, directors and affiliated 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.

You will incur immediate and substantial dilution as a result of this offering.

If you purchase common stock in this offering, you will incur immediate and substantial dilution of approximately $ per share, representing the difference between the assumed initial public offering price of $ per share, which is the midpoint of the estimated offering price range set forth on the cover page of this prospectus, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, and our pro forma net tangible book value per share after giving effect to this offering and the automatic conversion of all outstanding shares of our convertible preferred stock immediately prior to the closing of this offering. As of March 31, 2021, there were 10,368,032 shares subject to outstanding options with a weighted-average exercise price of $0.51 per share. To the extent that these outstanding options or other options that we have issued or may issue in the future are ultimately exercised or the underwriters exercise their option to purchase additional shares, you will incur further dilution. See the section of this prospectus titled "Dilution" for a further description of the dilution you will experience immediately after this offering.

Sales of a substantial number of shares of our common stock in the public market could cause our stock price to fall.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock. After this offering, we will have outstanding shares of common stock, based on the number of shares outstanding as of March 31, 2021, assuming: (1) no exercise of the underwriters' option to purchase additional shares and (2) the conversion of all outstanding shares of our

convertible preferred stock into shares of common stock immediately prior to the closing of this offering. This includes the shares that we sell in this offering, which may be resold in the public market immediately without restriction, unless purchased by our affiliates. Of the remaining shares, 163,948,679 shares of our common stock are currently restricted as a result of securities laws or market stand-off or lock-up agreements but will be able to be sold after this offering as described in the "Shares Eligible for Future Sale" section of this prospectus. Moreover, after this offering, holders of an aggregate of 156,613,818 shares of our common stock will have rights, subject to certain conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. We also intend to register all shares of common stock that we may issue under our equity incentive plans. Once we register these shares, they can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates and the lock-up agreements described in the "Underwriters" section of this prospectus.

Our executive officers, directors and the holders of substantially all of our capital stock and securities convertible into or exchangeable for our capital stock have entered into market stand-off agreements with us and lock-up agreements with the underwriters under which they have agreed, subject to specific exceptions described in the section titled "Underwriters," not to sell, directly or indirectly, any shares of common stock without the permission of the underwriters for a period of 180 days following the date of this prospectus. We refer to such period as the lock-up period or restricted period. When the lock-up period expires, we and our securityholders subject to a lock-up agreement or market stand-off agreement will be able to sell our shares in the public market. In addition, the underwriters may, in their sole discretion, release all or some portion of the shares subject to lock-up agreements at any time and for any reason. See the description of the market stand-off agreement with us and the lock-up agreement with the underwriters in the section of this prospectus titled "Shares Eligible for Future Sale" for more information. Sales of a substantial number of such shares upon expiration of the lock-up and market stand-off agreements, the perception that such sales may occur, or early release of these agreements, could cause our market price to fall or make it more difficult for you to sell your common stock at a time and price that you deem appropriate.

We are an "emerging growth company" and a "smaller reporting company" and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies and smaller reporting companies will make our common stock less attractive to investors.

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012 (JOBS Act). For as long as we continue to be an emerging growth company, we intend to take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure in this prospectus;
- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended (Sarbanes-Oxley Act);
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements;
- reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements; and
- exemptions from the requirements of holding nonbinding advisory stockholder votes on executive compensation and stockholder approval of any golden parachute payments not previously approved.

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 avail ourselves of

this exemption from new or revised accounting standards and, therefore, will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. As a result, our financial statements may not be comparable to companies that comply with the new or revised accounting pronouncements as of public company effective dates.

We will remain an emerging growth company until the earliest to occur of: (1) the last day of the fiscal year in which we have more than $1.07 billion in annual revenue; (2) the date we qualify as a "large accelerated filer," with at least $700.0 million of equity securities held by non-affiliates; (3) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period; and (4) the last day of the fiscal year ending after the fifth anniversary of our initial public offering.

Even after we no longer qualify as an emerging growth company, we may still qualify as a "smaller reporting company," as defined in the Securities Exchange Act of 1934, as amended (Exchange Act), which would allow us to continue to take advantage of many of the same exemptions from disclosure requirements, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act and reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements.

We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

If securities or industry analysts do not publish research or reports, or if they publish adverse or misleading research or reports, regarding us, our business or our market, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that securities or industry analysts publish about us, our business or our market. We do not currently have and may never obtain research coverage by securities or industry analysts. If no or few securities or industry analysts commence coverage of us, the stock price would be negatively impacted. In the event we obtain securities or industry analyst coverage, if any of the analysts who cover us issue adverse or misleading research or reports regarding us, our business model, our intellectual property, our stock performance or our market, or if our operating results fail to meet the expectations of analysts, our stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

We will incur increased costs as a result of operating as a public company, and our management will devote substantial time to related compliance initiatives. Additionally, if we fail to maintain proper and effective internal controls, our ability to produce accurate financial statements on a timely basis could be impaired.

As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company, and these expenses may increase even more after we are no longer an "emerging growth company." We will be subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Protection Act, as well as rules adopted, and to be adopted, by the SEC and the Nasdaq Stock Market LLC (Nasdaq). Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, we expect these rules, regulations and standards to substantially increase our legal and financial compliance costs and to make some activities more time-consuming and costly, which will increase our operating expenses. For example, we expect these rules, regulations and standards to make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to incur substantial costs to maintain sufficient coverage, particularly in light of recent cost increases related to coverage. We cannot accurately predict or estimate the amount or timing of additional costs we may incur to respond to these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers.

In addition, as a public company we will be required to incur additional costs and obligations in order to comply with SEC rules that implement Section 404 of the Sarbanes-Oxley Act. Under these rules, beginning with our second annual report on Form 10-K after we become a public company, we will be required to make a formal assessment of the effectiveness of our internal control over financial reporting, and once we cease to be an emerging growth company, we will be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To achieve compliance with Section 404 within the prescribed period, we will be engaging in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, potentially continue to engage outside consultants and adopt a detailed work plan to assess and document the adequacy of our internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are designed and operating effectively, and implement a continuous reporting and improvement process for 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 meet the detailed standards under the rules. During the course of its testing, our management may identify material weaknesses or deficiencies which may not be remedied in time to meet the deadline imposed by the Sarbanes-Oxley Act.

Our internal control over financial reporting will not prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud will be detected.

If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner, or if we are unable to maintain proper and effective internal controls, we may not be able to produce timely and accurate financial statements. If that were to happen, the market price of our stock could decline and we could be subject to sanctions or investigations by the stock exchange on which our common stock is listed, the SEC or other regulatory authorities.

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

Upon the closing of this offering, we will become subject to the periodic reporting requirements of the Exchange Act. We designed 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 facts that judgments in decision-making can be faulty and that breakdowns can occur because of simple error or mistake. 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.

We will have broad discretion in the use of the net proceeds from this offering and may not use them effectively.

Our management will have broad discretion in the application of the net proceeds from this offering, including for any of the purposes described in "Use of Proceeds," and you will be relying on the judgment of our management regarding the application of these proceeds, who could spend the proceeds in ways that do not improve our results of operations or enhance the value of our common stock. You will not have the opportunity,

as part of your investment decision, to assess whether we are using the proceeds appropriately. Our management might not apply the net proceeds in ways that ultimately increase the value of your investment. If we do not invest or apply the net proceeds from this offering in ways that enhance stockholder value, we may fail to achieve expected financial results, which could cause our stock price to decline.

We may be subject to securities litigation, which is expensive and could divert management attention.

The market price of our common stock may be volatile and, in the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. This risk is especially relevant for us because biotechnology companies have experienced significant stock price volatility in recent years and we may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business.

We do not intend to pay dividends on our common stock in the foreseeable future, so any returns will be limited to the value of our common stock.

We have never declared or paid any cash dividends on our common stock. We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Any return to stockholders will therefore be limited to any appreciation in the value of their stock.

Provisions in our amended and restated certificate of incorporation and amended and restated bylaws, as they will be in effect upon closing of this offering, 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, as they will be in effect upon closing 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. In addition, because our board of directors is responsible for appointing the members of our management team, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors. These provisions, among other things:

- establish a classified board of directors so that not all members of our board are elected at one time;
- permit only the board of directors to establish the number of directors and fill vacancies on the board;
- provide that directors may only be removed "for cause" and only with the approval of two-thirds of our stockholders;
- authorize the issuance of "blank check" preferred stock that our board could use to implement a stockholder rights plan (also known as a poison pill);
- eliminate the ability of our stockholders to call special meetings of stockholders;
- prohibit stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders;
- prohibit cumulative voting;
- authorize our board of directors to amend the bylaws;
- establish advance notice requirements for nominations for election to our board or for proposing matters that can be acted upon by stockholders at annual stockholder meetings; and
- require a super-majority vote of stockholders to amend or repeal specified provisions of our amended and restated certificate of incorporation and amended and restated bylaws, as they will be in effect upon closing of this offering.

In addition, Section 203 of the General Corporation Law of the State of Delaware (DGCL), prohibits a publicly-held Delaware corporation from engaging in a business combination with an interested stockholder, generally a person which together with its affiliates owns, or within the last three years has owned, 15% of our voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner.

Any provision of our amended and restated certificate of incorporation, amended and restated bylaws or Delaware law that has the effect of delaying or preventing a change in control could limit the opportunity for our stockholders to receive a premium for their shares of our capital stock and could also affect the price that some investors are willing to pay for our common stock.

Our amended and restated bylaws that will become effective upon the closing of this offering provide that the Court of Chancery of the State of Delaware and the federal district courts of the United States of America will be the exclusive forums 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 bylaws that will become effective upon the closing of this offering provide that the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, another State court in Delaware or the federal district court for the District of Delaware) is the exclusive forum for the following (except for any claim as to which such court determines that there is an indispensable party not subject to the jurisdiction of such court (and the indispensable party does not consent to the personal jurisdiction of such court within 10 days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than such court or for which such court does not have subject matter jurisdiction):

- any derivative action or proceeding brought on our behalf;
- any action asserting a claim of breach of fiduciary duty;
- any action asserting a claim against us arising under the DGCL, our amended and restated certificate of incorporation or our amended and restated bylaws; and
- any action asserting a claim against us that is governed by the internal-affairs doctrine.

This provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act or any other claim for which the U.S. federal courts have exclusive jurisdiction.

Our amended and restated bylaws further provide that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act.

These exclusive-forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage lawsuits against us and our directors, officers and other employees. In addition, these exclusive-forum provisions may impose additional litigation costs for stockholders who determine to pursue any such lawsuits against us.

Any person or entity purchasing or otherwise acquiring any interest in any of our securities shall be deemed to have notice of and consented to these provisions. There is uncertainty as to whether a court would enforce such provisions, and the enforceability of similar choice of forum provisions in other companies' charter documents has been challenged in legal proceedings. It is possible that a court could find these types of provisions to be inapplicable or unenforceable, and if a court were to find either exclusive-forum provision in our amended and restated bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving the dispute in other jurisdictions, which could seriously harm our business.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. All statements other than statements of historical facts contained in this prospectus, including statements regarding our future results of operations and financial position, business strategy, development plans, planned preclinical studies and clinical trials, future results of clinical trials, expected research and development costs, regulatory strategy, timing and likelihood of success, as well as plans and objectives of management for future operations, are forward-looking statements. In some cases, investors can identify forward-looking statements by terms such as "may," "will," "should," "would," "expect," "plan," "anticipate," "could," "intend," "target," "project," "contemplate," "believe," "estimate," "predict," "potential" or "continue" or the negative of these terms or other similar expressions. Forward-looking statements contained in this prospectus include, but are not limited to, statements about:

- the ability of our preclinical studies and planned clinical trials to demonstrate safety and efficacy of our product candidates, and other positive results;
- the timing, progress and results of preclinical studies and planned clinical trials for our current product candidates and other product candidates we may develop, including statements regarding the timing of initiation and completion of studies or trials and related preparatory work, and the period during which the results of the studies or trials will become available;
- the timing, scope and likelihood of regulatory filings and approvals, including timing of INDs, CTAs, FDA approvals, and final regulatory approval of our current product candidates and any other future product candidates;
- our ability to develop and advance our current product candidates and programs into, and successfully complete, clinical studies;
- our manufacturing, commercialization, and marketing capabilities and strategy and the timing of our facilities becoming operational;
- our plans relating to commercializing our product candidates, if approved;
- the need to hire additional personnel and our ability to attract and retain such personnel;
- the size of the market opportunity for our product candidates, including our estimates of the number of patients who suffer from the diseases we are targeting;
- our competitive position and the success of competing therapies that are or may become available;
- the beneficial characteristics, and the potential safety, efficacy and therapeutic effects of our product candidates and our approach;
- our plans relating to the further development of our product candidates, including additional indications and targets we may pursue;
- the impact of existing laws and regulations and regulatory developments in the United States, Europe and other jurisdictions;
- our expectations regarding the impact of the COVID-19 pandemic on our business, including our preclinical studies and clinical trials;
- our intellectual property position, including the scope of protection we are able to establish and maintain for intellectual property rights covering our current product candidates and other product candidates we may develop, including the extensions of existing patent terms where available, the validity of intellectual property rights held by third parties, and our ability not to infringe, misappropriate or otherwise violate any third-party intellectual property rights;
- our continued reliance on third parties to conduct additional preclinical studies and planned clinical trials of our product candidates, and for the development and manufacture of our product candidates for preclinical studies and clinical trials;

- our ability to obtain, and negotiate favorable terms of, any collaboration, partnership, licensing or other arrangements that may be necessary or desirable to develop, manufacture or commercialize our product candidates;
- the pricing and reimbursement of our current product candidates and other product candidates we may develop, if approved, including any increase in demand as a result of the availability of reimbursement from the government and third-party payors;
- the rate and degree of market acceptance and clinical utility of our current product candidates and other product candidates we may develop;
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- our financial performance;
- the period over which we estimate our existing cash and cash equivalents will be sufficient to fund our future operating expenses and capital expenditure requirements;
- our expectations regarding the period during which we will remain an emerging growth company under the JOBS Act; and
- our anticipated use of our existing resources and the net proceeds from this offering.

We have based these forward-looking statements largely on our current expectations and projections about our business, the industry in which we operate and financial trends that we believe may affect our business, financial condition, results of operations and prospects, and these forward-looking statements are not guarantees of future performance or development. These forward-looking statements speak only as of the date of this prospectus and are subject to a number of risks, uncertainties and assumptions described in the section titled “Risk Factors” and elsewhere in this prospectus. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified, investors should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein until after we distribute this prospectus, whether as a result of any new information, future events or otherwise.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

MARKET, INDUSTRY AND OTHER DATA

This prospectus contains estimates, projections and other information concerning our industry, our business and the markets for our product candidates, including data regarding the estimated size of such markets and the incidence of certain medical conditions. We obtained the industry, market and similar data set forth in this prospectus from our internal estimates and research and from academic and industry research, publications, surveys and studies conducted by third parties, including governmental agencies. In some cases, we do not expressly refer to the sources from which this data is derived. Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances that are assumed in this information. Investors are cautioned not to give undue weight to any such information, projections and estimates.

USE OF PROCEEDS

We estimate that the net proceeds to us from the sale of the shares of our common stock in this offering will be approximately $ million, or approximately $ million if the underwriters exercise their option to purchase additional shares in full, based upon 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, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

Each $1.00 increase or decrease in the assumed initial public offering price of $ per share would increase or decrease, as applicable, the net proceeds to us from this offering by approximately $ million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase or decrease of 1.0 million shares in the number of shares offered by us would increase or decrease, as applicable, the net proceeds to us from this offering by approximately $ million, assuming the assumed initial public offering price remains the same, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

The principal purposes of this offering are to obtain additional capital to support our operations, establish a public market for our common stock and facilitate our future access to the public capital markets. We currently intend to use the net proceeds from this offering, together with our existing cash and cash equivalents, as follows:

- approximately $ million to $ million to fund our ongoing and planned preclinical and clinical development of our product candidate TN-201 in our MYBPC3 program;
- approximately $ million to $ million to fund our ongoing and planned preclinical and clinical development of our product candidate TYA-11631 in our HDAC6i program;
- approximately $ million to $ million to fund the continued development of our other programs, including our PKP2, DWORF and Reprogramming programs;
- approximately $ million to $ million to fund the expansion of our manufacturing capabilities and facilities; and
- the remaining amounts, if any, for working capital and other general corporate purposes.

Our expected use of the net proceeds from this offering represents our intentions based upon our current plans and business conditions. 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 and we may require additional funds in order to fully accomplish the specified uses listed above. We believe opportunities may exist from time to time to expand our current business through licenses with or acquisitions of, or investments in, complementary businesses, products, intellectual property or technologies. While we have no current agreements, commitments or understandings for any specific licenses, acquisitions or investments at this time, we may use a portion of the net proceeds for these purposes. As a result, our management will have broad discretion over the use of the net proceeds from this offering.

Based on our current operating plan, we believe that the net proceeds from this offering, together with our existing cash and cash equivalents, will be sufficient to fund our operating expenses and capital expenditures . The net proceeds from this offering, together with our existing cash and cash equivalents, 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. It is difficult to predict the cost and timing required to complete development and obtain regulatory approval of, and commercialize, our product candidates due to, among other factors, our lack of experience as a company with initiating, conducting and completing clinical trials, and uncertainty regarding the scope and design of clinical trials required to obtain regulatory approval for our product candidates, the rate of subject

enrollment in our planned clinical trials, filing requirements with various regulatory agencies, clinical trial results, and the actual costs of manufacturing, supplying and commercializing our product candidates. The amounts and timing of our expenditures will depend upon numerous factors including the cost and results of our research and development efforts, the timing, cost and success of preclinical studies and any clinical trials we may commence in the future, the timing of regulatory submissions, our ability to obtain additional financing, the amount of cash obtained through our existing collaborations and future collaborations, if any, and any unforeseen cash needs. We also may elect to raise additional capital opportunistically.

Pending their use, we intend to invest the net proceeds of this offering in short- and intermediate-term interest-bearing obligations, including U.S. government money market funds, U.S. Treasury obligations, U.S. agency and government-sponsored entity obligations, corporate debt obligations, and taxable and tax-exempt municipal obligations.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain any future earnings and do not expect to pay any dividends in the foreseeable future. Any future determination to declare cash dividends will be made at the discretion of our board of directors, subject to applicable laws, and will depend on a number of factors, including our financial condition, results of operations, capital requirements, contractual restrictions, general business conditions and other factors that our board of directors may deem relevant.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and capitalization as of March 31, 2021:

- on an actual basis;
- on a pro forma basis to give effect to: (i) the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of 156,613,818 shares of our common stock immediately prior to the completion of this offering, as if such conversion had occurred on March 31, 2021; (ii) the related reclassification of our convertible preferred stock aggregate carrying value to permanent equity; and (iii) the filing and effectiveness of our amended and restated certificate of incorporation immediately prior to the closing of this offering; and
- on a pro forma as adjusted basis to give further effect to the sale by us of shares of our common stock in this offering, at an assumed initial public offering price of $ per share (which is the midpoint of the estimated price range set forth on the cover page of this prospectus), and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

Our capitalization following the closing of this offering will depend on the actual initial public offering price and other terms of this offering determined at pricing. You should read this information in conjunction with our financial statements and the related notes appearing elsewhere in this prospectus, the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations", and other financial information contained in this prospectus.

	As of March 31, 2021 (in thousands, except share and per share data)		
	Actual	Pro Forma	Pro Forma as adjusted(1)
Cash and cash equivalents	$128,439	$	$
Convertible preferred stock, par value $0.0001; 156,613,818 shares authorized, issued and outstanding, actual; no shares authorized, issued and outstanding, pro forma and pro forma as adjusted	240,735		
Stockholders' (deficit) equity:			
Preferred stock, par value $0.0001; no shares authorized, issued and outstanding, actual; shares authorized, no shares issued and outstanding, pro forma and pro forma as adjusted	—		
Common stock, par value $0.0001; 181,980,000 shares authorized, 7,334,861 shares issued and outstanding, actual; shares authorized, shares issued and outstanding, pro forma; shares authorized, shares issued and outstanding, pro forma as adjusted	1		
Additional paid-in capital	2,053		
Notes receivable from stockholders	(87)		
Accumulated deficit	(95,910)		
Total stockholders' (deficit) equity	$ (93,943)	$	$
Total capitalization	$146,792	$	$

(1) Each $1.00 increase (decrease) in the assumed initial public offering price per share would increase (decrease) pro forma as adjusted amount of each of our cash and cash equivalents, additional paid-in capital, total stockholders' equity and total capitalization by $ million, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase

(decrease) of 1,000,000 shares in the number of shares offered by us would increase (decrease) our cash and cash equivalents, additional paid-in capital, total stockholders' equity and total capitalization by $ million, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

The number of shares of our common stock issued and outstanding, pro forma and pro forma as adjusted, in the table above are based on 163,948,679 shares of our common stock outstanding as of March 31, 2021 (including conversion of all of our outstanding shares of convertible preferred stock into 156,613,818 shares of our common stock), and excludes:

- 10,368,032 shares of our common stock issuable upon the exercise of options outstanding as of March 31, 2021, with a weighted-average exercise price of $0.51 per share;
- shares of our common stock issuable upon the exercise of options granted subsequent to March 31, 2021, with a weighted-average exercise price of $ per share;
- 2,275,357 shares of our common stock reserved for future grant or issuance under our Amended and Restated 2016 Equity Incentive Plan as of March 31, 2021;
- shares of our common stock reserved for future issuance under our 2021 Equity Incentive Plan, which will become effective on the business day immediately prior to the date of effectiveness of the registration statement of which this prospectus forms a part, as well as any automatic increases in the number of shares of our common stock reserved for future issuance pursuant to this plan; and
- shares of common stock reserved for future issuance under our 2021 ESPP, which will become effective on the business day immediately prior to the date of effectiveness of the registration statement of which this prospectus forms a part, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this plan.

DILUTION

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

As of March 31, 2021, we had a historical net tangible book value (deficit) of $(94.0) million, or $(12.82) per share of common stock. Our historical net tangible book value (deficit) represents our total tangible assets, less our total liabilities and convertible preferred stock, which is not included within stockholders' equity (deficit), divided by the total number of shares of our common stock outstanding as of March 31, 2021.

Our pro forma net tangible book value as of March 31, 2021, was $ million, or $ per share. Pro forma net tangible book value per share represents our total tangible assets, less our total liabilities, divided by the total number of shares of common stock outstanding as of March 31, 2021, after giving effect to the conversion of our convertible preferred stock into an aggregate of 156,613,818 shares of our common stock.

After giving further effect to the sale and issuance by us of the shares of our common stock in this offering at an assumed initial public offering price of $ per share (which is the midpoint of the estimated price range set forth on the cover page of this prospectus), and after deducting underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of March 31, 2021 would be $ million, or $ per share. This represents an immediate increase in pro forma net tangible book value to our existing stockholders of $ per share and an immediate dilution to new investors of $ per share. Dilution per share to new investors 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 per share dilution:

Assumed initial public offering price per share		$
Historical net tangible book value (deficit) per share as of March 31, 2021	$(12.82)	
Pro forma increase in historical net tangible book value (deficit) per share as of March 31, 2021		
Pro forma net tangible book value per share as of March 31, 2021		
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 in pro forma as adjusted net tangible book value per share to new investors participating in this offering		$

The dilution information discussed above is illustrative only and will change based on the actual initial public offering price and other terms of this offering determined at pricing. Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share (which is the midpoint of the estimated price range set forth on the cover page of this prospectus) would increase (decrease) pro forma as adjusted net tangible book value per share to new investors by $, and would increase (decrease) dilution per share to new investors in this offering by $, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase (decrease) of 1,000,000 shares in the number of shares offered by us would increase (decrease) our pro forma as adjusted net tangible book value by approximately $ per share and increase (decrease) the dilution to new investors by $ per share, assuming the assumed initial public offering price remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters' over-allotment option is exercised in full, the pro forma as adjusted net tangible book value per share of our common stock would be $ per share, and the dilution in pro forma net tangible book value per share to new investors in this offering would be $ per share, in each case 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.

The following table summarizes, as of March 31, 2021, on a pro forma as adjusted basis, the number of shares of common stock purchased from us, the total consideration paid, or to be paid, and the 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, the midpoint of the estimated initial public offering range set forth on the cover page of this prospectus, before deducting underwriting discounts and commissions and offering expenses payable by us:

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders		%	$	%	$
New investors					$
Total		100%	$	100%	

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

The above table assumes no exercise of the underwriters' over-allotment option. If the underwriters' over-allotment option were exercised in full, our existing stockholders would own % and our new investors would own % of the total number of shares of our common stock outstanding upon completion of this offering.

The number of shares of our common stock issued and outstanding, in the tables above are based on 163,948,679 shares of our common stock outstanding as of March 31, 2021 (including conversion of all of our outstanding shares of convertible preferred stock into 156,613,818 shares of our common stock), and excludes:

- 10,368,032 shares of our common stock issuable upon the exercise of options outstanding as of March 31, 2021, with a weighted-average exercise price of $0.51 per share;
- shares of our common stock issuable upon the exercise of options granted subsequent to March 31, 2021, with a weighted-average exercise price of $ per share;
- 2,275,357 shares of our common stock reserved for future grant or issuance under our Amended and Restated 2016 Equity Incentive Plan as of March 31, 2021;
- shares of our common stock reserved for future issuance under our 2021 Equity Incentive Plan, which will become effective on the business day immediately prior to the date of effectiveness of the registration statement of which this prospectus forms a part, as well as any automatic increases in the number of shares of our common stock reserved for future issuance pursuant to this plan; and
- shares of common stock reserved for future issuance under our 2021 ESPP, which will become effective on the business day immediately prior to the date of effectiveness of the registration statement of which this prospectus forms a part, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this plan.

To the extent that stock options are exercised, new stock options are issued under our equity incentive plan or we issue additional shares of common stock in the future, there will be further dilution to investors participating in this offering. In addition, we may choose to raise additional capital because of market conditions or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans. If we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

SELECTED FINANCIAL DATA

The following tables set forth our selected financial data for the periods and as of the dates indicated. We have derived the selected statements of operations data for the years ended December 31, 2019 and 2020, and the selected balance sheet data as of December 31, 2019 and 2020, from our audited financial statements appearing elsewhere in this prospectus. The selected statements of operations data for the three months ended March 31, 2020 and 2021 and the selected balance sheet data as of March 31, 2021 are derived from our unaudited interim condensed financial statements included elsewhere in this prospectus. We have prepared the unaudited interim condensed financial statements on the same basis as the audited financial statements. We have included, in our opinion, all adjustments, consisting only of normal recurring adjustments that we consider necessary for a fair presentation of the financial information set forth in those unaudited interim condensed financial statements.

You should read the following selected financial data together with the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and the related notes appearing elsewhere in this prospectus. The selected financial data in this section are not intended to replace our financial statements and are qualified in their entirety by our financial statements and related notes appearing elsewhere in this prospectus. Our historical results are not necessarily indicative of our future results, and our results for the three months ended March 31, 2021 are not necessarily indicative of results to be expected for the full year.

	Year Ended December 31,		Three Months Ended March 31,	
	2019	2020	2020	2021
	(in thousands, except share and per share data)			
Statements of Operations Data:				
Operating expenses:				
Research and development	$ 23,148	$ 31,099	$ 7,297	$ 9,590
General and administrative	4,564	7,813	1,969	3,515
Total operating expenses	27,712	38,912	9,266	13,105
Loss from operations	(27,712)	(38,912)	(9,266)	(13,105)
Other income (expense), net:				
Interest income	453	87	57	9
Change in fair value of convertible preferred stock tranche liability	11	75	(19)	—
Other income (expense), net	1,017	355	177	(2)
Total other income (expense), net	1,481	517	215	7
Net loss before income tax expense	(26,231)	(38,395)	(9,051)	(13,098)
Income tax expense	—	—	—	—
Net loss	$ (26,231)	$ (38,395)	$ (9,051)	$ (13,098)
Net loss per share, basic and diluted	$ (5.78)	$ (6.58)	$ (1.69)	$ (1.99)
Weighted-average shares used in computing net loss per share, basic and diluted	4,534,692	5,832,594	5,351,978	6,586,917
Pro forma net loss per share, basic and diluted(1)		$		$
Weighted-average shares used in computing pro forma net loss per share, basic and diluted(1)				

(1) The unaudited pro forma net loss per share for the year ended December 31, 2020 and the three months ended March 31, 2021 was computed using the weighted-average number of shares of common stock outstanding, including the pro forma effect of the conversation of all outstanding shares of our 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.

	As of December 31,		As of March 31,
	2019	2020	2021
		(in thousands)	
Balance Sheet Data:			
Cash and cash equivalents	$ 23,872	$128,535	$ 128,439
Working capital(1)	23,622	124,923	123,840
Total assets	38,001	148,161	159,757
Convertible preferred stock	73,042	220,754	240,735
Additional paid-in capital	763	1,583	2,053
Accumulated deficit	(44,417)	(82,812)	(95,910)
Total stockholders' deficit	(43,739)	(81,315)	(93,943)

(1) We define working capital as current assets less current liabilities. See our financial statements 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

The following discussion of our financial condition and results of operations should be read together with the section titled "Selected Financial Data," and our financial statements and related notes included elsewhere in this prospectus. The following discussion contains forward-looking statements that reflect our plans, estimates and beliefs. Our actual results could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to these differences include those discussed below and elsewhere in this prospectus, particularly in the section titled "Risk Factors." Our historical results are not necessarily indicative of the results that may be expected for any period in the future. See also the section of this prospectus titled "Special Note Regarding Forward-Looking Statements."

Overview

We are a biotechnology company headquartered in South San Francisco, California focused on discovering, developing and delivering curative therapies that address the underlying drivers of heart disease. We are advancing a pipeline of disease-modifying therapies developed using our product platforms and core internal capabilities to target defined sub-populations of patients with rare or highly prevalent forms of heart disease.

We were incorporated in August 2016 and commenced operations thereafter. Our operations to date have included developing our Gene Therapy, Cellular Regeneration and Precision Medicine platforms, identifying and developing product candidates, conducting preclinical studies, acquiring technology, organizing and recruiting management and technical staff, conducting 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 preclinical stage and we do not have any products approved for sale. We have not generated any revenue.

Since our inception, we have incurred net losses each year and we expect to continue to incur significant and increasing losses for the foreseeable future as we continue to advance our platforms, programs and product candidates, and as we transition to operating as a public company. Our net losses may fluctuate significantly from period to period, depending on the timing of expenditures on our research and development activities. Our net losses were $26.2 million and $38.4 million for the years ended December 31, 2019 and 2020, respectively, and $9.1 million and $13.1 million for the three months ended March 31, 2020 and 2021, respectively. As of March 31, 2021, we had an accumulated deficit of $95.9 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.

We have not generated any revenue from product sales or other sources since inception. Our ability to generate product revenue sufficient to achieve profitability, if ever, will depend heavily on the successful completion and eventual commercialization of our product candidates which we expect, if it ever occurs, will take a number of years. In addition, we have leased approximately 94,000 square feet in the San Francisco Bay Area intended for future manufacturing and office space as we invest in our manufacturing capabilities.

To date, we have funded our operations primarily from the sale and issuance of our convertible preferred stock. From our inception through March 31, 2021, we raised an aggregate of $247.9 million in gross proceeds from sales of our convertible preferred stock. As of March 31, 2021, we had cash and cash equivalents of $128.4 million.

We will need substantial additional funding in the future to finance our operations, including the commercialization of any product candidates that may be approved by the FDA or comparable foreign regulatory authorities. Until such time, if ever, as we can generate significant product revenue, we expect to finance our

operations with our existing cash and cash equivalents, the net proceeds from this offering, any future equity or debt financings, and upfront and milestone and royalty payments, if any, received under future licenses or collaborations or other arrangements with other companies, or other sources of financing. 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 on acceptable terms when needed, our business, results of operations, and financial condition would be adversely affected, and we may have to delay, reduce or eliminate our product development or future commercialization efforts. Insufficient liquidity may also require us to relinquish rights to product candidates at an earlier stage of development or on less favorable terms than we would otherwise choose. The amount and timing of our future funding requirements will depend on many factors, including the pace and results of our development efforts. We cannot provide assurance that we will ever be profitable or generate positive cash flow from operating activities.

University of Texas Southwestern Medical Center (UTSW) License Agreement

In January 2020, we entered into a license agreement with UTSW (UTSW License), pursuant to which UTSW granted us a royalty-bearing exclusive and sublicensable patent license and a non-exclusive, non-sublicensable license for mutually agreed upon development activities. Under the UTSW License, we are obligated to pay UTSW (i) a non-refundable upfront license fee of $0.1 million, (ii) milestone payments up to a total of $14.8 million in aggregate, which are contingent upon achieving specific development and commercialization milestone events, and (iii) royalties on future net sales of each royalty-bearing product ranging in the low-single digits.

During the year ended December 31, 2020, we recorded research and development expenses of $0.1 million related to the upfront license fee payable pursuant to the UTSW License. As of March 31, 2021, we have not recognized any milestone or royalty payments under the UTSW License.

COVID-19

As a result of the COVID-19 pandemic, we could experience disruptions that could severely impact our business. Potential impacts to our business include disruptions or restrictions on our employees' ability to effectively conduct their work. In addition, some of our suppliers of certain lab materials, or service providers used in the performance of our research activities, are located in areas impacted by COVID-19, which could limit our ability to achieve planned progress. COVID-19 could adversely affect the economy and financial markets, resulting in an economic downturn that could affect our financing prospects. Any of the foregoing could harm our business and we cannot anticipate all of the ways in which health epidemics such as COVID-19 could adversely impact our business. To date, we have experienced modest delays in the progress of our research and development activities, primarily due to extended lead times at certain suppliers and temporary and partial shutdowns at certain academic institutions as a result of statewide stay-at-home orders. However, these stay-at-home orders have largely terminated and operations have since resumed. We continue to monitor and assess the effects of the COVID-19 pandemic on our business, but the ultimate impact of the COVID-19 outbreak or a similar health epidemic is highly uncertain and subject to change. For additional details, see the section titled "Risk Factors."

Components of Operating Results

Research and Development

Research and development activities account for a significant portion of our operating expenses. Research and development expenses relate primarily to discovery and development of our platforms, programs and product candidates, and are recognized as incurred. Internal research and development costs include, among others, personnel-related costs (including salaries, benefits, travel and stock-based compensation for employees engaged in research and development functions), laboratory supplies and other non-capital equipment utilized for in-house

research, allocated facilities and overhead costs. External research and development expenses include, among others, amounts incurred to CROs that conduct research and development activities on our behalf, consulting fees and amounts owed under licensing agreements. We do not allocate our costs by platform, program or product candidate, as a significant amount of research and development expenses include internal costs, which are deployed across multiple platforms, programs, product candidates and activities.

Amounts recorded for external goods or services incurred for research and development activities that have not yet been invoiced often represent estimates. We do not currently have projects that require estimates for percentage of completion and we record estimates for amounts due but not yet invoiced based on input from external service providers.

We expect our research and development expenses to increase for the foreseeable future as we continue to invest in research and development activities related to developing our platforms, programs and product candidates and progressing through preclinical and clinical product development stages. The process of conducting the necessary research to advance to the clinical stage and ultimately obtain regulatory approval is costly and time-consuming, and the successful development of our product candidates is highly uncertain. As a result, we are unable to determine the duration and completion costs of our research and development projects or when and to what extent we will generate revenue from the commercialization and sale of any of our product candidates.

General and Administrative

General and administrative expenses consist of personnel-related costs (including salaries, benefits, travel and stock-based compensation for our employees in executive, finance and other administrative functions), legal fees, professional fees incurred for accounting, audit, and tax services, recruiting costs, and facility costs not otherwise included in research and development expenses. Legal fees include those related to corporate and intellectual property related matters.

We expect that our general and administrative expenses will increase for the foreseeable future to support our continued research and development activities, general operations, future business development opportunities and professional fees. In addition, we expect to incur additional expenses associated with operating as a public company, including legal, accounting, insurance, exchange listing, SEC compliance, and investor relations costs.

Interest Income

Interest income primarily consists of interest earned on our cash, cash equivalents and investment balances.

Change in Fair Value of Convertible Preferred Stock Tranche Liability

The change in fair value of our convertible preferred stock tranche liability fluctuates based on remeasurements at each reporting period. Our convertible preferred stock tranche liability stems from our obligation to issue additional shares to investors upon the second and third closings of our Series B convertible preferred stock. Until settlement, fluctuations in the fair value of a convertible preferred stock tranche liability are based on the remeasurement at each reporting period. Our convertible preferred stock tranche liability was settled on the second and third closings of our Series B convertible preferred stock financing in March and August 2020, respectively.

Other Income (Expense), Net

Other income (expense), net primarily consists of sublease income for a portion of our facilities in South San Francisco during 2019 and 2020.

Results of Operations

Comparison of the Three Months Ended March 31, 2020 and 2021

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

	Three Months Ended March 31,		$	%
	2020	2021	Change	Change
	(in thousands)			
Operating expenses:				
Research and development	$ 7,297	$ 9,590	$ 2,293	31%
General and administrative	1,969	3,515	1,546	79%
Total operating expenses	9,266	13,105	3,839	41%
Loss from operations	(9,266)	(13,105)	(3,839)	41%
Other income (expense), net:				
Interest income	57	9	(48)	(84)%
Change in fair value of convertible preferred stock tranche liability	(19)	—	19	(100)%
Other income (expense), net	177	(2)	(179)	(101)%
Total other income (expense), net	215	7	(208)	(97)%
Net loss and comprehensive loss	$ (9,051)	$(13,098)	$(4,047)	45%

Research and Development Expenses

The following table summarizes our research and development expenses for the periods presented.

	Three Months Ended March 31,		$	%
	2020	2021	Change	Change
	(in thousands)			
Facility and laboratory costs	$ 2,601	$ 4,096	$1,495	57%
Personnel-related costs	2,432	3,337	905	37%
External costs	1,957	2,043	86	4%
Other research and development expenses	307	114	(193)	(63)%
Total research and development expenses	$ 7,297	$ 9,590	$2,293	31%

Research and development expenses were $7.3 million and $9.6 million for the three months ended March 31, 2020 and 2021, respectively. The increase of $2.3 million, or 31%, was primarily due to:

- an increase of $1.5 million in facility and laboratory costs, including laboratory supplies and materials and other allocated costs, as we ramped up our research and development operations;
- an increase of $0.9 million in personnel-related costs, including stock-based compensation, primarily due to growth in the number of our research and development employees as we expanded our research and development capabilities; and
- an increase of $0.1 million in external costs, including amounts paid to CROs for research and development activities, consulting fees, preclinical studies and other external research expenses as we progressed development of our programs.

These increases were partially offset by a decrease of $0.2 million in other research and development expenses, including licensing fees.

General and Administrative

General and administrative expenses were $2.0 million and $3.5 million for the three months ended March 31, 2020 and 2021, respectively. The increase of $1.5 million, or 79%, was primarily due to a $0.8 million increase in professional service expenses and a $0.6 million increase in personnel-related expenses, including stock-based compensation, as a result of increased headcount as we grew our operations.

Interest Income

Interest income was $57,000 and $9,000 for the three months ended March 31, 2020 and 2021, respectively. The decrease of $48,000, or 84%, was primarily due to a change in our investment portfolio mix.

Change in Fair Value of Convertible Preferred Stock Tranche Liability

The change in fair value of our convertible preferred stock tranche liability for the three months ended March 31, 2020 was attributable to changes in the fair value of the underlying Series B convertible preferred stock. There was no similar expense for the three months ended March 31, 2021 as our convertible preferred stock tranche liability was settled in 2020.

Other Income (Expense), Net

Other income (expense), net of $0.2 million for the three months ended March 31, 2020 was primarily due to sublease income. We did not have any sublease agreements in place during the three months ended March 31, 2021.

Comparison of the Years Ended December 31, 2019 and 2020

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

	Year Ended December 31,		$	%
	2019	2020	Change	Change
	(in thousands)			
Operating expenses:				
Research and development	$ 23,148	$ 31,099	$ 7,951	34%
General and administrative	4,564	7,813	3,249	71%
Total operating expenses	27,712	38,912	11,200	40%
Loss from operations	(27,712)	(38,912)	(11,200)	40%
Other income (expense), net:				
Interest income	453	87	(366)	(81)%
Change in fair value of convertible preferred stock tranche liability	11	75	64	nmf*
Other income (expense), net	1,017	355	(662)	(65)%
Total other income (expense), net	1,481	517	(964)	(65)%
Net loss and comprehensive loss	$ (26,231)	$ (38,395)	$(12,164)	46%

* nmf—not meaningful

Research and Development Expenses

The following table summarizes our research and development expenses for the periods presented.

	Year Ended December 31,		$ Change	% Change
	2019	2020		
	(in thousands)			
Personnel-related costs	$ 7,130	$ 10,525	$3,395	48%
Facility and laboratory costs	8,786	11,798	3,012	34%
External costs	6,995	8,190	1,195	17%
Other research and development expenses	237	586	349	147%
Total research and development expenses	$ 23,148	$ 31,099	$7,951	34%

Research and development expenses were $23.1 million and $31.1 million for the years ended December 31, 2019 and 2020, respectively. The increase of $8.0 million, or 34%, was primarily due to:

- an increase of $3.4 million in personnel-related costs, including stock-based compensation, primarily due to growth in the number of our research and development employees as we expanded our research and development capabilities;
- an increase of $3.0 million in facility and laboratory costs, including laboratory supplies and materials and other allocated costs, as we ramped up our research and development operations;
- an increase of $1.2 million in external costs, including amounts paid to CROs for research and development activities, consulting fees, preclinical studies and other external research expenses as we progressed development of our programs; and
- an increase of $0.3 million in other research and development expenses, including licensing fees, due to entering into additional license agreements in 2020.

General and Administrative

General and administrative expenses were $4.6 million and $7.8 million for the years ended December 31, 2019 and 2020, respectively. The increase of $3.2 million, or 71%, was primarily due to a $1.4 million increase in personnel-related expenses, including stock-based compensation, as a result of higher headcount as we grew our operations, a $1.2 million increase in professional service expenses and a $0.3 million increase in facility related expenses to support the growth of our operations.

Interest Income

Interest income was $0.5 million and $0.1 million for the years ended December 31, 2019 and 2020, respectively. The decrease of $0.4 million, or 81%, was primarily due to lower average interest rates in 2020 as compared to 2019 and a change in our investment portfolio mix.

Change in Fair Value of Convertible Preferred Stock Tranche Liability

The $0.1 million change in fair value of our convertible preferred stock tranche liability for the year ended December 31, 2020 was attributable to changes in the fair value of the underlying Series B convertible preferred stock.

Other Income (Expense), Net

Other income (expense), net was $1.0 million and $0.4 million for the years ended December 31, 2019 and 2020, respectively. The decrease in other income of $0.7 million, or 65%, was primarily due to a $0.6 million reduction in sublease income as a result of the expiration of one of our sublease agreements in the third quarter of 2019.

Liquidity and Capital Resources

Sources of Liquidity

Since our inception, we have not generated any revenue and we have incurred significant net losses and negative cash flows from operations. To date, we have funded our operations primarily from the sale and issuance of our convertible preferred stock. From our inception through March 31, 2021, we raised an aggregate of $247.9 million in gross proceeds from sales of our convertible preferred stock. As of March 31, 2021, we had cash and cash equivalents of $128.4 million and an accumulated deficit of $95.9 million.

Funding Requirements

We expect 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 Gene Therapy, Cellular Regeneration and Precision Medicine platforms;
- continue preclinical development of our product candidates and initiate additional preclinical studies;
- commence clinical trials of our product candidates;
- build out our manufacturing facilities and establish our manufacturing capabilities, including developing our contract development and manufacturing relationships;
- acquire and license technologies aligned with our Gene Therapy, Cellular Regeneration and Precision Medicine platforms;
- seek regulatory approval of our product candidates that successfully complete clinical trials;
- expand our operational, financial, and management systems and increase personnel, including personnel to support our preclinical and clinical development, manufacturing, and future commercialization efforts;
- continue to develop, grow, perfect, enforce and defend our intellectual property portfolio; and
- incur additional legal, accounting, and other expenses in operating our business, including the additional costs associated with operating as a public company.

Based on our current operating plan and without giving effect to the anticipated net proceeds from this offering, we believe that our existing cash and cash equivalents will be sufficient to meet our working capital and capital expenditure needs for at least the next twelve months.

We also believe that the anticipated net proceeds from this offering, together with our existing cash and cash equivalents, will be sufficient to fund our planned operating expenses and capital expenditure requirements for . We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we expect. We may also raise additional financing on an opportunistic basis in the future. We expect to continue to expend significant resources for the foreseeable future.

In order to complete the development of our product candidates and commercialize our product candidates, if approved, we will require substantial additional funding. Until such time as we can generate significant revenue from sales of our product candidates, if ever, we expect to finance our operations through public or private equity offerings or debt financings or other capital sources, which may include strategic collaborations or other arrangements with third parties, or other sources of financing. We may not be able to raise additional capital on terms acceptable to us or at all. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our stockholders will be or could be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our common stockholders. Debt financing and preferred equity financing, if available, may involve agreements that

include covenants limiting or restricting our ability to take specific actions, including restricting our operations and limiting our ability to incur liens, issue additional debt, pay dividends, repurchase our common stock, make certain investments or engage in merger, consolidation, licensing or asset sale transactions. If we raise funds through strategic collaborations, partnerships and other similar arrangements with third parties, we may be required to grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves. If we are unable to raise additional capital on acceptable terms when needed, our business, results of operations, and financial condition would be adversely affected.

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. If we fail to obtain necessary capital when needed on acceptable terms, or at all, it could force us to delay, limit, reduce or terminate our product development programs, future commercialization efforts or other operations. Because of the numerous risks and uncertainties associated with research, product development and commercialization of product candidates, we are unable to predict the timing or amount of our working capital requirements or when or if we will be able to achieve or maintain profitability.

Cash Flows

The following table summarizes our cash flows for each of the periods indicated.

	Year Ended December 31,		Three Months Ended March 31,	
	2019	2020	2020	2021
	(in thousands)			
Net cash provided by (used in):				
Operating activities	$ (24,096)	$ (35,447)	$ (8,238)	$ (15,789)
Investing activities	(5,583)	(7,010)	2,318	(4,323)
Financing activities	30,511	147,268	30,670	20,015
Net increase (decrease) in cash, cash equivalents and restricted cash	$ 832	$ 104,811	$ 24,750	$ (97)

Operating Activities

Net cash used in operating activities for the three months ended March 31, 2021 was $15.8 million, which consisted primarily of a net loss of $13.1 million and a net change in net operating assets and liabilities of $4.0 million, partially offset by $1.3 million in non-cash charges. The non-cash charges primarily consisted of depreciation and amortization of $0.7 million, stock-based compensation of $0.4 million and the non-cash operating lease expense of $0.2 million. The change in net operating assets and liabilities was primarily due to an increase in other non-current assets of $3.3 million related to a security deposit for a lease entered into in February 2021, a decrease in accrued expenses and other current liabilities of $1.0 million and a decrease in operating lease liabilities of $0.4 million, partially offset by an increase in accounts payable of $0.6 million and a decrease in prepaid expenses and other current assets of $0.1 million.

Net cash used in operating activities for the three months ended March 31, 2020 was $8.2 million, which consisted primarily of a net loss of $9.1 million and a net change in net operating assets and liabilities of $21,000, partially offset by $0.8 million in non-cash charges. The non-cash charges primarily consisted of depreciation and amortization of $0.6 million and stock-based compensation of $0.2 million. The change in net operating assets and liabilities was primarily due to an increase in accounts payable of $0.7 million and a decrease in prepaid expenses and other current assets of $0.2 million, partially offset by a decrease in accrued expenses and other current liabilities of $0.5 million, a decrease in deferred rent and other lease liabilities of $0.2 million and an increase in other non-current assets of $0.2 million as we expanded our operations.

Net cash used in operating activities for the year ended December 31, 2020 was $35.4 million, which consisted primarily of a net loss of $38.4 million and a net change in net operating assets and liabilities of $0.2 million, partially offset by $3.2 million in non-cash charges. The non-cash charges primarily consisted of depreciation and amortization of $2.5 million and stock-based compensation of $0.7 million. The change in net operating assets and liabilities was primarily due to a decrease in deferred rent of $0.8 million, an increase in prepaid expenses and other current assets of $0.3 million and an increase in other non-current assets of $0.2 million, partially offset by an increase in accrued expenses and other current liabilities of $0.9 million and an increase in accounts payable of $0.1 million as we expanded our operations.

Net cash used in operating activities for the year ended December 31, 2019 was $24.1 million, which consisted primarily of a net loss of $26.2 million and a net change in net operating assets and liabilities of $0.3 million, partially offset by $2.4 million in non-cash charges. The non-cash charges primarily consisted of depreciation and amortization of $2.0 million and stock-based compensation of $0.4 million. The change in net operating assets and liabilities was primarily due to a decrease in deferred rent of $0.7 million and increase in prepaid expenses and other current assets of $0.4 million, partially offset by an increase in accounts payable of $0.4 million and an increase in accrued expenses and other current liabilities of $0.5 million as we expanded our operations.

Investing Activities

Net cash used in investing activities for the three months ended March 31, 2021 was $4.3 million, which consisted of purchases of property and equipment that primarily related to our manufacturing and office space in the San Francisco Bay Area.

Net cash provided by investing activities for the three months ended March 31, 2020 was $2.3 million, which consisted of proceeds from maturities of marketable securities of $2.8 million, partially offset by purchases of property and equipment of $0.4 million.

Net cash used in investing activities for the year ended December 31, 2020 was $7.0 million, which consisted of purchases of property and equipment of $9.8 million that primarily related to our manufacturing and office space in the San Francisco Bay Area, partially offset by proceeds from maturities of marketable securities of $2.8 million.

Net cash used in investing activities for the year ended December 31, 2019 was $5.6 million, which consisted of purchases of property and equipment of $2.9 million and net purchases of and proceeds from maturities of marketable securities of $2.7 million.

Financing Activities

Net cash provided by financing activities for the three months ended March 31, 2021 was $20.0 million, which primarily consisted of net proceeds received from the issuance of our Series C convertible preferred stock.

Net cash provided by financing activities for the three months ended March 31, 2020 was $30.7 million, which primarily consisted of net proceeds received from the sale and issuance of our Series B convertible preferred stock.

Net cash provided by financing activities for the year ended December 31, 2020 was $147.3 million, which consisted of net proceeds received from the sale and issuance of our Series B convertible preferred stock of $61.3 million and net proceeds received from the initial closing of our Series C convertible preferred stock of $86.0 million.

Net cash provided by financing activities for the year ended December 31, 2019 was $30.5 million, which consisted of net proceeds received from the sale and issuance of our Series B convertible preferred stock of $30.4 million and proceeds from the exercise of stock options of $0.1 million.

Contractual Obligations and Other Commitments

We enter into contracts in the normal course of business with contract research organizations for preclinical studies and other services, which are generally cancellable with limited notice.

The following table summarizes our contractual obligations and other commitments as of December 31, 2020:

	Payments Due by Period				
	Less than 1 year	1 to 3 years	3 to 5 years	More than 5 years	Total
	(in thousands)				
Operating lease obligations	$ 3,752	$4,489	$3,362	$ —	$11,603
Total contractual obligations	$ 3,752	$4,489	$3,362	$ —	$11,603

The obligations noted above represent our operating lease obligations related to our leased facility currently occupied in South San Francisco, California, with a lease term that expires in May 2025. The table does not include the operating lease we entered into in the San Francisco Bay Area in February 2021 for our manufacturing facility, which commenced in May 2021 and has a ten-year term. Payments associated with this operating lease agreement will result in additional operating lease obligations not included in the above table of approximately $13.9 million plus operating expenses.

We also enter into contracts in the normal course of business with various third parties for preclinical studies, manufacturing services with CDMOs and other services. These contracts generally provide for termination upon limited notice, and therefore we believe that our noncancelable obligations under these agreements are not material. These payments are not included in the table above. This table also does not include any milestone or royalty payments to third parties as the amounts, timing and likelihood of such payments are not known at this time. See Note 5 to our audited financial statements and Note 5 to our unaudited interim condensed financial statements included elsewhere in this prospectus.

Off-Balance Sheet Arrangements

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

Critical Accounting Policies and Estimates

Our management's discussion and analysis of the financial condition and results of operations is based on our financial statements, which have been prepared in accordance with the U.S. generally accepted accounting principles, or GAAP. The preparation of our financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, expenses and related disclosures. Our estimates are based on historical experience and on various other factors that 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 the notes to our 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. Goods or services incurred for research and development activities that have not yet been invoiced are recorded as liabilities within accrued expenses and other current liabilities on the balance sheets. Amounts recorded for unbilled services often represent estimates, which are typically based on contracted amounts for the proportion of work performed and determined through analysis with internal personnel and external service providers as to the progress or stage of completion of the associated services. We make judgments and estimates in determining the accrued and other current liabilities balance. If the actual timing of the performance of services or the level of effort varies from the estimate, we adjust accrued expenses or prepaid expenses accordingly, which impact research and development expenses. We have not experienced any material differences between accrued costs and actual costs incurred. Changes in these estimates that result in material changes to our accrued costs could materially affect our results of operations.

We have and may continue to acquire the rights to licensed technology that represents in-process research and development to use and develop in the commercialization of product candidates, if approved. The upfront payments made to acquire licenses, products or rights, or payments made related to future milestone payments are recognized as research and development expenses provided that there is no alternative future use of the rights in other research and development projects, up to the point of regulatory approval. Milestone payments are expensed when the specific milestone has been achieved.

Stock-Based Compensation

We measure and record expense related to all equity awards granted to employees and non-employees in the statements of operations based on their grant date estimated fair values, including stock options and restricted stock awards. For stock-based awards that vest subject to the satisfaction of a service requirement, the expense is recognized using the straight-line method over the requisite service period, which is generally the vesting period. Forfeitures are recognized as they occur.

The fair value of restricted stock awards is determined on the date of grant based on the estimated fair value of our common stock on that date.

For purposes of determining the estimated fair value of options granted to employees and non-employees, we use the Black-Scholes option pricing model, which requires the use of highly subjective assumptions. These assumptions include:

- *Fair Value of Common Stock*—See the subsection titled "—Common Stock Valuations" below.
- *Expected Term*—We determine the expected term, which represents the period that stock-based awards are expected to be outstanding, in accordance with the simplified method, which is presumed to be the mid-point between the contractual term and the vesting term.
- *Expected Volatility*—As there is no trading history for our common stock, we have determined our computation of expected volatility on the historical volatility of a representative group of public companies with similar characteristics to us, including stage of product development and life science industry focus. The historical volatility is calculated based on a period of time commensurate with the expected term assumption.
- *Risk-Free Interest Rate*—We base the risk-free interest rate on U.S. Treasury zero coupon issues in effect at the time of grant for periods corresponding with the expected term assumption.
- *Expected Dividend*—The expected dividend yield is assumed to be zero as we have never paid and have no plans to pay dividends on our common stock.

See Note 9 to our audited financial statements and Note 9 to our unaudited interim condensed financial statements included elsewhere in this prospectus for more information concerning certain of the specific

assumptions we used in applying the Black-Scholes valuation model to determine the estimated fair value of our stock options.

For the years ended December 31, 2019 and 2020, we incurred stock-based compensation of $0.4 million and $0.7 million, respectively. For the three months ended March 31, 2020 and 2021, we incurred stock-based compensation of $0.2 million and $0.4 million, respectively. As of March 31, 2021, there was $6.4 million of total unrecognized stock-based compensation, which is expected to be recognized over a weighted-average period of approximately 3.5 years.

The intrinsic value of all outstanding options as of March 31, 2021 was $ million, based on the assumed initial public offering price of $ per share, which is the mid-point of the estimated price range set forth on the cover page of this prospectus, of which $ million is related to vested options and $ million is related to unvested options.

Common Stock Valuations

Historically, for all periods prior to this offering, fair values of the shares of common stock underlying our stock-based awards were approved on each grant date by our board of directors. Our board of directors considered, among other things, valuations of our common stock which were prepared by an independent third-party valuation firm in accordance with the guidance provided by the American Institute of Certified Public Accountants Practice Aid, *Valuation of Privately-Held Company Equity Securities Issued as Compensation*. The significant objective and subjective factors included, but are not limited to:

- our most recently available estimated 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;
- 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 likelihood of achieving a liquidity event, such as an initial public offering (IPO) or a sale of our company, given prevailing market conditions;
- trends and developments in our industry; and
- external market conditions affecting the life sciences and biotechnology industry sectors.

For the independent third-party valuations performed in October 2018 and October 2019, we used a probability-weighted expected return method (PWERM) whereby our total equity value was estimated under various exit scenarios and allocated to our different classes of equity. The PWERM included various scenarios in which we complete an IPO, the sale of our company or dissolution of our company that considered our estimate of the timing of each scenario and were weighted based on our estimate of the probability of each event occurring. The equity value under the IPO scenarios was based on the market approach and considered recent IPO values of comparable companies. The equity value under the scenarios in which we complete the sale of our company was based on the market approach and considered recent licensing deals for programs utilizing similar technologies as us. The equity value under the dissolution scenarios was based on the market approach and considered the return on investment from failed venture capital investments. The equity value under each scenario was adjusted for anticipated future financings and the equity value allocated to our common stock was reduced by a discount for lack of marketability.

For the independent third-party valuations performed in November 2020 and April 2021, we used a hybrid method of the PWERM and the option pricing model (OPM) backsolve method to allocate our estimated equity value to our different classes of equity. The PWERM included scenarios in which we complete an IPO and a scenario in which we complete an alternative exit (OPM Scenario) that considered our estimate of the timing of each scenario and were weighted based on our estimate of the probability of each event occurring. The equity value under the IPO scenarios was based on the market approach and considered recent IPO values of comparable companies. The equity value under the OPM Scenario in the November 2020 valuation utilized the OPM backsolve method based on our Series C convertible preferred stock financing. The April 2021 valuation considered market-based adjustments to the equity value determined under this approach in the November 2020 valuation. 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, dividend yield, and risk-free rate and then solving for the value of equity such that the value for the most recent financing equals the amount paid. The equity value allocated to our common stock was reduced by a discount for lack of marketability.

For valuations after the completion of this offering, the fair value of each share of underlying common stock will be based on the closing price of our common stock as reported on the date of grant on the primary stock exchange on which our common stock is traded.

Convertible Preferred Stock Tranche Liability

The obligation to issue additional shares of our Series B convertible preferred stock on the second and third closings of our Series B convertible preferred stock was determined to be a freestanding financial instrument that should be accounted for as a liability. At issuance, we recorded the convertible preferred stock tranche liability on the balance sheet at its estimated fair value, using the estimated fair value of the underlying Series B stock and common stock (which was determined using the standard pricing model). The other inputs used to arrive at the fair value of the convertible preferred stock tranche liability was a discount rate and the expected term, which was based on the expected contractual closing date or the actual closing date.

A tranche liability is subject to remeasurement at each balance sheet date, with changes in fair value recognized as a gain or loss on remeasurement as a component of other income (expense), net in the statements of operations until settlement or extinguishment. Our convertible preferred stock tranche liability was settled upon the closing of our second and third closings of our Series B convertible preferred stock financing in March and August 2020, respectively.

Recent Accounting Pronouncements

See Note 2 to our audited financial statements and Note 2 to our unaudited interim condensed financial statements included elsewhere in this prospectus for more 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 of results of operations.

Emerging Growth Company and Smaller Reporting Company Status

We are an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012 (JOBS Act). We will remain an emerging growth company until the earliest to occur of: (i) the last day of the fiscal year in which we have more than $1.07 billion in annual revenue; (ii) the date we qualify as a “large accelerated filer,” with at least $700 million of equity securities held by non-affiliates; (iii) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period; and (iv) the last day of the fiscal year ending after the fifth anniversary of our initial public offering. As a result of this status, we have taken advantage of reduced reporting requirements in this prospectus and may elect to take advantage of other reduced reporting requirements in our future filings with the SEC. 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.

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, delaying the adoption of these accounting standards until they would apply to private companies. We have elected to use the extended transition period to enable us to comply with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date on which we (i) are no longer an emerging growth company and (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

We are also a "smaller reporting company" meaning that the market value of our stock held by non-affiliates plus the proposed aggregate amount of gross proceeds to us as a result of this offering is less than $700 million and our annual revenue was less than $100 million during the most recently completed fiscal year. We may continue to be a smaller reporting company after this offering if either (i) the market value of our stock held by non-affiliates is less than $250 million or (ii) our annual revenue was less than $100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than $700 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation and other matters.

Interest Rate Risk

We are exposed to market risks in the ordinary course of our business. These risks primarily include interest rate sensitivities. We held cash and cash equivalents of $128.5 million and $128.4 million as of December 31, 2020 and March 31, 2021, respectively, which consisted of bank deposits and money market funds. Historical fluctuations in interest rates have not had a significant impact on our financial condition or results of operations. We believe that we do not have any material exposure to changes in the fair value of these assets as a result of changes in interest rates due to the short-term nature of our cash and cash equivalents.

BUSINESS

Overview

Heart disease is the leading cause of death in the world, accounting for more deaths than from all cancers combined. In the United States, more than 30 million adults are diagnosed with heart disease and approximately 35,000 children are born each year with congenital heart disease (CHD). There are over 250 known genetically defined disorders where the primary source of morbidity and mortality involves the heart, but there are few approved products that target the underlying cause of such diseases. Recent analysis has shown that mortality rates due to heart failure (HF) are rising. While there is a clear need for improved treatments, the rate of cardiovascular drug product approvals has declined in recent years.

We are a biotechnology company committed to a bold mission: to discover, develop and deliver curative therapies that address the underlying drivers of heart disease. Our vision is to change the treatment paradigm for heart disease, and in doing so improve and extend the lives of millions of individuals and families fighting this debilitating disease. We are advancing a pipeline of disease-modifying therapies developed using our product platforms and core internal capabilities to target defined sub-populations of patients with rare or highly prevalent forms of heart disease.

Founded by leading cardiovascular scientists from Gladstone Institutes and University of Texas Southwestern Medical Center (UTSW), we are developing therapies through scientific advancements in three distinct but interrelated product platforms: Gene Therapy, Cellular Regeneration and Precision Medicine. While our Gene Therapy and Cellular Regeneration platforms focus on the use of viral vectors for drug delivery, our Precision Medicine platform enables us to identify promising targets and product candidates in a modality-agnostic manner, including gene therapies, small molecules, and biologics.

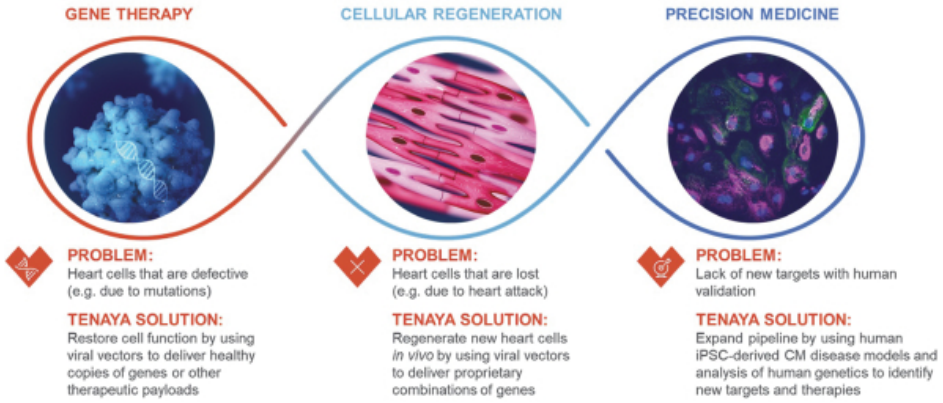
We are advancing a deep and diverse pipeline including both gene therapies and small molecules. In 2022, we intend to submit an investigational new drug application (IND) or a clinical trial application (CTA) to the U.S. Food and Drug Administration (FDA) or European Medicines Agency (EMA), respectively, for our most advanced product candidate from our Gene Therapy platform, TN-201, an adeno-associated virus (AAV)-based gene therapy to address genetic hypertrophic cardiomyopathy (gHCM) caused by Myosin Binding Protein C3 *(MYBPC3)* gene mutations. TN-201, currently in IND-enabling studies, is designed to deliver a fully functional *MYBPC3* gene driven by our proprietary heart-specific promoter to restore normal levels of MYBPC3 protein. We also intend to submit an IND to the FDA for our most advanced product candidate from our Precision Medicine platform, TYA-11631, an HDAC6-specific small molecule inhibitor (HDAC6i). TYA-11631, currently in IND-enabling studies, has potentially broad utility in both heart failure (HF) where the ejection fraction (EF) is greater than or equal to 50%, called preserved EF (HFpEF), and genetic dilated cardiomyopathy (gDCM). Our PKP2 program involves an AAV-based gene therapy to address genetic arrhythmogenic right ventricular cardiomyopathy (gARVC) caused by plakophilin 2 *(PKP2)* gene mutations, and is currently at the candidate selection stage. Our DWORF program, an AAV-based gene therapy designed to express the Dwarf Open Reading Frame (*DWORF*) gene in the heart, has potentially broad utility in dilated cardiomyopathy (DCM) and HF where the EF is below 40%, called reduced EF (HFrEF), and is currently at the candidate selection stage. Our Reprogramming program for cardiac regeneration can potentially replace heart cells lost in patients experiencing HF due to prior myocardial infarction (MI) and is currently at the candidate selection stage. In addition, we have numerous earlier-stage programs emerging from our product platforms to address other forms of HF.

Our Product Platforms

We have established three distinct but interrelated product platforms to discover novel therapies for various forms of heart disease. These platforms bring together differentiated science, capabilities, and intellectual property to enable multi-modality drug discovery. As displayed below, each of our product platforms is designed to address different problems that have historically plagued the development of novel therapies for heart disease.

We believe these three product platforms together yield better insight into disease processes, create more opportunities for successful drug development, mitigate scientific risks, and differentiate our efforts relative to competitors.

Our Product Platforms Powering Multi-Modality Drug Discovery



1. Our ***Gene Therapy*** platform uses AAVs to deliver genes to specific cells in the heart to correct or compensate for functional defects. We have the ability to use both known AAV capsids as well as novel capsids identified through our internal capsid engineering capabilities. Depending on the nature of the disease, we may target cardiomyocytes (CMs), cardiac fibroblasts (CFs), or other cells important to the proper functioning of the heart. The genes delivered can be a healthy copy of genes that are known to be mutated in human disease, or some other protein or construct that can exert a therapeutic effect. The product candidates arising from this platform are intended to overcome the shortcomings of traditional therapies that are not able to address the underlying problems that contribute to heart disease. We believe this platform has potentially broad utility for both genetic and non-genetic forms of heart disease.

2. Our ***Cellular Regeneration*** platform uses viral vectors to deliver genes to specific cells in the heart to regenerate CMs *in vivo*. We own certain intellectual property that covers two distinct approaches to achieve regeneration of new heart tissue. One approach uses AAV vectors to deliver proprietary combinations of genes that induce the resident CFs to convert to CMs. We have developed, through internal capsid engineering capabilities, novel AAV capsids with enhanced CF transduction. Another approach uses non-integrating lentiviruses to deliver proprietary combinations of genes that induce the resident CMs to undergo transient cell division. The product candidates arising from this platform are intended to overcome the shortcomings of traditional therapies that are not able to address the loss of CMs. We believe this platform has potentially broad utility across a range of heart conditions that result in the loss of CMs, including MI, chemotherapy-related toxicity, and viral infection.

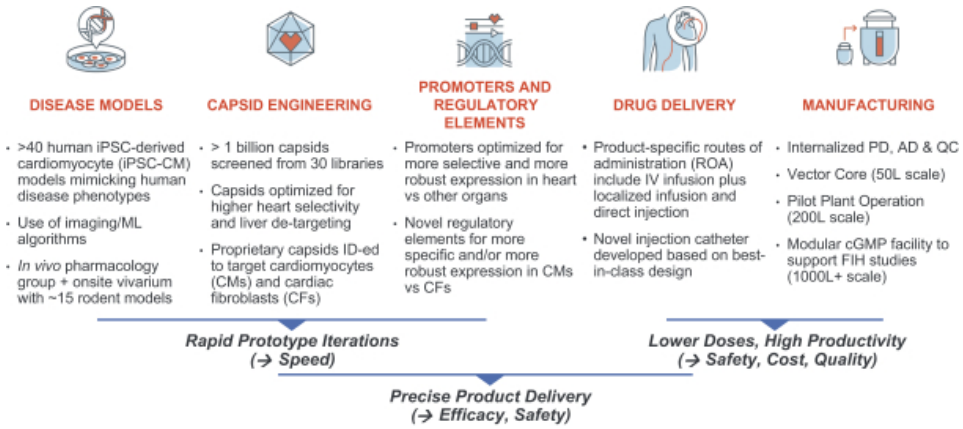
3. Our ***Precision Medicine*** platform uses human induced pluripotent stem cell-derived CMs (hiPSC-CMs) as proprietary disease models and analysis of human genetics for the identification of new targets, validation of known targets, and high-throughput screening for drug discovery. This platform is intended to overcome the shortcomings of traditional drug development efforts that rely more heavily on efficacy in animal models to develop therapies intended for human heart disease. We believe this platform may also help identify promising drug targets directed to sub-populations of patients who are more likely to respond to such targeted product candidates. We believe this platform has potentially broad utility for the identification of targets and therapies in a modality-agnostic

manner—including gene therapy, small molecules, and biologics—for both genetic and non-genetic forms of heart disease.

Our Approach and Capabilities

We have five core internal capabilities, as displayed below, to support our product platforms and our pipeline programs. We believe these integrated capabilities provide us with several advantages and differentiate our efforts relative to competitors, particularly for our AAV-based development efforts. We believe these capabilities can collectively support rapid product development, precise product delivery, and efficient production, which ultimately improves the probability of technical and regulatory success of our product candidates.

Our Core Capabilities Supporting Our Differentiated Product Platforms



Our internalized and integrated capabilities to support our product platforms include:

1. ***Disease Models***. Having better models of human heart disease is an important capability for drug discovery. Existing models may not be adequate to assess the efficacy or safety of novel therapies. In order to achieve this, we have internalized the ability to create and integrate proprietary *in vitro* and *in vivo* models within our research organization. For our *in vitro* hiPSC-CM disease models, we use multiple methods to induce phenotypes within cell lines that simulate human diseases and then use these models for high throughput target identification and drug discovery. For our *in vivo* disease models, we have a dedicated onsite *in vivo* pharmacology group and vivarium, where we have established approximately 15 rodent heart disease models, both genetic and non-genetic, and can dose animals, perform heart surgeries, and use non-invasive imaging to assess the impact of our therapies under development.

2. ***Capsid Engineering***. We have established in-house AAV capsid engineering capabilities and have screened over one billion variants from diverse, proprietary libraries to discover novel AAV capsids with desirable therapeutic properties to support our programs. We have generated preclinical data to support the superiority of these capsids over parental variants in multiple species—including NHPs—against multiple attributes. These capsids have improved tropism for the heart compared to other organs and for specific cells within the heart; improved transduction and expression within the heart cells; and lower susceptibility to neutralizing antibodies. We believe our capsid engineering efforts will be critical in supporting the successful clinical development of our product candidates and enabling those product candidates, if approved, to reach more patients.

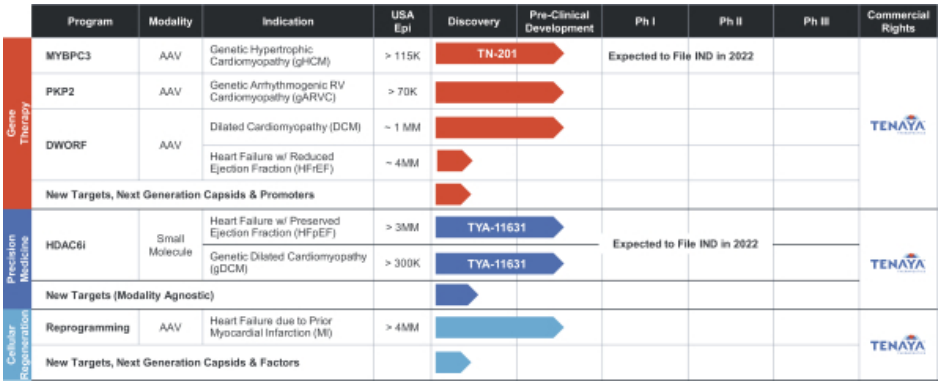
3. ***Promoters and Regulatory Elements***. We have created novel promoters and regulatory elements to support our gene therapy and cellular regeneration programs. These promoters and regulatory elements control the expression of genes within the cells. We use these elements to help ensure a more precise expression of therapeutic payloads in different cell types in the heart. We believe our innovations in promoters and regulatory elements can support the successful clinical development of our product candidates.

4. ***Drug Delivery***. Most AAV-based gene therapies in development rely on intravenous (IV) infusions; however, there are many programs that attempt to achieve more targeted physical delivery to specific organs (e.g. eye, central nervous system). Gene delivery is considered one of the biggest challenges to successful translation of cardiac gene therapy into approved products. We believe it is important to explore different routes of administration (ROAs) as well as different infusion- or injection-based catheters to support more targeted delivery and more efficient uptake of gene therapies for the heart. We prioritize head-to-head comparison of different ROAs in large animal models. We are also developing a novel transendocardial injection catheter for precise delivery of therapeutic payloads around the scar area of an infarcted heart. We believe our discoveries in drug delivery can help widen the therapeutic index of our product candidates by reducing the dose required for a therapeutic benefit.

5. ***Manufacturing***. We have taken important steps towards internalizing AAV manufacturing capabilities, expertise, and intellectual property to support our emerging portfolio of gene therapy product candidates, and to have greater control over our product development. We have in-house personnel to support our upstream and downstream process development (PD), analytical development (AD), and quality control (QC) efforts. We have produced non-clinical material involving both parental and novel AAV capsids at the 50L and 200L scales to support early research and IND-enabling studies in small and large animal models. We have initiated construction of a 94,000 square-foot current Good Manufacturing Practices (cGMP) facility in the San Francisco Bay Area near our research labs to enable smooth scale-up of production to support first-in-human (FIH) studies, initially at the 1000L scale. We expect this facility will be operational by the end of 2021. We have in-licensed certain manufacturing intellectual property to support our programs.

Our Pipeline

We are advancing a deep and diverse pipeline of programs. The pipeline includes therapeutic programs intended for rare or orphan diseases, such as genetic cardiomyopathies, as well as programs intended for larger indications, such as HFpEF. We have exclusive worldwide rights to all of our programs. Our pipeline includes programs that have emerged from our internal efforts, including various ongoing early stage discovery efforts across our platforms, as well as programs that are based on intellectual property licensed from academic institutions.



- ***MYBPC3 Program for gHCM***. We are developing an AAV-based gene therapy designed to deliver a functional *MYBPC3* gene in adults and children with gHCM due to *MYBPC3* gene mutations. We have demonstrated significant and durable disease reversal and survival benefit in a relevant murine model, as well as tolerability in mice and NHPs. Our product candidate, TN-201, uses a differentiated approach designed to enable robust expression of the *MYBPC3* gene in the heart. The program is currently in IND-enabling studies, and we have obtained feedback from multiple regulatory agencies, including the FDA, to guide our path to clinical development. We intend to submit an IND or CTA to the FDA or EMA, respectively, in 2022.
- ***HDAC6i Program for HFpEF and gDCM***. Inhibitors of histone deacetylases (HDACs) have long been considered promising targets for many indications in a range of therapeutic areas. Several partially selective HDAC6i are already in clinical development, but none for a heart disease indication. We have discovered a highly specific and potent HDAC6i for which medicinal chemistry has been completed and we have filed patent applications for two chemical series. We have also demonstrated in vivo activity of these molecules in multiple animal models, including in two different models of HFpEF as well as in a model of gDCM. Our product candidate, TYA-11631, has not demonstrated evidence of toxicity at levels dosed to date in small and large animal species. We have initiated IND-enabling activities and intend to submit an IND to the FDA in 2022.
- ***PKP2 Program for gARVC***. We are developing an AAV-based gene therapy designed to deliver a functional *PKP2* gene in adults with gARVC due to *PKP2* gene mutation. We have demonstrated prevention of disease progression and survival benefit in a murine model. Based on publicly available information to date, we believe these data are the first known demonstrations of durable disease modification, survival benefit, and prevention of arrhythmia using an AAV:PKP2 gene therapy construct. This program is currently at the candidate selection stage.
- ***DWORF Program for DCM and HFrEF***. We are developing an AAV-based gene therapy designed to deliver the *DWORF* gene for patients with DCM and HFrEF. DWORF is a muscle-specific micro-peptide first discovered by our co-founder Eric Olson, Ph.D., that acts on the sarcoplasmic/endoplasmic

reticulum Ca2+ ATPase 2a (SERCA2a) pathway, widely considered to be a promising target in HF. We and our academic collaborators have accumulated significant preclinical *in vivo* proof-of-concept evidence for the therapeutic benefit of over-expression of the *DWORF* gene in multiple murine models, including models of DCM and HFrEF, as well as tolerability in murine models. These findings in animal models support the advancement of this program in patients with genetic cardiomyopathies due to specific mutations as well as more prevalent HF populations. This program is currently at the candidate selection stage.

- ***Reprogramming Program for HF due to prior MI***. We have made significant advances in our unique approach to cellular regeneration using viral vectors to deliver genes that drive *in vivo* reprogramming of resident CFs to create new CMs. This approach was first demonstrated by our co-founder Deepak Srivastava, M.D. We have discovered a proprietary combination of three genes that can drive robust reprogramming when delivered together in a single AAV capsid. We have demonstrated significant and durable disease reversal as well as tolerability in multiple small and large animal models. Results of this approach in a pig model of HF due to prior MI were presented at the American Society of Gene & Cell Therapy conference in 2020 and represent what we believe is the first-ever successful demonstration of the therapeutic benefit of this approach in a large animal model with a human-sized heart. This program is currently at the candidate selection stage.

Our Management Team and Investors

We were incorporated in August 2016 by The Column Group, in partnership with leading scientific and clinical researchers in cardiovascular genetics and muscle biology at Gladstone Institutes and UTSW. Since our founding, we have attracted a talented group of industry experts and scientists as part of a highly innovative organization of over 75 employees.

We are led by a team of executives and directors with significant experience in the discovery, development, manufacture, and commercialization of novel therapeutics, specifically in the fields of rare diseases, gene therapies, and heart disease. Faraz Ali, our Chief Executive Officer since 2018, previously served as the Chief Business Officer at REGENXBIO, and prior to that, accumulated relevant experiences at industry-leading companies in gene therapy and orphan drug development including at bluebird bio and Genzyme Corporation.

We have raised approximately $248 million in equity financing to date from leading venture, strategic and public investors, including The Column Group, Casdin Capital, SymBiosis II, LLC, Fidelity Management & Research Company, RTW Investments, RA Capital Management, funds and accounts advised by T. Rowe Price Associates, GV and others who share our vision to build a highly innovative, integrated biotechnology company delivering next-generation therapies that address the underlying causes of heart disease.

Overview of Heart Disease

Heart disease is the leading cause of death in the world, accounting for more deaths than from all cancers combined. In the United States, more than 30 million adults, or approximately 12% of the adult population, are diagnosed with heart disease. In addition, an adult dies from a cardiovascular-related health condition, such as a heart attack every 36 seconds, a gruesome statistic that translates to 31% of all deaths in the United States each year. The picture is equally bleak at the other end of the age spectrum, as approximately 35,000 children are born in the United States every year with CHD, and CHD is the leading cause of birth defect-related morbidity and mortality. There are over 250 known genetically defined disorders where the primary source of morbidity and mortality involves the heart. There are few approved products that target the underlying cause of such diseases. Recent analysis has shown that after decades of reduction in the mortality rate due to HF, these rates are once again rising over the last decade, highlighting the need for improved treatments.

The heart is a complex organ due to its biological structure as well as its tightly regulated and coordinated electrophysiological and biomechanical properties. Heart disease comes in many forms, affects individuals at

many ages, and is a result of many factors. As depicted in the below table, heart disease can be generally categorized as either directly resulting from problems associated with the heart organ, for example, HF, arrhythmia and heart valve disease; or indirectly resulting from problems associated with the vasculature, for example, coronary artery disease (CAD). In each case, the underlying cause could be genetic, due to normal aging or due to environmental factors.

The table below illustrates four broad categories of heart disease:

CATEGORIES	DESCRIPTION
 Heart Failure (HF)	HF is a heart condition in which the heart's pumping capacity is not adequate to meet the demands for blood and oxygen required by the rest of the body. HF can be the result of a range of conditions that lead to weakening of the heart muscle. Conditions that can be associated with the development of HF include a heart attack, uncontrolled high blood pressure, congenital heart disease (heart defects present at birth), and genetic cardiomyopathies.
 Arrhythmia	Arrhythmia is one of the most common heart conditions and is described as any change in the heart's normal electrical impulses. Electrical impulses from within the heart initiate each heartbeat and ensure its normal pumping function. Arrhythmias can cause the heart to beat too quickly, too slowly or irregularly, resulting in a broad range of symptoms as well as sudden death and stroke.
 Heart Valve Disease	Heart value disease occurs when there is a problem with one or more of the four valves that normally work in unison to make sure that blood is pumped in the proper direction through the four chambers of the heart.
 Coronary Artery Disease (CAD)	CAD is among the most common type of heart disease and occurs when plaque grows in the walls of the coronary arteries, limiting the blood flow to the heart's muscle. CAD can ultimately lead to a heart attack.

While there is significant unmet need in the field of heart disease, historically there have been challenges in developing novel therapies for the different forms of heart disease. We are currently focused on HF and arrhythmia, particularly when these diseases can be traced to some underlying genetic defect.

Current Challenges in the Development of Novel Therapies for Heart Disease

- ***Most development efforts focus on treating symptoms rather than targeting the underlying causes of diseases.*** First-line therapies for HF such as generic small molecules, including ACE inhibitors, angiotensin II receptor blockers, beta blockers, aldosterone antagonists, and diuretics, are most commonly used, irrespective of the underlying cause of the HF.

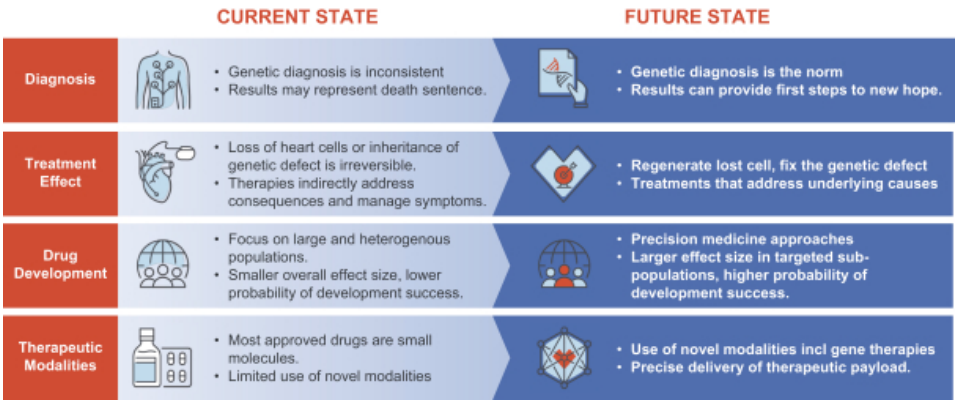
- ***Identifying new disease-modifying targets is challenging.*** There is a high reliance on animal models that are not always predictive of human heart disease. There is only a 4% to 7% overall probability of successful drug development from Phase 1 through commercialization for heart disease, among the lowest of all therapeutic areas.
- ***Genetic diagnosis and genetic counseling are limited.*** Most patients presenting with heart disease do not currently obtain a genetic test as part of their diagnosis. Given there are almost no therapies that are targeted at the underlying genetic cause of the disease, physicians may believe a genetic test will not influence treatment and management decisions. Additionally, even when patients do receive a genetic diagnosis, genetic counseling and family screening are not commonly employed. As a result, family members who may be at risk of disease are not identified early. Additionally, this also limits the availability of patients for clinical trials of genetic medicines in heart disease.
- ***Regenerative therapy science is still in its early stages.*** Historical attempts at developing novel cell and gene therapies for heart disease have not been successful. Much effort was devoted to regenerative medicine approaches using autologous (from self) or allogeneic (from donors) cell sources, but after more than 150 clinical studies involving thousands of patients over the last two decades, those efforts have mostly ended in failure. Factors that likely contributed to these failures include an insufficient number of new cells surviving rejection by the immune system, only modest efficacy from the surviving cells, and arrhythmia caused by abnormal electric activity and connections between new cells and the existing cells.
- ***Gene therapy science for the heart is still maturing.*** There have been few attempts at gene therapy for heart disease. Most early gene therapy efforts used adenoviruses instead of AAV. The most well-known AAV-based effort involved the use of AAV1 to deliver SERCA2a. After promising preclinical and early clinical results, this effort was discontinued following an unsuccessful Phase 2b study. These first-generation gene therapy efforts for the heart did not have the benefit of more recent advances in capsids, promoters, delivery, and manufacturing.
- ***Regulatory requirements are stringent.*** Historically, cardiovascular drug development has involved large studies to demonstrate a survival benefit over and above standard-of-care, and where there is very low tolerance for safety risks. Endpoints focused on functional improvements, such as change in EF, have generally not been sufficient for FDA approval. This translates to a need for very large, long, and expensive randomized and placebo-controlled clinical studies. The average size of a clinical study used to support treatment recommendations for HF can involve approximately 2,000 to 8,000 patients. As an example, studies for therapies intended to treat diabetes may require safety trials involving 5,000 to 15,000 patients to rule out cardiovascular risk.
- ***Costs of development are high.*** In part due to the historical need for large survival studies, drug development in this space has been very long and expensive. A recent analysis demonstrated that, on average, biopharmaceutical companies spent $1 billion in clinical development per cardiovascular drug product approval, the highest ratio among all therapeutic areas.
- ***Patient access barriers are challenging.*** In addition to being the leading cause of death, HF is one of the largest and most expensive categories for payers. The United States spends approximately $317 billion per year on CAD alone, including heart disease and stroke, or nearly 17% of all U.S. healthcare spending, representing the most expensive category of chronic diseases to treat. The total direct and indirect costs of HF alone are expected to increase to $70 billion by 2030. As a result, heart disease is an area of focus for cost-containment and price sensitivity for new therapies for both private and public payers.

These factors have contributed to a decline in successful heart disease drug development. Between 2000 and 2009, FDA approvals for new cardiovascular drug products declined by approximately 33% compared with the prior decade. While heart disease is the leading cause of death in the world, fewer resources have been mobilized in support of new therapies for heart disease relative to investment in other therapeutic areas, such as oncology and diseases of the central nervous system.

However, there are recent signs of improvement, notably due to the improving rate of genetic testing, potentially from more education by physicians and patient advocacy groups, as well as increased availability of accessible genetic testing covering more than 150 relevant genes associated with inherited arrhythmia and cardiomyopathy conditions. There are also a small but growing number of examples of clinical success with precision medicine approaches in cardiology, including in genetic cardiomyopathies. In addition, there is the potential for relaxation of some regulatory requirements that may enable approval of new cardiovascular therapies based on demonstrated effect on symptoms or physical function and not based solely on demonstrated improvement of survival or risk of hospitalization.

We believe with the evolving understanding of heart disease in the scientific community and general public, there are significant opportunities where we can benefit from and support the evolution towards more precise diagnosis, drug development, and treatment for heart disease, as depicted in the diagram below.

The Evolving Landscape of Heart Disease



Our Strategy

Our goal is to become a leading, fully integrated biotechnology company delivering next-generation therapies that address the underlying causes of heart disease identified through our multi-modality product platforms. We are taking advantage of an expanded understanding of heart biology and advances in the science to discover, develop, manufacture and ultimately commercialize a deep and diverse pipeline of novel therapies. The key components of our strategy to achieve these goals are:

- ***Develop disease-modifying therapies.*** We are focused on developing disease-modifying and potentially life-saving novel therapies that target the underlying causes of heart disease. We are particularly interested in areas where there is no current standard-of-care or where we believe the nature and the magnitude of the effect of our therapies will be significant relative to existing standards-of-care. For example, we believe our AAV-based gene therapies for genetically defined conditions have the potential to be curative after a single dose.
- ***Focus exclusively on heart disease.*** Heart disease is still the leading cause of death globally, more than all cancers combined, and the unmet medical need remains high. We see significant opportunity to address this sizable market with our dedicated strategy. The heart is a complex organ to target, in part due to the tightly regulated and coordinated electrophysiological and biomechanical properties that can complicate delivery of effective therapies and necessitates a deep understanding of heart biology. Our laser focus leads to insights that underpin our foundational and differentiated capabilities to address

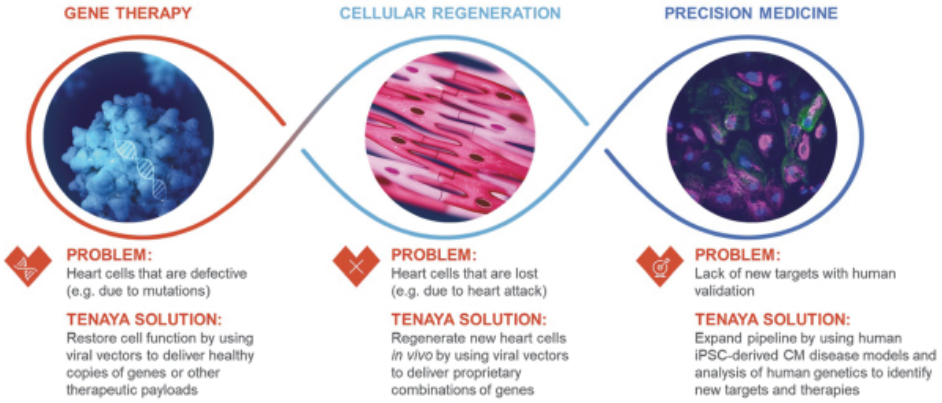
challenges that have historically presented barriers to the successful development of novel therapies for the heart.

- ***Discover novel therapies using three product platforms in parallel***. To address the wide range of issues in heart diseases, we are advancing science from three distinct product platforms in parallel. Each platform tackles different problems that have historically plagued drug development in the field of cardiology: (i) our Gene Therapy platform to deliver a wide variety of therapeutic payloads more precisely to heart tissue, (ii) our Cellular Regeneration platform to replace heart cells lost to disease, and (iii) our Precision Medicine platform to discover targeted therapies in a modality-agnostic fashion. These platforms represent distinct but interrelated product engines that we believe will enable a robust pipeline of promising product candidates while also mitigating overall scientific risk.
- ***Target defined sub-populations of patients most likely to respond to our therapies.*** We seek to focus on patient populations where the genetic cause of the disease is well-established, including genetic cardiomyopathies and other monogenic disorders. We also seek to use different strategies to sub-segment larger HF populations, such as HFrEF and HFpEF, through the use of genetics or biomarkers to improve selection of patients with attributes that are more suited to the specific mechanism of action. We believe this strategy can accelerate clinical development, reduce overall development costs, and improve the probability of clinical and regulatory success.
- ***Advance a deep and diverse pipeline of therapies.*** We aim to advance potential product candidates from all three product platforms concurrently, and the current pipeline already has at least one program from each product platform. The diversity of our programs illustrates the ambition of our vision and the versatility and depth of our scientific approaches. For example, from our Gene Therapy platform we are advancing AAV-based therapies for rare, genetic forms of heart disease including (i) TN-201, our MYBPC3 product candidate for gHCM, (ii) our PKP2 product candidate for gARVC and (iii) our DWORF product candidate for DCM and HFrEF; from our Cellular Regeneration platform, we are advancing a potentially one-time regenerative medicine therapy for HF due to prior MI; and from our Precision Medicine platform, we are advancing TYA-11631, an HDAC6i for a prevalent form of HFpEF and gDCM. We are also working on several other undisclosed programs, particularly from our Gene Therapy and Precision Medicine platforms, that we believe will add to our future pipeline opportunities.
- ***Internalize and integrate core capabilities to support our innovation.*** We have five core capabilities that we believe will enable us to rapidly discover, develop, and deliver heart therapies. These capabilities include: (i) Disease Models, (ii) Capsid Engineering, (iii) Promoter and Regulatory Elements, (iv) Drug Delivery and (v) Manufacturing. We believe the integration of our know-how and innovations in these areas will allow us to generate scientific insights more rapidly and improve the probability of technical and regulatory success of our product candidates. The internalization of these capabilities also reduces our reliance on third parties—be it academic labs, CROs, or CDMOs—providing us better control of our timelines and costs.
- ***Become a fully integrated biopharmaceutical company with commercial capabilities.*** We aim to discover, develop, manufacture, and eventually commercialize therapies. We believe this strategy can make us a partner of choice for academics and larger companies alike who wish to access deep expertise in next generation therapies for heart disease. We also strategically evaluate collaborations and partnerships with biopharmaceutical companies that may have more robust and complimentary capabilities and resources to accelerate the development and maximize the availability and potential of our product candidates, particularly for more prevalent indications.

Our Product Platforms

To unlock the full potential of novel therapies across many forms of heart disease, we are advancing science from three product platforms in parallel. Each platform is intended to address different problems that have historically plagued drug development in the field of cardiology: (i) our Gene Therapy platform to deliver a wide variety of therapeutic payloads more precisely to heart tissue, (ii) our Cellular Regeneration platform to replace heart cells lost to disease, and (iii) our Precision Medicine platform to discover targeted therapies in a modality-agnostic fashion. We are advancing programs from these distinct but interrelated product platforms that combine different science, capabilities, and intellectual property. We believe these three product platforms together yield better insights into disease processes, create more opportunities for successful drug development, mitigate scientific risk, and differentiate our efforts relative to competitors.

Our Product Platforms Powering Multi-Modality Drug Discovery



Gene Therapy Platform

Gene therapy focuses on repairing or replacing defective or mutated genes to produce a therapeutic effect or treat a disease. AAV is a non-enveloped virus that already exists in some humans and does not cause disease. In gene therapy, the viral DNA within an AAV is replaced with new DNA to become a precisely coded vector to deliver the engineered therapeutic to specific tissues or organs within the body.

AAV vectors are the subject of significant research and development as they can be leveraged as a gene delivery vehicle for a wide range of therapeutic payloads to a wide variety of human cells. AAV-mediated gene therapy has been shown to be highly effective in targeting multiple organs, including the eye, the liver and the central nervous system. These viruses have been used to dose more than 3,300 patients in approximately 150 clinical studies around the world, and there are now several therapies that use such viruses that have been approved by the FDA and other regulatory agencies.

Recent third-party clinical studies have demonstrated that AAV serotype 9 (AAV9) can effectively transduce the hearts of infants and adults. This supports the results of several published non-clinical studies using AAV9 in murine and NHP models. Overall, most data suggest that AAV9 may be the best of the known existing parental vectors for the purpose of cardiac gene therapy.

However, AAV9 has limitations. AAV9 has a well-established ability to also transduce the liver and the central nervous system, in addition to the heart, which can create safety considerations. Also, some individuals have neutralizing antibodies to AAV9, making them ineligible for AAV9-based treatments.

Cardiac-specific promoters like cardiac troponin T (cTnT) can help limit the expression of AAV-delivered genes to CMs, but do not enable targeted gene expression in other heart cells (e.g. CFs). Additionally, the level of gene expression from these promoters may not be sufficient for therapeutic effect in some settings.

Therefore, there is significant room for improvement, and we aim to improve gene therapy for the heart in ways that expand its utility. We believe our five core internal capabilities will allow us to identify, engineer, validate, deliver and manufacture novel AAV vectors to optimize the delivery and expression of therapies more selectively to cells of interest in the heart. With our capsid engineering capabilities, we have designed and screened more than one billion AAV variants to find novel capsids with higher tropism and transduction efficiency for different types of heart cells, lower transduction efficiency for the liver and other tissues, and lower susceptibility to neutralizing antibodies. We have discovered promoters and regulatory elements that enable more precise gene expression in specific heart cells. We are developing new catheters and are exploring different ROAs to more precisely deliver vectors to heart tissue. And we have established know-how to enable more optimal manufacturing, including of novel AAV capsids.

These capabilities open the opportunity to deliver novel gene therapies to patients with heart disease and position us to become a leader in gene therapy for cardiology. We are leveraging these capabilities to develop gene therapies not only for rare, genetic forms of heart disease, but also to enable the transition to more prevalent forms as well.

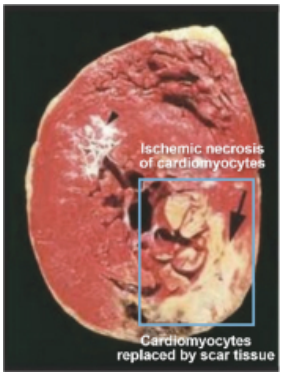
The product candidates arising from our Gene Therapy platform are intended to overcome the shortcomings of traditional pharmacological or surgical interventions that are not able to address the underlying genetic factors contributing to heart disease. Our initial area of focus is on the delivery of a healthy copy of genes that are known to be mutated in genetic cardiomyopathies; for example, our most advanced product candidate from our Gene Therapy platform involves delivering a healthy copy of the *MYBPC3* gene to address the leading cause of gHCM. This “lock and key” gene therapy program was selected following a screen of hundreds of potential targets. We believe our MYBPC3 program is able to benefit from a variety of factors, including high disease severity and large unmet need; relatively high prevalence; emerging science supporting haploinsufficiency as the disease driver; representative disease models; and illustrative proof-of-concept evidence for gene therapy from academic labs.

We believe the versatility of our Gene Therapy platform and related differentiated capabilities enables us to rapidly expand our portfolio of therapies beyond the initial focus. For example, our PKP2 program is another example of a “lock and key” approach to addressing the leading cause of gARVC. Our DWORF program is based on the idea of delivering the recently discovered DWORF protein targeting a well-known pathway that has been shown to exert a therapeutic effect in a range of disease models. We continue to explore other genetic cardiomyopathies that can potentially be addressed by our Gene Therapy platform.

Cellular Regeneration Platform

Scientists have long known that the human heart is not able to regenerate itself, unlike many other organs in the body. Acute MI—more commonly referred to as a heart attack—can kill as many as 25% of CMs from the left ventricle (LV), or approximately one billion cells. The heart has no natural way to replace cells that are lost slowly with age or suddenly due to disease. One reason that HF is so prevalent and the leading cause of death in the world is due to the lack of regenerative potential of the heart. Acute MI is associated with a 30% mortality rate; about 50% of the deaths occur prior to arrival at the hospital. An additional 5% to 10% of survivors die within the first year after their MI. Approximately half of all patients with an MI are rehospitalized within one year of their first MI. Finding ways to replace lost heart cells is one of the “holy grails” of regenerative medicine.

There are two abundant cell types in the heart: CMs, which are the cells that are responsible for contraction during each heartbeat, and CFs, that produce and secrete growth factors, cytokines and other signaling molecules contributing to structural, biochemical, mechanical and electrical properties of the myocardium. While CFs are able to divide and proliferate, CMs are post-mitotic, meaning they are incapable of regenerating. CMs that are lost due to aging or disease are replaced by fibrotic scar tissue that is permanent and irreparable with currently approved therapies.

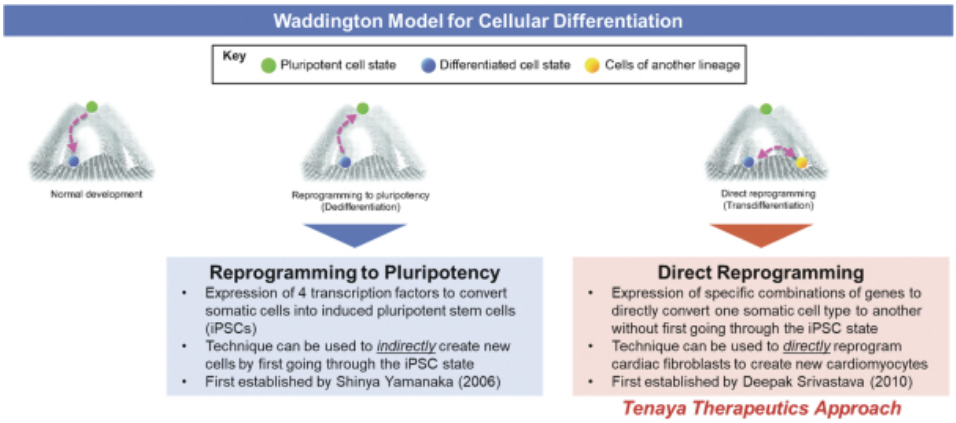


The field of cardiac regeneration has historically been dominated by *ex vivo* cell therapy approaches using autologous (from self) or allogeneic (from donors) cell sources to replace lost CMs. However, there have been no successful therapies after scores of clinical studies involving thousands of patients. Any modest efficacy seen in clinical studies are now often attributed to indirect paracrine effects rather than true cardiac regeneration. Some have tried to induce regeneration by infusion or injecting cells generated from hiPSC-CMs or human embryonic stem cells (hESCs), but that has been fraught with many challenges, as these cells have an embryonic phenotype and generate arrhythmias once injected into the heart; recipients need to be immunosuppressed to avoid rejection; and integration into the electric and mechanical connections of the heart is still imperfect.

We are advancing a cardiac regeneration approach based on research conducted by our founders at Gladstone Institutes and UTSW, who pioneered the idea of restoring heart function after a heart attack by *in vivo* regeneration of lost CMs. Our approach is intended to achieve this by using viral vectors to deliver a proprietary combination of three genes that when delivered together in a single AAV can permanently convert—or "reprogram"—a patient's own resident CFs into new CMs.

This approach was inspired by the Nobel-prize winning discoveries of Shinya Yamanaka who first discovered that human cells can be "reprogrammed" with certain specific factors—which became known as the "Yamanaka factors"—to become induced pluripotent stem cells (iPSCs), and that these newly formed iPSCs were in turn capable of differentiating to become any other human cell type in the body, including heart cells. Our founders and other academic labs built on this idea and demonstrated that it is possible to directly convert CFs to CMs without first going through the iPSC stage. Dr. Srivastava, one of our co-founders and a member of our board of directors, was the first to demonstrate proof of concept of this "direct reprogramming" approach for cardiac regeneration *in vivo* in a mouse model and *in vitro* with human cells. Several independent academic labs around the world have subsequently replicated the results with direct reprogramming for cardiac regeneration using the same factors as well as new combinations.

The figure below helps illustrate the idea of direct reprogramming of CFs to CMs using the Waddington model for cellular differentiation:



There have been several historical challenges for the field of direct reprogramming for cardiac regeneration to turn this promising scientific discovery into potentially viable therapies. Most academic efforts required anywhere from three to five factors to achieve the conversion of human CFs to CMs, and the overall conversion rate was relatively low. Some of these efforts used a combination of retroviruses and small molecules to achieve this conversion, which is not clinically applicable. The published proof-of-concept work has been demonstrated in murine models of acute MI (i.e. immediately at the time of onset of heart attack), but not in models of HF following MI (i.e. sometime after the heart attack has already happened) which more accurately simulates the situation that would be adopted in the clinical setting.

We believe we are the first to potentially overcome these challenges. We have discovered a proprietary combination of three genes that can be co-packaged and co-expressed from a single proprietary AAV vector engineered for higher transduction of CFs when compared to existing parental capsids. We have demonstrated higher transdifferentiation rates *in vitro* using human CFs that are higher than rates reported in published studies using combinations of other factors intended to drive reprogramming, and robust and durable proof-of-concept of this approach in multiple rodent models of acute MI and HF post-MI. Most importantly, we believe we are the first to have demonstrated the therapeutic benefit of this approach in a post-MI pig model with a human-sized heart.

We believe our *in vivo* approach to cardiac regeneration may have several advantages over *ex vivo* cell therapies. Because the newly formed CMs are generated from the patients' own cells, they are not rejected by the body and no immunosuppression is needed. And since these newly formed CMs are generated from within the patient's heart tissue, it may be easier for them to electrically and mechanically connect with surrounding cells as they mature and to contribute to healthy heart function with lower risk for arrhythmias. In addition, it is easier to manufacture and to deliver AAV-based therapies and to offer them at commercially viable prices compared to cell-based therapies.

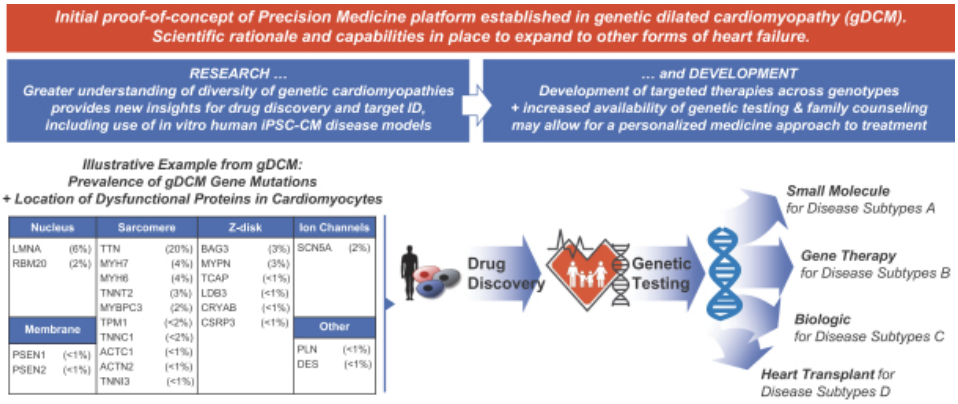
The initial focus of our Cellular Regeneration platform is on the development of disease-modifying treatments for HF due to prior MI. We believe the versatility of this product platform and related differentiated capabilities position us to expand our portfolio of therapies rapidly and pursue other indications involving loss of CMs.

Precision Medicine Platform

The idea of "precision medicine" has been around for a number of years, with the core concept of delivering the right therapy to the right patient at the right time. Recently, the idea of precision medicine has gained traction in oncology, in particular, with the benefit of a better understanding of the genetics of different tumor types, and to match therapies to specific mutations (e.g. Genentech's Herceptin therapy for HER2+ breast cancer). We aim to bring this concept of precision medicine to the discovery and development of targeted therapies for heart disease.

There is an increasing understanding of the genetic basis for many cardiomyopathies, including DCM, hypertrophic cardiomyopathy (HCM), restrictive cardiomyopathy (RCM) and arrhythmogenic cardiomyopathy. DCM provides an interesting case study. Mutations in more than 50 genes have been identified for gDCM, with more than 50% of patients presenting with multiple mutations. These mutations present in different parts of the cellular apparatus of patients' CMs, including the sarcomere, nucleus, ion channels, and cellular membranes. Yet mutations in proteins with diverse biology present as a common disease phenotype, suggesting common nodes of disease yet to be discovered. Despite this heterogeneity of genetic background and underlying pathophysiology, the therapies used for these patients are the same as therapies used for patients with other forms of HF. We envision a future in which therapies are more specific to the underlying cause of disease and are used to treat patients who have been categorized based on their underlying genetic mutations.

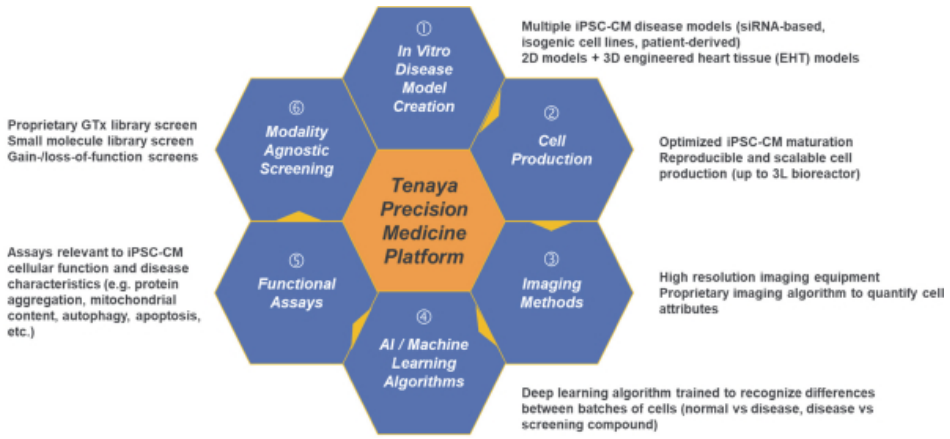
The figure below helps illustrate our vision for "precision medicine" research and development for heart disease through the lens of gDCM:



It is also necessary to have the appropriate disease models to discover new targets and to test new therapies. Unfortunately, there is still a lack of representative *in vivo* models; of the greater than 50 genes known to cause gDCM when mutated, less than ten have relevant murine models to support drug discovery. The situation is even worse for others forms of genetic cardiomyopathy. We are committed to finding new ways to model genetic cardiomyopathies, including *in vivo* but also *in vitro* models.

There is a growing body of academic literature supporting the use of hiPSC-CMs to model human heart disease and the potential cardiotoxicity of therapeutics during drug discovery. This can be helpful where animal models for specific forms of heart disease either do not yet exist or are not yet sufficiently representative of human disease. There is also a growing number of biopharmaceutical companies that are using iPSCs for phenotypic screening and drug discovery. We are advancing a novel approach of using proprietary hiPSC-CMs disease models for target identification and drug discovery.

The figure below illustrates how we have internalized and integrated six key aspects necessary to advance the discovery of precision medicine therapeutics using hiPSC-CMs:



We have demonstrated proof of concept of this approach using an hiPSC-CM disease model representing a specific gDCM mutation plus machine learning algorithms to measure variations in appearance of these cells when screened with a library of several thousand small molecule compounds. We identified several biologically relevant hits and validated HDAC6 as a specific target of interest. We have since turned our findings into a product candidate in our HDAC6i program with *in vivo* activity and tolerability demonstrated in multiple heart disease models of HFpEF and gDCM.

We are currently conducting target identification screens for both gene therapy and small molecules targets in multiple iPSC-CM disease models of gDCM. We are also expanding our efforts to different genetic backgrounds including the leading genetic causes of HCM and genetic arrhythmogenic cardiomyopathy. We believe the versatility of our Precision Medicine platform and related capabilities enables us to rapidly expand our portfolio of product candidates beyond HDAC6i.

Our Approach and Capabilities

We utilize five core internal capabilities to support our three product platforms. Our key capabilities include the creation and development of (1) disease models to more accurately simulate human heart disease phenotypes, (2) proprietary heart-tropic AAV capsids designed to enable precise tissue targeting and increase safety, (3) proprietary promoters and regulatory elements to control gene expression, (4) fit-for-purpose drug delivery methods for more optimal uptake and distribution of our product candidates and (5) scalable AAV manufacturing to better control quality, costs, timelines and supply.

We believe integration of these in-house capabilities provides us with several advantages and differentiates our efforts relative to other drug discovery companies, especially for gene therapy drug development. Through the combination of these capabilities, we are developing product candidates that can address the complicated characteristics of heart disease. For example, we believe with our capabilities in capsids and promoter design and delivery, we can overcome the limitations faced by prior cardiac gene therapy approaches through enabling precise delivery and robust gene expression and lowering the risk of off-target effects. We also believe that these approaches can overcome the historical challenges of drug development for heart disease, by enabling delivery of a wide range of therapeutic approaches to specific cells in the heart.

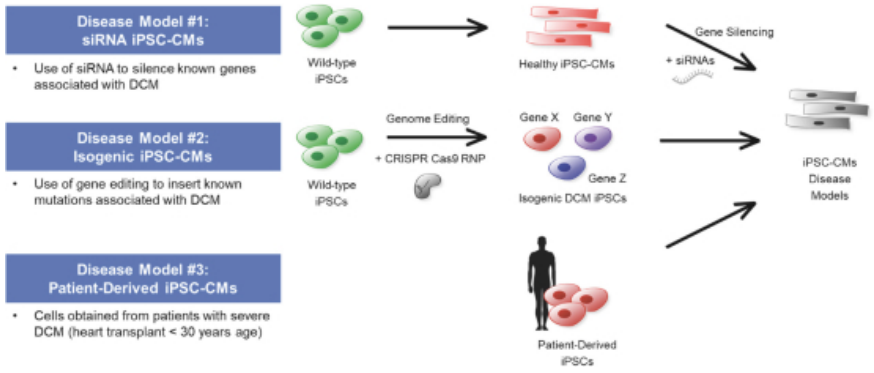
By having our capabilities in-house, we believe we are able to achieve deeper insight, shorten product development cycles, and improve the probability of technical and regulatory success for our product candidates compared to what can be achieved when outsourcing. This further allows us to rapidly build a diverse pipeline of product candidates. Ultimately, we believe our differentiated capabilities can support development of product candidates that, if approved, could address the high unmet need of patients with cardiac diseases and could be delivered at a lower cost of goods than what is possible today.

1. Disease Models

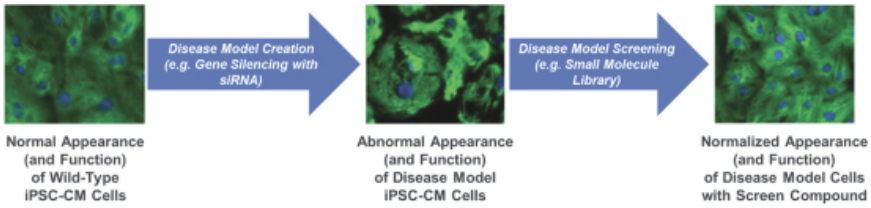
We have internalized the ability to create and integrate *in vitro* and *in vivo* models within our research organization, which allows us to simulate human heart disease phenotypes. We believe our success will be supported by the know-how we are developing and the proprietary integration of these disease models across our programs.

- *In vitro cell-based disease models*: For our *in vitro* disease models, we have leveraged the seminal discovery of methods used to generate iPSCs to establish disease models based on human iPSC-derived cardiomyocytes (iPSC-CMs). We have implemented three primary approaches to model human heart disease in this way: (i) short interfering ribonucleic acid (siRNA) constructs to silence specific genes of interest in iPSC-CMs; (ii) CRISPR-based gene editing approaches to create isogenic iPSC-cell lines where specific genes have been altered; and (iii) iPSCs derived from patients with severe heart disease, for example, severe DCM resulting in early HF and transplant, sourced from commercial and academic collaborators.

  In the figure below, we illustrate our primary disease models based on iPSC-CMs:



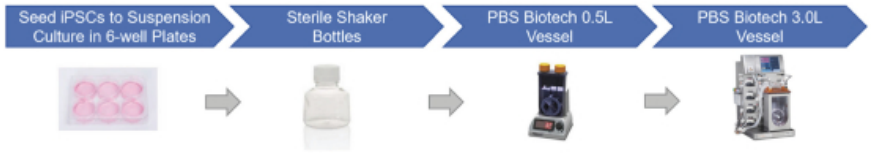
These disease models can collectively help simulate the impact of human disease-causing mutations on the appearance and function of CMs. They can also help model the impact of potentially disease-modifying treatments on such cells. In the figure below, we illustrate how, through use of gene editing and gene silencing tools, we can modify the appearance of normal iPSC-CMs to appear disorganized, and subsequently restore cell appearance with compounds from our screening library:



We initially used cells from these disease models plated in two-dimensional formats. We have since advanced our efforts to include three-dimensional engineered heart tissue disease models where the cells have a more mature phenotype and with contractility that can be measured more reliably.

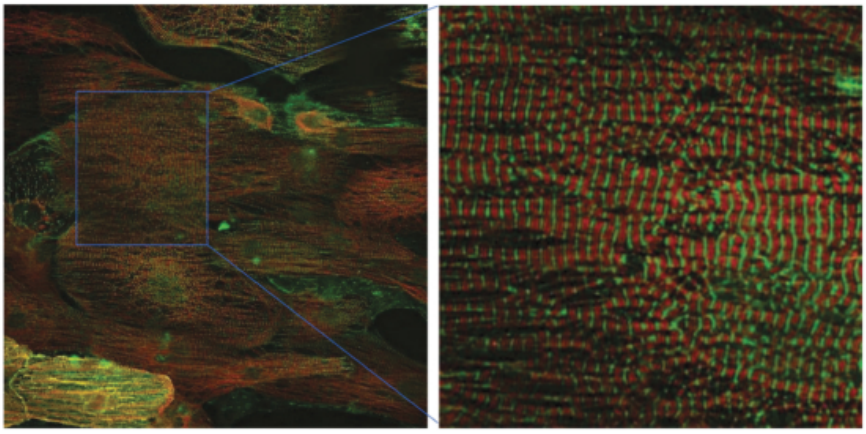
- *iPSC production:* To conduct robust target identification and drug discovery screens using our cell-based disease models, we need to produce large volumes of these hiPSC-CMs. We have developed the necessary know-how to do so reliably and reproducibly at increasing scale.

  The figure below provides an overview of our scale-up process for hiPSC-CM production from six-well plates up to 3L bioreactors:

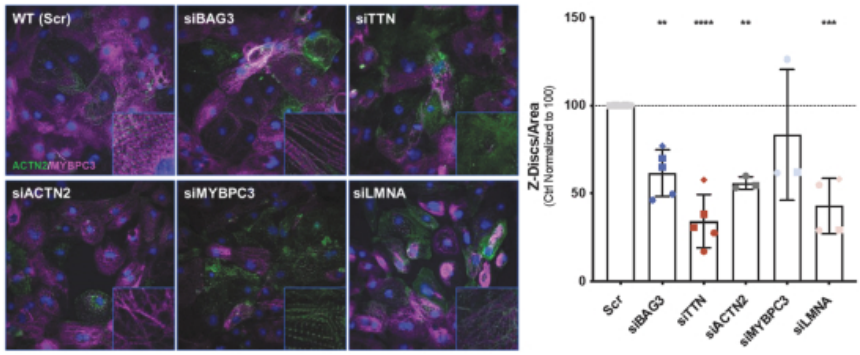


- *Imaging techniques:* We use a combination of immunostaining, high-resolution imaging, and imaging algorithms to visualize and quantify phenotypic differences between our in-house iPSC-CM disease models. We can measure several details of the sarcomeres of these cell lines, including sarcomere density, disarray and Z-disc area.

The figure below shows the degree of automated high-resolution image capture that is possible to help visualize the details of iPSC-CM disease models such as, the sarcomere structure and other characteristics:

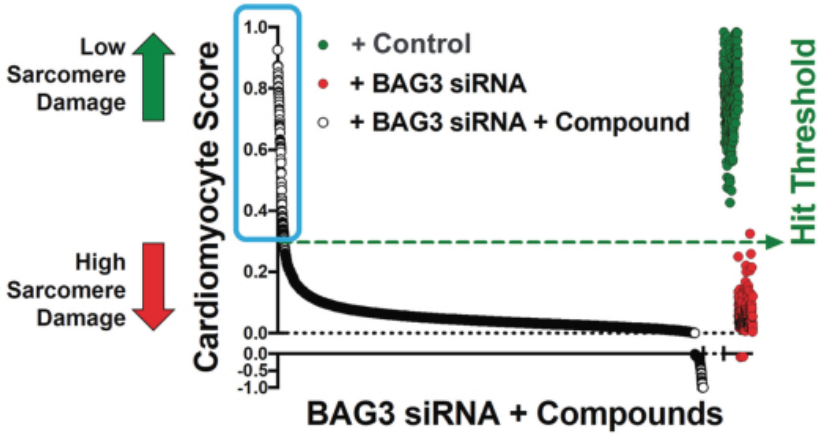


In the figure below, we show data that illustrate our ability to use proprietary imaging algorithms to quantify reproducible and statistically significant differences between particular attributes of the iPSC-CMs (e.g. Z-Disc Area of the sarcomere) across multiple disease model lines:



- *Machine learning algorithms:* We have used machine learning algorithms to support high-throughput phenotypic screening of our iPSC-CM disease models. The algorithms can rapidly and reproducibly measure subtle differences in the overall appearance between wild-type iPSC-CM cells and the different disease models, as well as differences on the disease models in response to compounds in our screening libraries.

The figure below illustrates the output of a screen in a disease model of DCM, using siRNA silencing of the *BAG3* gene, with a curated library of greater than 5,000 small molecule compounds. A deep learning algorithm that was trained on images of the disease model and on normal cells was used to determine which compounds caused the sarcomeres within the cells to appear more disorganized, representing more sarcomere damage (red), or more organized, representing less sarcomere damage (green), as measured by a "cardiomyocyte score":



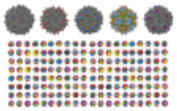
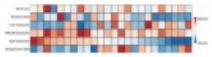
- *In vivo models:* For our *in vivo* disease models, we have a dedicated onsite *in vivo* pharmacology group and vivarium. We have established approximately 15 rodent heart disease models, both genetic and non-genetic, and continue to develop new models in-house as needed. We can dose both gene therapies as well as small molecules. We can perform heart surgeries on these rodent models and use blinded echocardiography-based imaging techniques to assess the impact of our therapies under development. The internalization of these capabilities greatly reduces our reliance on external CROs and academic organizations and significantly increases the speed and consistency with which we can iterate on product prototypes, generate data and formulate insights on our product candidates. We also work with established CROs for research efforts involving large animal models (e.g., NHPs and pigs), including for efficacy studies and evaluation of drug delivery methods. Through these efforts we have developed important insights into the advantages and limitations of specific models and have learned how to optimize the design of our experiments. This insight influences our preclinical drug development strategies and our discussions with regulatory agencies.

2. Capsid Engineering

Our goal is to discover, design, and develop novel heart-tropic AAV capsids with superior attributes in order to enable more precise tissue targeting and to improve the safety profile of our product candidates. To achieve this goal, we have established in-house AAV capsid engineering capabilities and have designed and screened over one billion variants from diverse, proprietary libraries to discover, design, and develop novel capsids to support our programs.

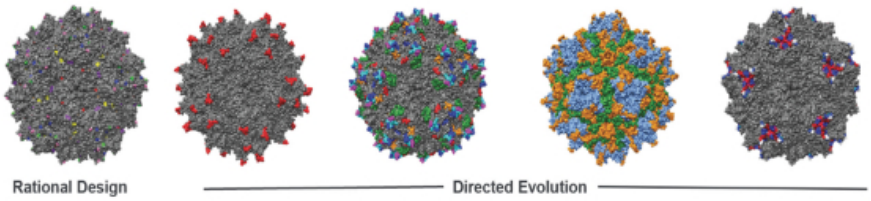
The table below captures the breadth and depth of the focused strategies we have pursued to discover novel AAV capsids:

Focused Multi-Year AAV Screening Efforts Using Diverse Strategies

Cell specificity		Capsid engineering efforts for both CMs and CFs
Library diversity		Screened more than one billion variants from 30 diverse libraries (rational design, peptide insertion, variable region, chimeric, etc.)
Screening models		Screening and validation in multiple models, including human iPSC-CMs, rodent models, NHPs as well as in silico / machine learning models
Screening criteria		Evaluating novel capsids for multiple criteria including higher heart transduction, lower liver transduction, lower antigenicity, and comparable manufacturability (as compared to relevant known serotypes)

- *Cell specificity:* We are using our capsid engineering capabilities to identify novel AAV capsids with an overall higher tropism for the heart compared to other organs and selectively target the two most abundant cell types in the heart: CMs and CFs. We already have achieved *in vivo* proof of concept for novel vectors for both cell types. Having capsids that more specifically target one cell type over another could help improve efficacy and safety and lower cost of goods for our future product candidates.
- *Library diversity:* We have screened more than one billion variants from 30 diverse libraries utilizing a range of strategies, including rational modification of surface residues as well as directed evolution efforts with peptide insertion libraries, chimeric libraries, and libraries based on systematic alteration of variable regions (VR) using different parental capsids. The diversity of approaches increases the likelihood that we will find capsids with novel properties.

The image below illustrates our efforts to achieve diverse heart-tropic AAV capsids.



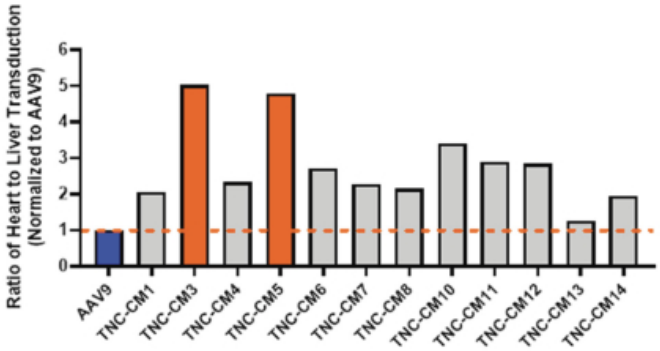
Capsid Modification	Surface-Exposed Residues Prone to Phosphorylation	Peptide Insertion Library	Randomly Altered Variable Region Library	Chimeric Library Generation	Systematic Alteration of Variable Regions
Tenaya Efforts	• Mutagenesis screen of surface-exposed residues prone to phosphorylation	• Generated peptide insertion libraries with multiple AAV parental capsids	• Generated multiple modified variable region libraries with modified VRs to screen for CM tropism	• Generated chimeric libraries to identify CM capsids with improved properties for cardiac gene transfer	• Modified parental VRs

- *Screening models:* We have performed our screens in a variety of *in vitro*, *in vivo*, and *in silico* libraries. Current efforts are focused on direct screening in NHPs, as well as use of machine learning algorithms. We believe our probability of finding novel variants that will translate to superior attributes in humans is highest in NHPs. We believe our *in silico* approaches can complement these efforts to help predict novel variants.
- *Screening criteria:* We have broad criteria for the selection of novel capsids, including improved tropism for the heart compared to other organs, with a particular interest in de-targeting the liver; improved transduction of specific heart cell types; higher ability to evade neutralizing antibodies; and comparable manufacturing in both HEK293- and Sf9/rBV-based manufacturing systems. We seek capsids that can outperform the relevant parental capsids, which may vary depending on the intended use and on some or all of these criteria.

Through these efforts, we have discovered proprietary capsids with superior performance over parental variants in multiple species, including NHPs. These capsids have improved tropism for the heart compared to other organs and even for specific cells within the heart; improved transduction and expression within the heart cells; and lower susceptibility to neutralizing antibodies. We have also developed insights about the performance of novel capsids across different species including mice and NHPs.

The data below are from the results of a head-to-head comparison in NHPs of novel capsids that were first identified via screening efforts in iPSC-CMs and a mouse model. Several capsids identified have superior transduction in the heart and lower transduction of the liver compared to AAV9, leading to an overall better heart-to-liver transduction ratio as validated in an NHP model. As shown below, our TNC-CM3 capsid has a five-fold better heart-to-liver transduction ratio compared to AAV9.

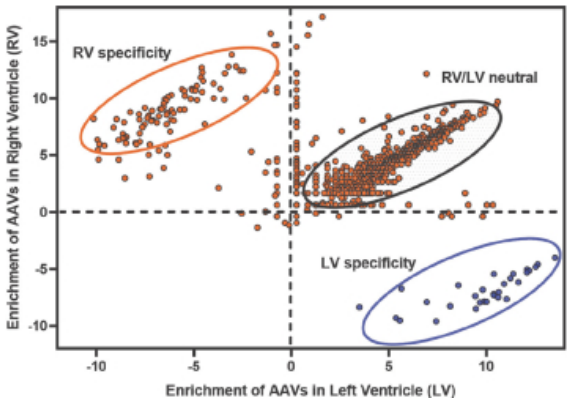
Results of Head-to-Head Comparison of Novel AAV Capsids in NHPs



Additionally, we have shown that several capsids we identified through this effort, such as TNC-CM5, have overall better ability to evade human neutralizing antibodies compared to AAV9.

The data below show preliminary results from efforts to identify novel AAV capsids by direct screening in NHPs. These results show it is possible to identify variants that have higher specificity for CMs of the right ventricle (RV) compared to CMs of the LV. These capsids that are identified to have higher tropism for the RV may enable better targeting of heart tissue for conditions predominantly affecting a specific chamber of the heart such as arrhythmogenic right ventricular cardiomyopathy (ARVC):

Early Results of Direct Screening of Novel AAV Capsids in NHPs



3. Promoters and Regulatory Elements

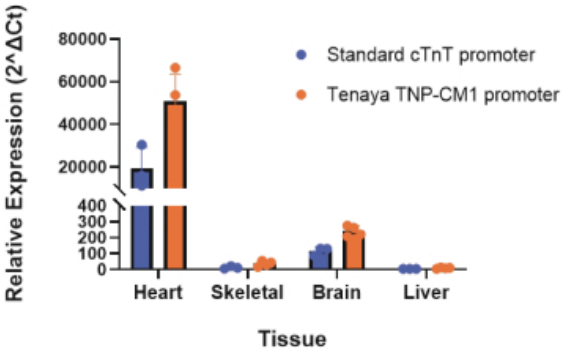
Enabled by our in-house molecular biology capabilities, we have created novel heart-specific promoters and regulatory elements to support our AAV-based programs and regulatory elements control gene expression within the cells. We are designing promoters and regulatory elements to help ensure a more precise and conditional expression of therapeutic payloads in different cell types in the heart. We believe our innovations in promoters and regulatory elements may further support the successful clinical development of our product candidates.

Illustrative examples of our innovations in this area include:

- *Heart specificity:* We have developed cardiac-specific promoters that enable more selective and robust expression in the heart as compared to other organs. During optimization of our MYBPC3 gene therapies, we discovered a CM-specific promoter, TNP-CM1, with improved performance attributes as compared to the standard cTnT promoter. *In vitro* and *in vivo* analyses confirmed that TNP-CM1 significantly increased expression of the *MYBPC3* gene compared to what can be achieved with the standard cTNT promoter. In addition, we observed 1000-fold selectivity of expression in cardiac tissue relative to other tissues.

In the figure below, we show data that demonstrate how our TNP-CM1 promoter outperformed a standard cTnT promoter in terms of robust gene expression in the heart of mice without loss of heart specificity:

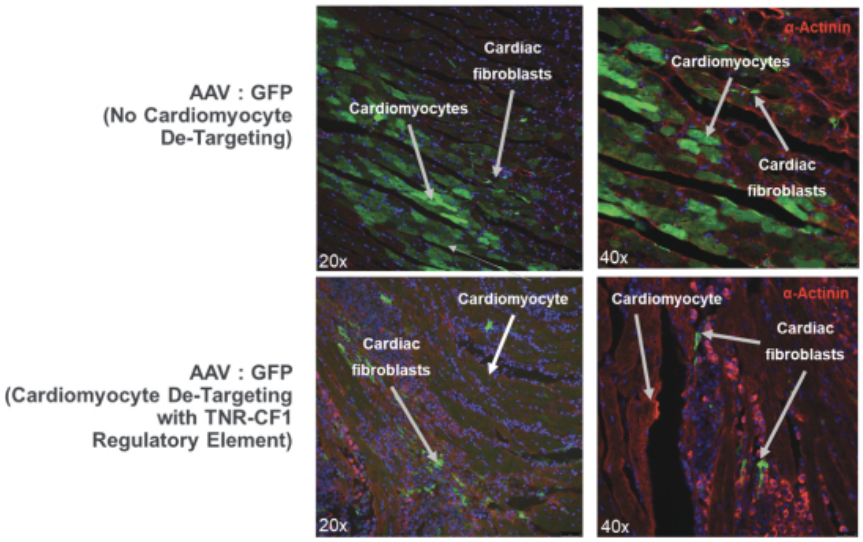
***MYBPC3* mRNA Expression in Wild-Type Mice with TNP-CM1 Compared to Standard cTnT Promoter**



- *Cell specificity:* We have also developed a proprietary combination of regulatory elements that enable more optimal and selective expression in one cell type in the heart compared to others. For our Reprogramming program for cellular regeneration, we discovered ways to optimize the robust co-expression of two protein-coding genes and one miRNA gene delivered within a single AAV in CFs, which we believe supports higher efficacy in preclinical models. We also discovered how to use specific micro-RNA binding sites to silence the translation of those same genes in both existing CMs as well as newly created CMs, which may provide a safety benefit and reduce the chance for off-target effects.

In the figure below, we illustrate how the use of a novel regulatory element, TNR-CF1, helped prevent the expression of a fluorescent protein (GFP) in the CMs of a mouse model and only allowed expression in the CFs. We have used this regulatory element in our Reprogramming program to focus the expression of our proprietary factors in resident CFs for the creation of new CMs, but to prevent the expression of those factors both in resident CMs and in newly created CMs, which we believe will improve the safety profile of our future product candidates:

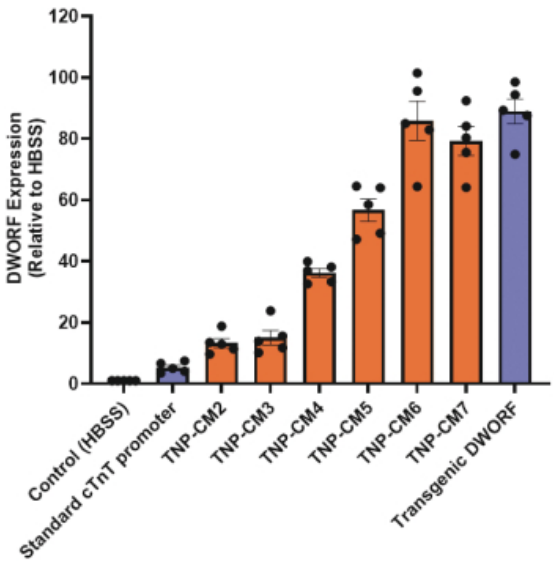
Illustration of Precise Expression of Genes in CFs and CMs Using TNR-CF1



- *Tunable gene expression:* We have also demonstrated the ability to develop an entire spectrum of novel promoters to titer the expression of genes within CMs. Through data (not shown) generated in our DWORF program, more than ten promoters were designed and tested *in vitro* in hiPSC-CMs, and *in vivo* in murine models to optimize the expression of the *DWORF* gene to be higher than what can be achieved with a standard cTnT promoter.

In the figure below, we show data for six of our promoters and cassette engineering efforts that illustrate how we have been able to create a suite of cardiac-specific constructs that are able to mediate significantly higher expression of the *DWORF* gene than can be achieved with a standard cTnT promoter:

DWORF Expression with Novel Cardiomyocyte-Specific Promoters and Constructs Compared with Standard cTnT Promoter and to Transgenic Model

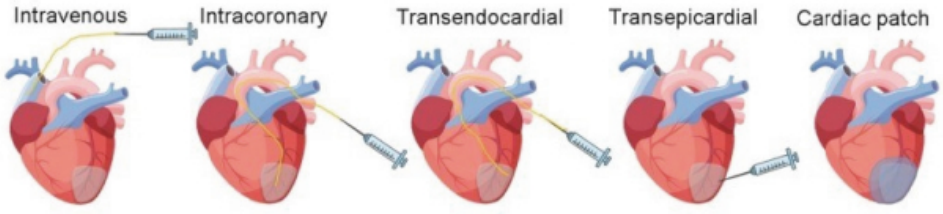


4. Drug Delivery

Delivery of drugs to the heart is widely considered to be an important challenge to successful translation of cardiac gene therapy and regenerative medicines into approved products. The diversity of programs in our current pipeline necessitates the use of different delivery methods. We are actively exploring different ROAs as well as different infusion- or injection-based catheters to support more targeted delivery and more efficient uptake of therapies based on viral vectors. We believe our discoveries in drug delivery can widen the therapeutic index of our product candidates by reducing the dose required for a therapeutic benefit.

Several distinct methods of drug delivery for the heart have been explored by different groups for gene- or cell-based therapies, including infusion-based approaches, such as peripheral IV infusion, intracoronary infusion, and retrograde coronary sinus infusion, and injection-based, such as transendocardial injection and epicardial injection. These delivery methods vary significantly in terms of degree of invasiveness, distribution of therapy around the heart, degree of therapy uptake into the heart, technical difficulty of administration, and clinical relevance and experience. For some approaches, additional methods to improve therapeutic delivery have also been tested to improve perfusion of AAV into the heart. Through these efforts, several groups have demonstrated how different delivery methods can meaningfully affect the relative uptake and biodistribution of therapies in the heart compared to peripheral organs.

Illustrative examples of various delivery methods for the heart are shown below:

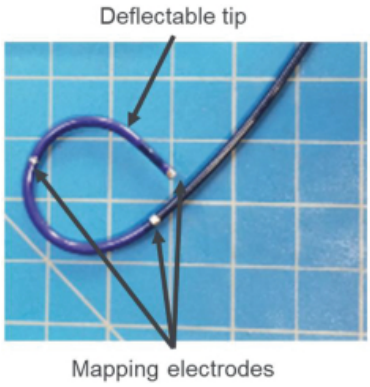


For the initial product candidates emerging from our Gene Therapy platform, including those from our MYBPC3 program, we generally need broad distribution across the heart tissue that is more suited to infusion-based approaches. By contrast, for the initial product candidates emerging from our Cellular Regeneration platform, including those from our Reprogramming program, we need more precise delivery into the heart tissue directly around a scar area of the LV in a way that is more suited to injection-based approaches.

Illustrative examples of our innovations and capabilities in drug delivery include:

- *Catheters*: To support our Reprogramming program for cardiac regeneration, we are developing a novel transendocardial injection catheter for more precise delivery of therapeutic payloads around the scar area that is formed after heart attack, but in a way that is minimally invasive and would not require heart surgery. The prototype of our catheter was designed with the help of interventional cardiologists and is based on similar catheters that have been successfully used in clinical trials. The catheter is designed to be steered into the heart via the femoral artery in the groin area. It has a deflectable tip that can be curved to better access the different parts of the heart. This initial prototype was tested in a large animal model and was able to direct injections to all areas of the LV. We are adding mapping capabilities to the design to allow for more precise delivery during the treatment procedure.

  The figures below include a picture of an initial prototype of our novel injection-based catheter for our Reprogramming program for cardiac regeneration, plus an illustration of how a deflectable tip plus embedded mapping electrodes can allow for more precise delivery:



- *ROAs*: We prioritize head-to-head comparison of different ROAs in large animal models to confirm the optimal method for delivery for each product candidate. For our Reprogramming program, we have conducted experiments in pig models to demonstrate that a less invasive catheter-based transendocardial injection to the LV inside wall can achieve a similar degree of drug uptake and

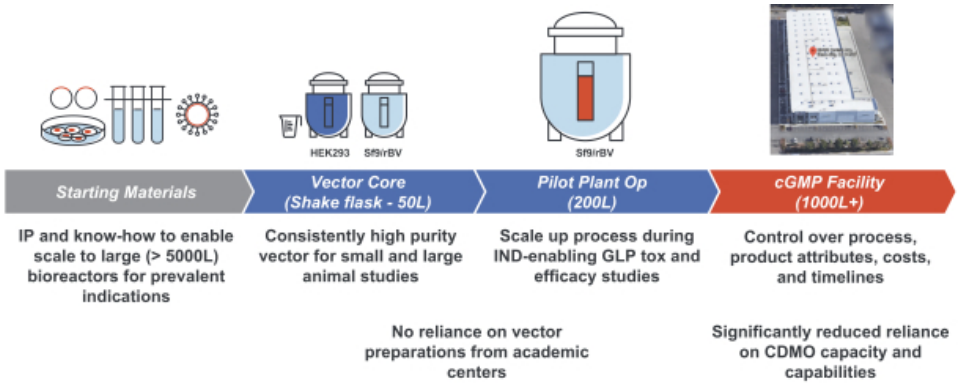
biodistribution as a more invasive direct epicardial injection to the LV outside wall requiring open-heart surgery. For our MYBPC3 program, we have conducted experiments in NHPs to compare the degree of drug uptake and biodistribution for peripheral IV infusion and infusions delivered directly into the heart.

5. Manufacturing

We are internalizing AAV manufacturing capabilities to support our Gene Therapy and Cellular Regeneration platforms. Our overall strategy is to have total ownership of our process development, analytical development, and quality control so that we have deep insight into the attributes of our drug substance (DS) and drug product (DP). Internalized manufacturing will enable continuous process improvement and innovation that can support manufacturing requirements for clinical development and commercialization not only for rare populations but also for more prevalent indications, and allow us to be a partner of choice in strategic drug development partnerships and with early-stage academic programs.

Overall, the internalization of these efforts provides us with know-how that yields several advantages that allow us to be in a better position to swiftly transfer technology know-how to CDMOs in order to support our future capacity expansion needs or to achieve dual sourcing for product candidates for risk mitigation purposes.

In the figure below, we show the breadth and depth of our current and emerging AAV manufacturing capabilities:



- *Vector core:* We have established vector production to support early research involving both parental and novel AAV capsids at the 50L scale. We have hired key PD, AD and QC personnel to internalize those capabilities. We have also established the necessary PD expertise to support comparable product efficacy in both HEK293-based and Sf9/rBV-based manufacturing systems for both existing AAV serotypes as well as for novel capsids discovered from our capsid engineering efforts.
- *Pilot plant operation:* We have established an in-house Pilot Plant Operation at the 200L scale to support all non-clinical studies including those involving large animal models, such as pigs and NHPs, under Good Laboratory Practice regulations. Our initial production at this scale has been at yields and with full/empty capsid ratios that compare favorably to industry standards.
- *cGMP facility:* We have initiated construction of a dedicated cGMP facility for drug product manufacturing in the San Francisco Bay Area. The facility will initially produce drug product at the 1000L scale to support FIH studies for our MYBPC3 program. The facility will use a modular pod design that will support scale-out and scale-up of manufacturing capacity in response to evolving needs. We expect this facility will be operational by the end of 2021.

- *Intellectual property:* We have in-licensed certain manufacturing-related intellectual property to support our programs. We have filed a patent application on process improvements that will support scale-up of AAV manufacturing to larger bioreactors necessary for supply of our gene therapy product candidates intended for more prevalent heart disease populations.

Our Programs

MYBPC3 Program for gHCM

We are developing an AAV-based gene therapy designed to deliver a functional *MYBPC3* gene in adults and children with gHCM due to *MYBPC3* gene mutations. We have demonstrated significant and durable reversal of heart pathology and improvement in survival in a relevant murine model, as well as tolerability in mice and NHPs. Our product candidate, TN-201, uses a differentiated approach that enables more robust expression of the *MYBPC3* gene in the heart compared to what has been demonstrated by others. The program is currently in IND-enabling studies, and we have obtained feedback from multiple regulatory agencies to guide our path to initiating clinical trials.

Overview of Hypertrophic Cardiomyopathy

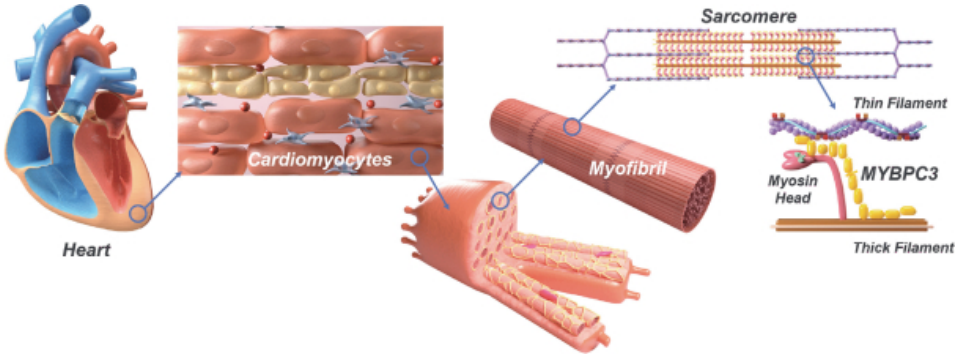
HCM is a condition in which the heart walls become thickened without an obvious cause, resulting in a reduced ability to pump blood effectively. A chronic, progressive disease, HCM is usually caused by the inheritance of mutations in the contractile machinery proteins in the heart muscle cell. Signs and symptoms of HCM may begin in infancy, childhood or adulthood. Mildly and moderately affected patients experience chest pain, have trouble breathing, and have reduced exercise tolerance and fatigue. In certain HCM patients, disease progression results in a substantial limitation in activities and impact on quality of life. The most severely affected patients suffer premature death due to end-stage HF, malignant ventricular arrhythmia, or stroke. HCM with onset in childhood and adolescence is, in particular, associated with significant unmet medical need. When compared with adult-onset HCM, childhood-onset HCM is 36% more likely to develop life-threatening ventricular arrhythmias and twice as likely to require transplant or ventricular assist device.

HCM is the most common form of heritable cardiomyopathy and is estimated to affect one in every 500 people, approximating more than 600,000 potential patients in the United States alone. A majority of HCM patients are currently undiagnosed, with diagnosis typically starting with the onset of symptoms, family screening, or the discovery of an abnormal ECG pattern.

More than 2,000 mutations in eleven or more genes have been linked to HCM. Mutations in the *MYBPC3* gene are the most common cause, estimated to represent approximately 19% of the overall HCM population. Disease-causing mutations occur throughout the *MYBPC3* gene, with most mutations being truncating mutations, causing either a markedly reduced or, in the most severe cases in which both copies of the gene are affected, a complete lack of functional MYBPC3 protein expression.

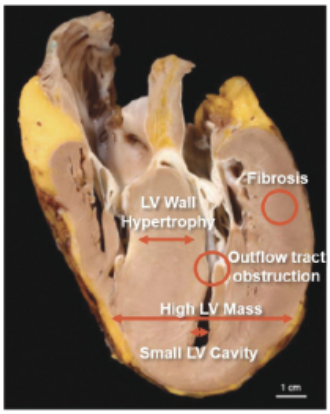
Normal MYBPC3 protein binds to the sarcomere and interacts with the muscle cell’s contractile machinery, actin and myosin proteins, as the heart beats. Based on published findings, it has been shown that MYBPC3 is involved in the folding of the myosin head into a state in which the head does not interact with actin or contribute to contraction.

The schematic below illustrates the cellular localization of MYBPC3. Within the heart, CMs contain multiple myofibrils, which are comprised of myofilaments containing many sarcomeres. The sarcomeres contain thin filaments containing actin and thick filaments containing myosin; the myosin head binds and pulls actin like a hand on a rope and thus supports normal muscle contraction. MYBPC3 (in yellow) is located between the thin and thick filaments and regulates the folding of the myosin head and its interaction with actin, and in this way, is also a critical element supporting normal muscle contraction.



The reduced MYBPC3 protein levels associated with heterozygous mutations in the *MYBPC3* gene result in increased activity of the myosin contractile machinery, which over time leads to LV muscle thickening, known as hypertrophy, excess deposition of extracellular matrix in the cardiac muscle, known as fibrosis, and disorganized muscle cells. As a result, the LV wall stiffens, and the chamber is reduced in size, decreasing the heart's ability to pump. The contractile strength of the muscle declines in some cases, resulting in LV systolic dysfunction, which ultimately can necessitate advanced therapies, such as left ventricular assist devices (LVADs) or transplantation, in the most severely affected patients. Fibrosis and muscle cell disarray may also lead to arrhythmias in some patients, including life-threatening ventricular arrhythmias and atrial fibrillation, which can lead to stroke.

An example of an actual heart from a patient who had hypertrophic cardiomyopathy, characterized by LV hypertrophy, fibrosis, high LV mass, and a small LV heart chamber, is shown below.



Mutations in the *MYBPC3* gene have also been associated with other forms of cardiomyopathy, including DCM, RCM, mixed cardiomyopathy, and ventricular non-compaction, which can lead to poor outcomes, particularly in children.

Infants with homozygous *MYBPC3* gene mutations represent a particularly severe patient group with high risk of death within a year after birth without heart transplantation. Even with a transplant, ten-year survival after transplant for pediatric HCM patients remains less than 50%. Patients with heterozygous *MYBPC3* gene mutations generally have a typical life expectancy, although some patient groups have been associated with increased mortality. Young adult patients with HCM have four-fold higher mortality than the general U.S. population at a similar age. Patients with LV systolic dysfunction have increased mortality and high rates of cardiac transplantation and LVAD implantation.

There are currently no approved therapies for the treatment of HCM and no therapies in clinical development specifically for HCM patients with *MYBPC3* gene mutations. The current goal of HCM treatment is to relieve symptoms and prevent sudden cardiac death in people at high risk. In current guideline-directed care, patients are typically prescribed one or more symptomatic therapies, including beta-blockers, verapamil, diltiazem, and disopyramide. These therapies do not address the underlying genetic cause of HCM and do not appear to affect disease progression. No randomized clinical trials have assessed these therapies specifically in HCM. Cardioverter-defibrillators may be implanted for patients at high risk for malignant arrhythmias and sudden death. For a subset of HCM patients with severe and disabling disease, surgery or other invasive interventions may be appropriate, including heart transplantation, and surgical removal of portions of the septum for patients with obstructions in the LV outflow tract, known as obstructive HCM.

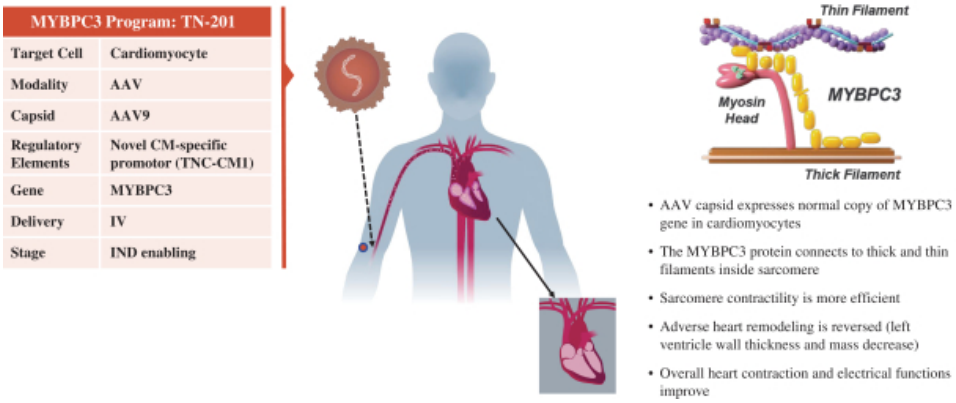
Our Solution: MYBPC3 Gene Therapy

We are developing an AAV9-based gene therapy designed to deliver a fully-functional *MYBPC3* gene driven by our proprietary heart-tropic promoter to restore normal levels of MYBPC3 protein. We believe our product candidate, TN-201, has the potential to address the underlying biological basis of disease in adult and pediatric HCM patients with *MYBPC3* gene mutations.

Based on our preclinical data, we believe that gene replacement, through highly specific and robust expression of *MYBPC3*, has the potential to slow or even reverse the course of gHCM disease in patients with *MYBPC3* mutations, including LV hypertrophy and disease progression leading to outflow tract obstruction, HF, atrial fibrillation, and malignant arrhythmias. By improving upon these aspects of disease, TN-201 may improve heart functional capacity, stabilize or reverse disease symptoms, reduce the need for invasive treatments and improve survival for the most severely impacted patients. As with other AAV-based gene therapies, benefits are expected to be durable and a one-time dose may be sufficient for disease stabilization and potentially reversal.

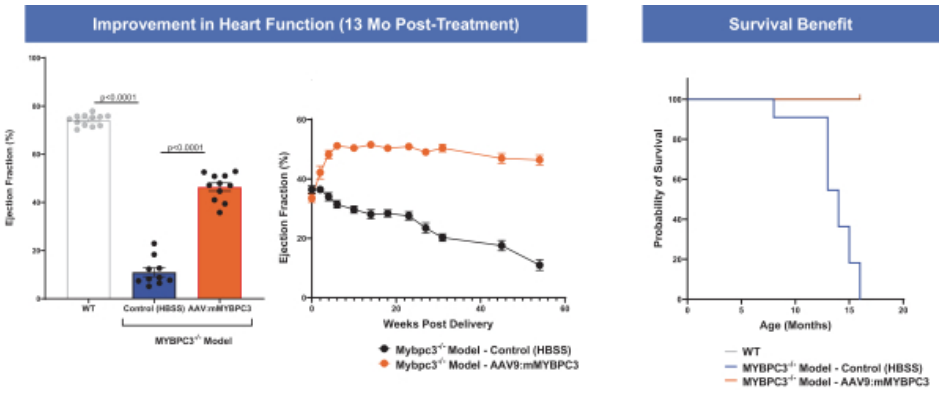
The design of TN-201, as illustrated in the schematic below, leverages our internal capabilities, including promoter and cassette engineering, as well as advances in understanding of parental capsids with tropism for the heart:

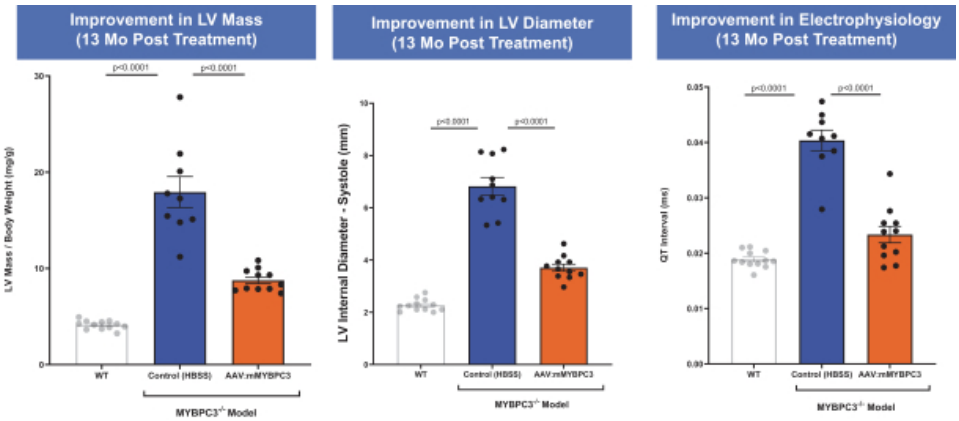
- *Capsid Selection*: AAV9 was selected based on its ability to effectively transduce cardiomyocytes upon systemic administration in multiple species, including rodents and primates. In addition, clinical data from an FDA-approved product and gene therapy product candidates incorporating AAV9 viral vectors also support cardiac transduction at the doses in the range we are considering for our product candidate; Novartis' Zolgensma and Rocket Pharma's RP-501 have demonstrated robust cardiac transduction when delivered systemically at 1×10^{14} vg/kg and 6.7×10^{13} vg/kg doses, respectively.
- *Promoter and Regulatory Elements*: TN-201 includes a novel promoter that has been optimized for robust and specific expression of the *MYBPC3* gene in CMs.
- *Drug Delivery*: In animal models, we have explored two distinct ROAs, systemic delivery (IV) and delivery via infusion catheter to release TN-201 directly to the heart tissue.



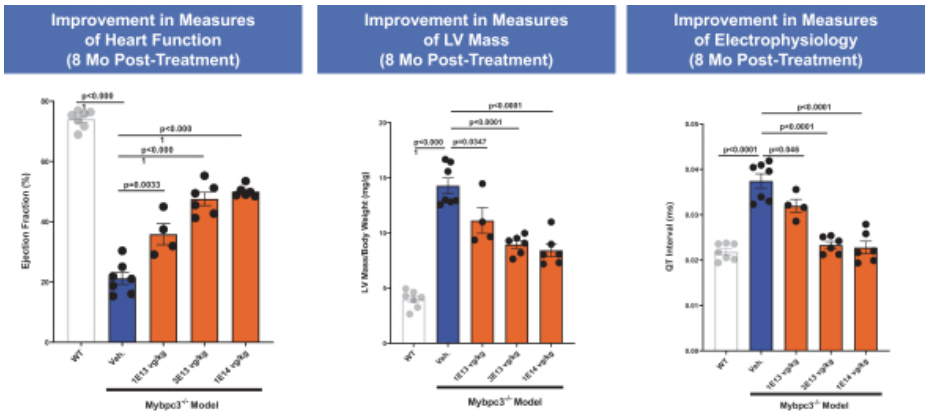
Preclinical Studies

We developed a *MYBPC3* homozygous knockout (KO) mouse model that simulates key aspects of the severe gHCM phenotype starting as early as two weeks of age. In preclinical studies, we systemically administered a version of TN-201 optimized for the mouse (AAV9:mMYBPC3) at 1×10^{14} vg/kg in two-week-old *MYBPC3* KO mice. As shown in the figures below, treatment with AAV9:mMYBPC3 improved heart function for the KO mice above their pre-treatment baseline levels, indicating partial reversal of the disease. At more than thirteen months post treatment, these measures have not diminished, suggesting that a single systemic dose may be sufficient for a durable reversal of gHCM caused by *MYBPC3* gene mutations. AAV9:mMYBPC3 treatment also led to sustained improvements in LV mass normalized to body weight (BW) and EF as well as an improvement in survival compared to vehicle-treated controls at fifteen months post treatment. Additionally, we observed improvements in LV diameter and ECG measurements. To our knowledge, these data are the first known demonstration of significant and durable disease reversal in a severe *MYBPC3* KO model. Similar data have been observed in the *MYBPC3* KO mouse model with our product candidate TN-201.





In addition, a dose-response relationship has been demonstrated with AAV9:mMYBPC3. As shown below, 1×10^{13} vg/kg, 3×10^{13} vg/kg and 1×10^{14} vg/kg weight-based doses all produced significant improvements in EF, LV mass normalized to body mass (LVM/BM), and measures of electrophysiological function (QT interval) at eight months post-injection in the *MYBPC3* KO HCM mouse model. The 1×10^{13} vg/kg dose had the lowest levels of efficacy, while the 3×10^{13} vg/kg had high improvement in the EF, similar to the 1×10^{14} vg/kg dose, suggesting a plateau in the dose-response curve. A similar dose response has also been observed with TN-201 in the *MYBPC3* KO mouse model.

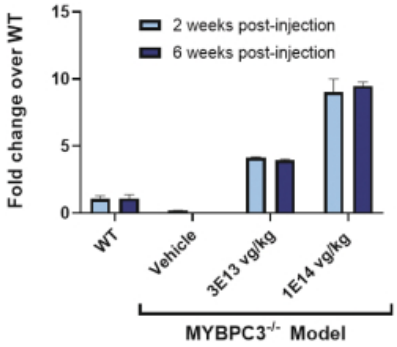


One-time dosing of AAV9:mMYBPC3 achieved normal levels of protein expression in *MYBPC3* KO mouse model hearts within two to six weeks following delivery, with the higher dose of 1×10^{14} vg/kg able to achieve normal levels of MYBPC3 protein expression within two weeks and lower doses (3×10^{13} vg/kg) able to achieve normal levels of MYBPC3 protein expression within four to six weeks after delivery. Across dose levels, we have not observed MYBPC3 protein levels substantially above normal levels, suggesting that protein accumulation does not occur and supporting the potential for a broad therapeutic index with lessened concern of overexpression-related potential toxicities. In addition, histological assessments of AAV9:mMYBPC3 treated *MYBPC3* KO model murine hearts support the uniform and robust distribution of expression following AAV9:mMYBPC3 infusion, suggesting gene therapy may be able to replace the missing *MYBPC3* gene

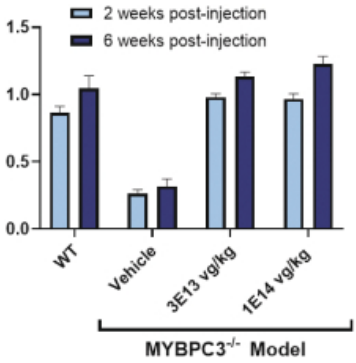
uniformly across the heart and consistent with heart biopsy samples from patients treated with other AAV9-based gene therapies in development.

The figure below demonstrates a restoration of MYBPC3 protein levels to wildtype levels following a single dose of AAV9:mMYBPC3 at the 3×10^{13} vg/kg and 1×10^{14} vg/kg dose levels.

MYBPC3 RNA Expression Comparison in Normal Mice and in Untreated vs Treated *MYBPC3* KO Models

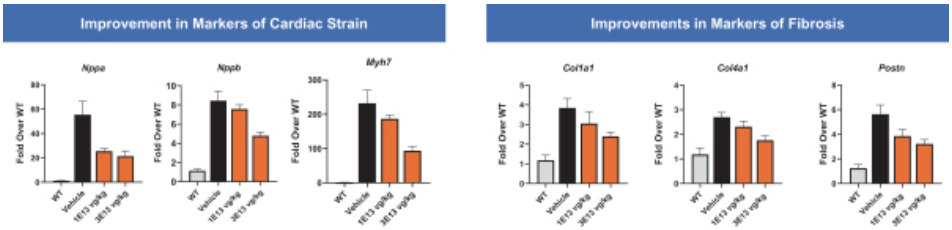


MYBPC3 Protein Expression Comparison in Normal Mice and in Untreated vs Treated *MYBPC3* KO Models



Consistent with observed therapeutic benefit, treatment of *MYBPC3* KO mice with AAV9:mMYBPC3 is also associated with a substantial reduction of expression of genes associated with fibrosis and B-type natriuretic peptide (BNP), a circulating factor associated with heart damage and heart wall stretch. We intend to evaluate the impact of treatment on BNP as a potential PD biomarker in initial clinical studies.

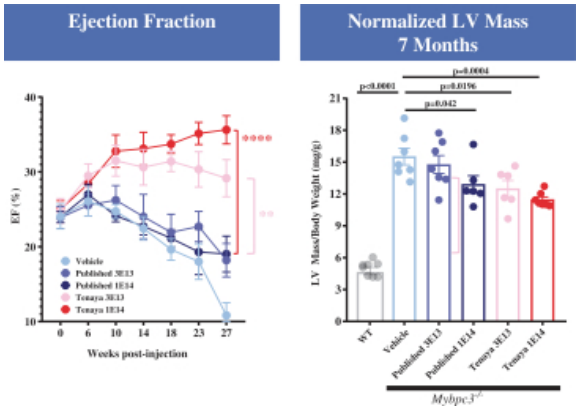
The figure below shows dose-dependent inhibition of expression of genes associated with cardiac strain (Nppa, Nppb, and Myh7) and fibrosis (Col1a1, Col4a1, and Postn) following a single dose of AAV9:mMYBPC3 at the 3×10^{13} vg/kg and 1×10^{14} vg/kg dose levels.



Treatment with either TN-201 or AAV9:mMYBPC3 in the *MYBPC3* KO model has not been associated with significant BW differences, clinical observations, or differences in histopathological assessments across dose levels. In addition, no impact on BW has been observed at dose levels between 3×10^{13} vg/kg and 6×10^{14} vg/kg in safety studies in wildtype neonatal mice twelve weeks after dosing. The 6×10^{14} vg/kg dose level is estimated to be six to twenty times greater than the approximated target dose, further supporting a broad therapeutic index.

Comparison with Previously Published Results for Our MYBPC3 Gene Therapy

Our approach is differentiated from previously published *MYBPC3* gene therapy approaches. As demonstrated below, in the *MYBPC3* KO mouse model, our proprietary cassettes show significantly improved EF and LV mass normalized to BW across all dose levels tested when compared to a construct containing a standard cTnT promoter and utilizing an AAV9 capsid.



Planned Clinical Development

We intend to submit an IND or CTA to the FDA or EMA, respectively, in 2022. If our IND or CTA is approved, we plan to initiate global first-in-human studies in patients with *MYBPC3* gene mutations. We have obtained useful feedback from regulatory authorities in multiple countries and the FDA has granted orphan drug designation for TN-201.

We plan to initiate a prospective and retrospective natural history study in patients with *MYBPC3* mutation-associated cardiomyopathy by the end of 2021. The objective of the natural history study, a non-interventional clinical study that follows patients with *MYBPC3* mutations over time, is to characterize the outcomes, burden of illness, risk factors, quality of life, and biomarkers associated with disease progression in patients with cardiomyopathy due to *MYBPC3* mutations as well as treatments, procedures, and patient outcomes.

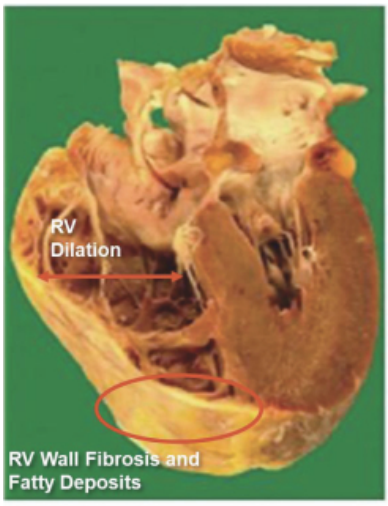
PKP2 Program for gARVC

Our PKP2 program is intended for development in a genetic subset of ARVC patients, a population with limited current treatment options. We are developing an AAV-based gene therapy designed to deliver a functional *PKP2* gene in patients with gARVC due to *PKP2* gene mutations. We have demonstrated durable disease modification, substantial survival benefit, and near complete prevention of arrhythmia *in vivo* in a murine model. This program is currently at the candidate selection stage.

Overview of ARVC

ARVC is largely an inherited disease characterized by the progressive loss of muscle cells in the heart's RV and replacement with a composite of fibrotic tissue and fatty deposits. As a result of this structural change, the heart becomes dilated and is prone to ventricular arrhythmia (VA). ARVC has an estimated prevalence in the general population of approximately 1:2000, representing more than 70,000 patients in the US alone.

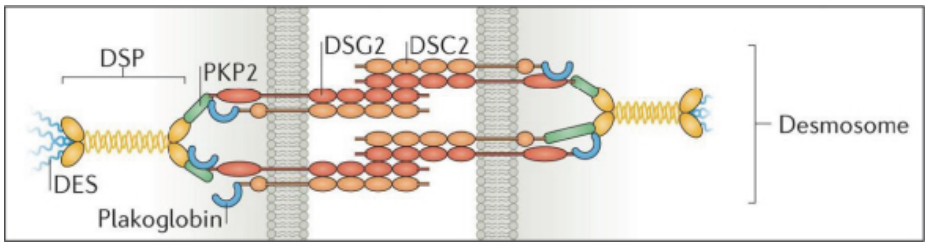
An example of an actual heart from a patient who had ARVC, characterized by RV wall fibrosis and fatty deposits and dilation of the RV chamber, is shown below.



Patients with ARVC most commonly present with symptoms related to VA (such as palpitations, lightheadedness, and fainting) or cardiac arrest, with the mean age of presentation in patients before the age of 40. ARVC is an important cause of sudden cardiac arrest in young patients, and particularly in athletes. The median age at cardiac arrest in ARVC patients is 25.

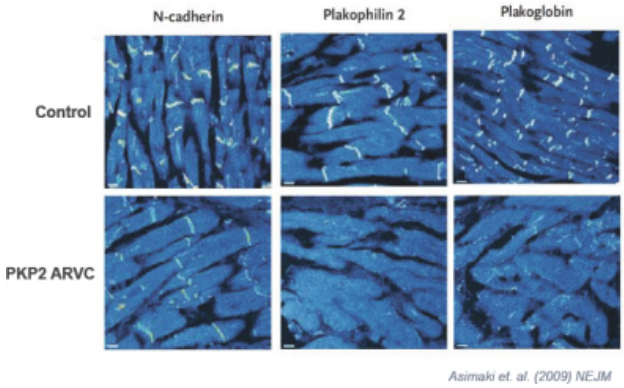
Over fourteen genes have been linked to ARVC. Mutations in the *PKP2* gene are the most common genetic cause of ARVC, with approximately 41-46% of ARVC patients carrying pathogenic variants. As illustrated below, the PKP2 protein is an integral component of cell adhesion protein complexes known as desmosomes which connect adjacent cells in the heart, stabilizing the heart and maintaining channels called gap junctions that allow for cellular communication among heart cells. Patients with *PKP2* mutations typically present at a younger age than patients carrying other mutations linked to ARVC and are thought to follow a similar disease progression to other ARVC patients.

Following a diagnosis, ARVC patients are typically implanted with an Implantable Cardioverter Defibrillator (ICD) to control arrhythmias and treated with beta-blockers. ICD implantation may be associated with complications in some patients, including potential for heart perforation and additional surgery. Patients may progress to catheter ablation procedures which have a high rate of recurrence of VA and have not been shown to reduce risk of sudden cardiac death or improve survival. Despite the availability of these treatments, clinical heart failure has been documented in more than 40% of ARVC patients, and when heart transplantation is required, transplants occur at an average age of 40 and within seven years of the onset of HF symptoms. There are currently no approved therapies that address the underlying genetic causes of ARVC.

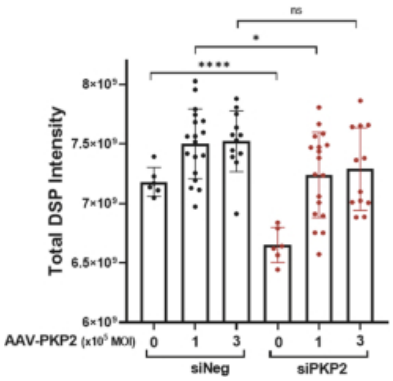


Our Solution: PKP2 Gene Therapy

We believe that gene replacement through delivery of the *PKP2* gene to CMs represents a promising treatment approach for patients with *PKP2* mutant gARVC. The figure below shows human patient heart tissue of PKP2 mutant ARVC and normal patients stained for several desmosome component proteins and N-cadherin. As illustrated, when the *PKP2* gene is mutated in human patient heart tissue, PKP2 protein is no longer properly localized to the desmosome and other desmosome components, such as plakoglobin, also have a reduced localization to the desmosome. In contrast, other proteins that form junctions between CMs, such as N-cadherin, correctly localize, supporting the structural integrity of the muscle tissue in patients with *PKP2*-mutant ARVC.

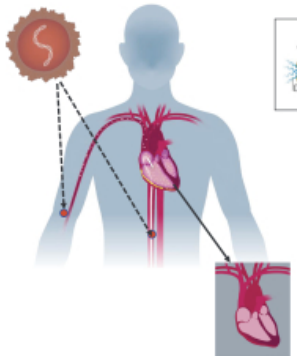


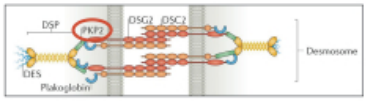
As demonstrated below, when a functional *PKP2* gene is delivered by AAV vectors *in vitro* to cells deficient for PKP2 (siPKP2), the protein levels of desmoplakin (DSP), a key component of the desmosome, correspondingly increase. In addition, we have demonstrated that DSP levels also increase on siPKP2 muscle cellular membranes *in vitro* upon AAV-mediated delivery of the *PKP2* gene. These data support the proposition that expression of PKP2 is sufficient to rescue desmosome protein expression and localization in cells deficient for PKP2 protein.



We are developing an AAV-based gene therapy to deliver the fully-functional *PKP2* gene to CMs for the treatment of gARVC. Our PKP2 program, illustrated below, is currently at the candidate selection stage. *PKP2* gene expression is limited to the CM through use of a CM-specific promoter. Our intended product is expected to use an AAV capsid with high tropism for the heart. Insertion of the functional *PKP2* gene is proposed to enable proper function and structure of the desmosome, prevent adverse heart remodeling and improve heart contraction and electrical function.

PKP2 Program	
Target Cell	Cardiomyocyte
Modality	AAV
Capsid	AAV9 or Proprietary Capsid
Regulatory Elements	cTnT or Proprietary Promoter
Gene	*PKP2*
Delivery	IV or Different ROA
Stage	Candidate Selection



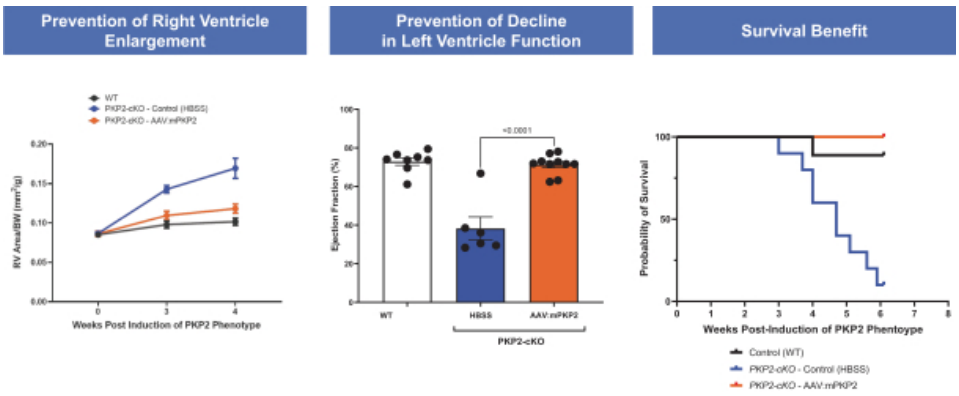


- AAV capsid inserts normal copy of *PKP2* gene in cardiomyocytes
- Inserted *PKP2* protein enables proper function of desmosomes and connection between cardiomyocytes
- Adverse heart remodeling is prevented (ventricle chamber size is normalized)
- Overall heart contraction and electrical functions improve

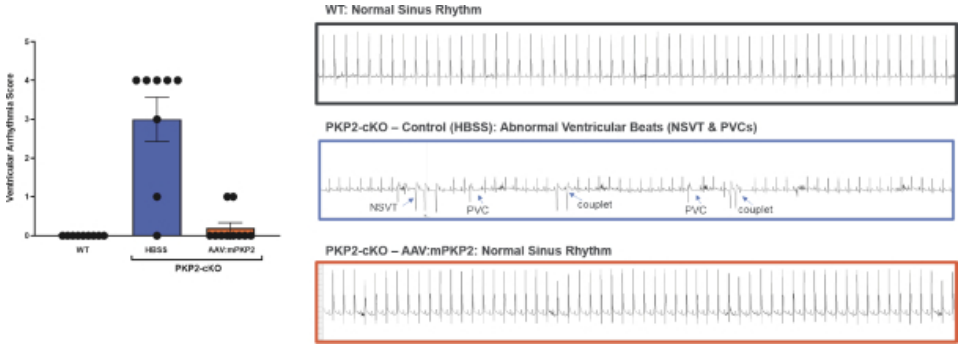
Preclinical Studies

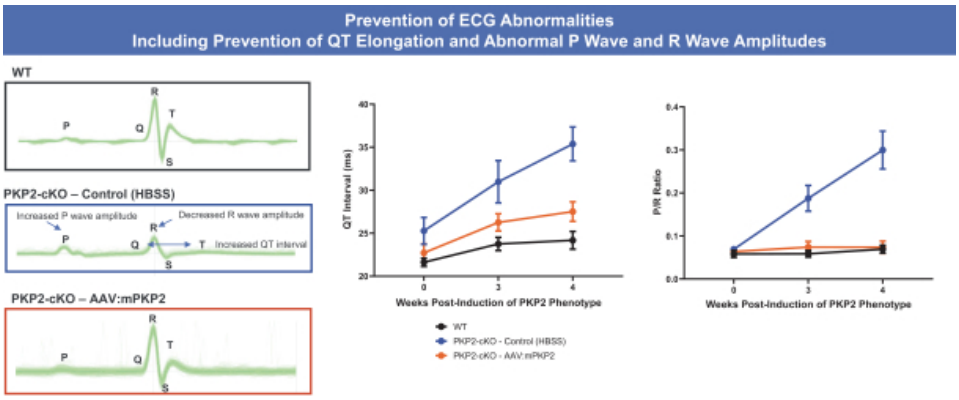
We developed a rapidly declining *PKP2* conditional knockout (cKO) mouse model that simulates key aspects of gARVC within three weeks after induction of the phenotype. In preclinical studies, we systematically administered a version of our lead construct optimized for the mouse (AAV:mPKP2) in PKP2-cKO mice in parallel with induction of the ARVC phenotype. As shown in the figure below, AAV:mPKP2 treatment in mice improved several ARVC phenotypes compared to mice treated with saline (HBSS). AAV:mPKP2 treatment

in mice prevented right ventricle enlargement, prevented a decline of left ventricular function, and improved survival relative to mice treated with vehicle controls, with rescue of heart structural and electrical phenotypes within four weeks after treatment.



In addition, as shown below, treatment in mice with AAV:mPKP2 prevented arrythmias including a nearly complete prevention of non-sustained ventricular tachycardia (NSVT) and premature ventricular contractions (PVCs) and a prevention of ECG abnormalities including prevention of QT elongation and abnormal P wave and R wave amplitudes. These measures are also reflected in a nearly complete reduction in Ventricular Arrythmia Score to wildtype levels. Ventricular Arrythmia Score includes NSVT, frequency of PVCs and other measurements of arrythmia. Based on publicly available information to date, we believe these data are the first known demonstrations of durable disease modification, survival benefit, and prevention of arrhythmia using an AAV:PKP2 gene therapy construct.





Planned Clinical Development

We intend to . If our IND or CTA is approved, we plan to initiate global first-in-human studies in patients with *PKP2* gene mutations.

DWORF Program for DCM and HFrEF

The DWORF program is intended to provide meaningful therapeutic benefit for multiple patient populations with significant unmet need with a focus on DCM and HFrEF. We and our academic collaborators have accumulated significant preclinical *in vivo* proof-of-concept evidence for the therapeutic benefit of over-expression of the *DWORF* gene in multiple murine models, including models of DCM and HFrEF, as well as tolerability in murine models. These findings in animal models support the idea that overexpression of DWORF may be a promising approach for both rare and prevalent forms of HF. This program is currently at the candidate selection stage.

Overview of DCM

DCM is broadly defined as HF with a reduced EF (HFrEF), in which the LV walls are thin and over-expanded, leading to insufficient contraction, reduced blood flow pumped by the heart, and abnormal heart rhythms. DCM can be caused by a variety of mechanisms, including genetics, coronary artery disease, high blood pressure, heart attack, and viral infection due to a high risk of ventricular arrythmias.

DCM is a life-threatening and progressive disease. Once symptoms appear, a patient's condition typically declines progressively. Typical symptoms of HF due to DCM include shortness of breath, fatigue, swelling in the extremities, or an irregular heartbeat. As the disease progresses, patients become increasingly debilitated and experience sustained shortness of breath, even at rest. Diastolic function, or the heart's ability to relax and fill with blood, is also impaired because the heart is already expanded and fibrotic. The dilated LV is deprived of an adequate supply of oxygen that may contribute to further fibrosis and the risk of dangerous heart rhythm disturbances. At any stage of the disease, whether or not symptoms have appeared, DCM patients are at risk of sudden cardiac death.

A subset of DCM is caused by genetic mutations in proteins involved in muscle contraction. Mutations in one such protein, phospholamban (PLN), can cause DCM. These mutations are believed to result in abnormal regulation of calcium biology instrumental in muscle contraction, leading to ventricular dilation, fibrosis and HF over time. Some patients with PLN mutations have a high severity of disease, including patients with R9C and R14del mutations.

Current therapy for DCM generally uses therapies developed for HFrEF. While current pharmacologic therapies have improved prognosis and the quality of life of DCM patients, the premature morbidity and mortality rate remains unacceptably high. End-stage DCM is the leading indication for use of last line therapies, including LVADs and heart transplantation. Within five years of diagnosis, 43% of patients with advanced DCM have either died or needed a heart transplant. Thus, there is a large unmet need for novel and more individualized therapeutic options.

It is estimated that DCM affects about one million people in the United States alone, with genetic abnormalities linked to DCM estimated to be present in about 30% to 40% of DCM patients. PLN mutations are rare with an estimated 0.5% of DCM patients carrying PLN mutations.

Overview of HFrEF

Among patients with HF, the amount of blood that is pumped out of the left ventricle of the heart (LV EF), can vary significantly, and is often characterized as reduced if below 40% (HFrEF), mid-range if between 40% to 50% (HFmrEF) or preserved if greater than or equal to 50% of normal LV EF (HFpEF).

Approximately 50% of HF cases are HFrEF, representing a prevalence of nearly four million patients in the United States alone. In addition, the incidence and prevalence of HFrEF continues to rise. This increase is driven by an aging population, improved survival from MI and other forms of heart disease, and the increasing prevalence of predisposing risk factors such as diabetes and obesity.

HFrEF patients continue to have substantial unmet need despite advances in pharmacological treatments, with up to 30% of treated patients experiencing a significant limitation in physical activity. Development of HF continues to be associated with significant morbidity and mortality, with a one-year mortality rate of 7% and one-year hospitalization rate of 32%. Over a five-year period, readmission for HF and mortality rates are as high as 48% and 75%, respectively, highlighting the significant and increasing burden of illness for patients and healthcare systems.

The standard of care for HFrEF involves multiple different classes of therapies, including ACE inhibitors, beta blockers, vasodilator, aldosterone antagonists, and others. For end-stage HFrEF patients refractory to medical therapy, the treatment options are limited to LVADs and heart transplantation. LVADs have a finite duration of efficacy and are associated with the potential for fatal complications, frequent hospital readmissions, and high treatment cost. Heart transplant availability is restricted by the scarce supply of donor organs, risk of transplant rejection, and lifelong treatment with immunosuppression therapeutic regimes that are associated with organ damage.

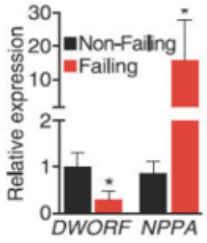
Our Solution: DWORF Gene Therapy

We are developing an AAV-based gene therapy to deliver the *DWORF* gene to CMs for the treatment of DCM and HFrEF. DWORF is a recently discovered small peptide that localizes primarily to the sarcoplasmic reticulum of the cardiac muscle cell. During muscle cell activation, calcium is released from sarcoplasmic reticulum into the muscle cell's cytosol and into the sarcomere, leading to muscle contraction. Sarcoplasmic/endoplasmic reticulum Ca2+ ATPase 2a (SERCA2a) is a major isoform of SERCA expressed in CMs and plays an essential role in the regulation of cardiac contractility. SERCA2a transports calcium from the cytosol back into the sarcoplasmic reticulum, preserving the calcium gradient required for contraction. DWORF binds to SERCA2a and displaces the inhibitory PLN peptide, resulting in increased SERCA2a activity, increased levels of calcium pumped into the sarcoplasmic reticulum, and increased muscle contraction, ultimately leading to an improvement in heart function.

We believe DWORF is an ideal target for the treatment of HFrEF. DWORF is a small peptide that is readily expressed when delivered by AAV. The small size of the *DWORF* gene leaves additional room in the AAV

capsid to include optimized combinations or promoters and regulatory elements to tailor *DWORF* gene expression levels. In addition, published studies have shown that *DWORF* gene expression is lower in failing human hearts compared to non-diseased hearts.

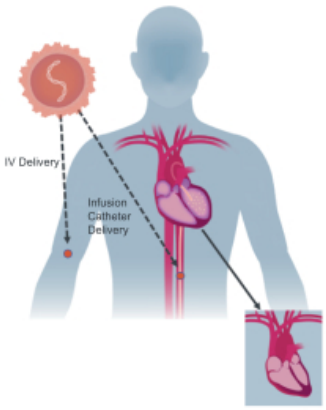
The figure below shows expression analyses in human HF tissue. DWORF mRNA is reduced in failing hearts whereas atrial natriuretic peptide (NPPA) mRNA, a marker of congestive HF, is significantly increased in failing hearts.

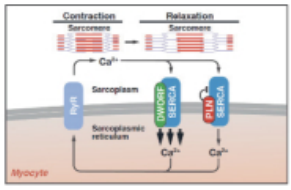


One therapeutic hypothesis is that restoring *DWORF* gene expression to normal levels, through treatment with a *DWORF* gene therapy, may normalize calcium flux in CMs and increase contractile strength in DCM patients as well as the broader HFrEF patient population. In addition, DCM patients carrying PLN mutations have mutant PLN peptides that inhibit SERCA2a and decrease contraction. *DWORF* gene therapy produces DWORF peptides that directly compete with mutant PLN peptides by preferentially binding with SERCA2a, which can increase muscle contraction, potentially resulting in halting or even reversal of disease progression.

Our DWORF program, illustrated below, is currently at the candidate selection stage with multiple constructs under consideration. *DWORF* gene expression is limited to the CM through use of a novel CM-specific promoter. Our intended product candidate will use an AAV capsid with high tropism for the heart, either AAV9 or a novel proprietary capsid developed through our capsid engineering capabilities, to deliver the *DWORF* gene. We are exploring different ROAs including systemic (IV) or delivery directly to the heart through an infusion catheter.

DWORF Program	
Target Cell	Cardiomyocyte (CM)
Modality	AAV
Capsid	AAV9 or Proprietary Capsid
Regulatory Elements	Proprietary CM-specific promotor and enhancers
Gene	*DWORF*
Delivery	IV or Infusion Catheter
Stage	Candidate Selection

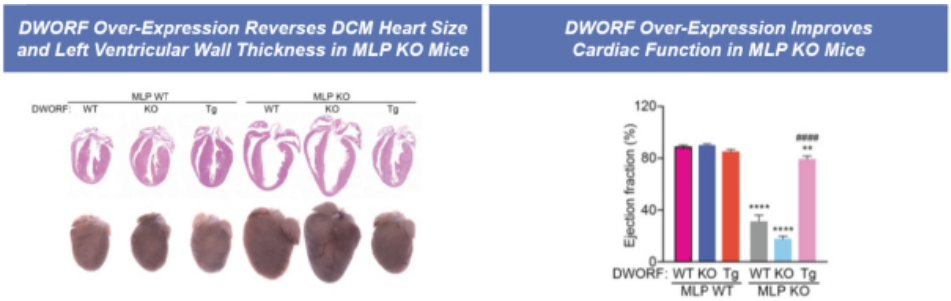




- AAV capsid delivers copy of DWORF gene to cardiomyocytes
- DWORF peptide binds SERCA2a calcium pump, displacing PLN and enhancing SERCA2a activity
- By increasing sarcoplasmic reticulum Ca^{2+}, SERCA2a activity leads to increased Ca^{2+} release into the sarcoplasm containing sarcomeres
- Sarcomere contraction is stronger
- Heart function improves

Preclinical Studies

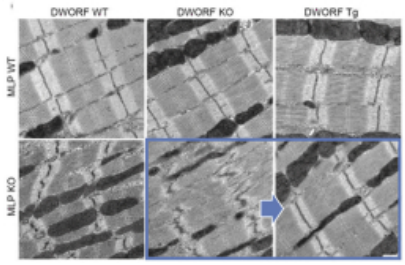
- *Results in DCM (with MLP KO model)*: Overexpression of *DWORF* has led to improvements in multiple parameters in mouse models of DCM. Our co-founder Eric Olson, Ph.D. has demonstrated that overexpression of *DWORF* in a transgenic (Tg) model leads to improvements in heart size, normalization of wall thickness and also improvements in EF, as demonstrated in the Muscle Lim Protein (MLP) KO mouse model of DCM, a model considered representative of the broader DCM population.



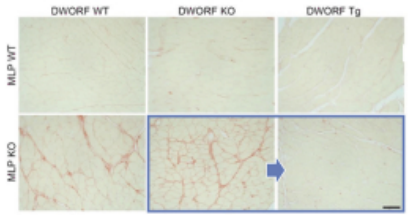
In addition to improvement in heart function, as shown in the figure below, Tg DWORF overexpression also prevents muscle cell disarray and fibrosis in the MLP KO model of DCM.

DWORF Overexpression Prevents Cellular Damage in a Mouse Model of gDCM (MLP KO)

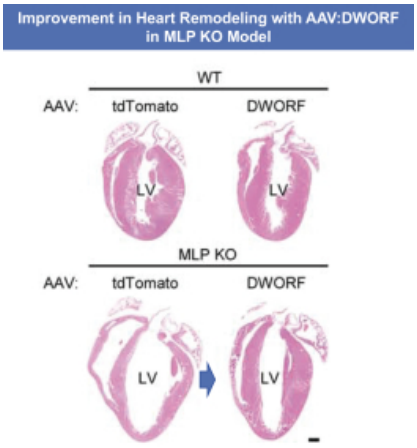
Pronounced disarray of structures inside cardiomyocytes of MLP KO mice hearts (characteristic of gDCM) is visibly reduced when crossed with DWORF Tg model



Pronounced fibrosis in heart muscle of MLP KO mice (characteristic of gDCM) is visibly and measurably reduced when crossed with DWORF Tg model

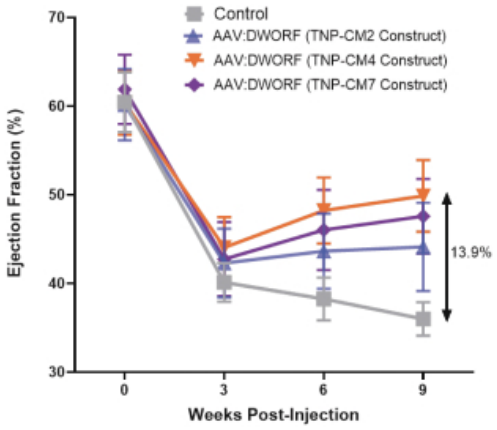


Treatment with AAV:DWORF constructs has shown similar improvements in heart remodeling following treatment. As shown below, experiments conducted in the lab of Eric Olson demonstrated improvements in heart remodeling with an AAV:DWORF construct in the MLP KO mouse model.



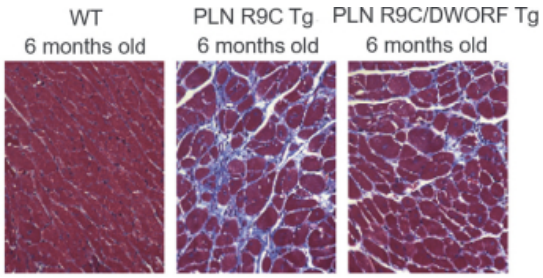
We have also demonstrated improvement in the same MLP KO model using our proprietary AAV:DWORF constructs. We have developed multiple proprietary promoters that drive multiple different levels of expression. As shown below, AAV:DWORF constructs containing these promoters (TNP-CM2, TNP-CM4, and TNP-CM7) improved in EF relative to a saline control in the MLP KO mouse model of DCM, with improvements in EF as high as approximately 14% achieved with constructs containing the TNP-CM4 promoter:

Comparison of Effect of Three DWORF Constructs in Severe MLP KO DCM Mouse Model

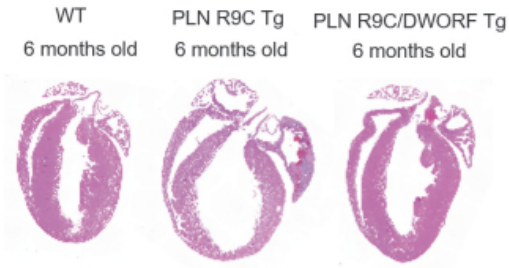


- *PLN Mutant DCM*: Overexpression of *DWORF* has also demonstrated meaningful improvements in mouse models of PLN mutant DCM. In experiments conducted in the lab of Eric Olson, mice with PLN R9C mutations are characterized by strong PLN inhibition of the SERCA2a calcium pump, resulting in decreased calcium flux, reduced heart muscle contraction, and decreased heart function. Tg overexpression of *DWORF* has been shown, as illustrated below, to improve fibrosis and heart remodeling in animals six months of age and improve survival in this genetic model of HF.

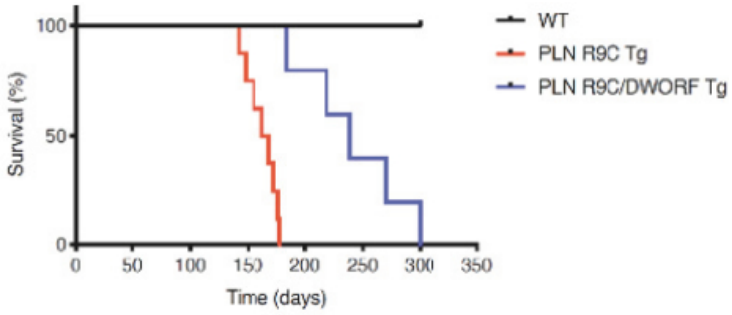
DWORF Overexpression Reduces Fibrosis in PLN R9C Mouse Model



DWORF Overexpression Reduces Adverse Remodeling in PLN R9C Mouse Model



DWORF Overexpression Improves Survival in PLN R9C Mouse Model



We have tested different AAV:DWORF constructs in both healthy and disease mouse models and have not observed any safety signals at clinically relevant levels of *DWORF* overexpression.

Planned Clinical Development

We intend to . We plan to explore the safety and efficacy of AAV:DWORF constructs in both broad indications, such as DCM and HFrEF, and rare indications, such as PLN mutant DCM.

Reprogramming Program for HF due to Prior MI

We have made significant advances in our unique approach to cellular regeneration using viral vectors to deliver factors that drive *in vivo* reprogramming of resident CFs to create new CMs. We have discovered a proprietary combination of three genes that can drive robust reprogramming when delivered together in a single AAV. As shown in the figures below, see "Reprogramming: Preclinical Studies", significant ($p<0.01$) and durable improvement in EF has been achieved across 29 weeks post-treatment in rats, as well as tolerability in multiple small and large animal models. Results of this approach in a pig model of HF due to prior MI were presented at the ASGCT conference in 2020 and represent what we believe is the first-ever successful demonstration of the therapeutic benefit of this approach in a large animal model with a human-sized heart. This program is currently at the candidate selection stage.

Overview of HF due to prior MI

CAD is the single most common cause of HF. CAD is often associated with an MI, in which blood flow to a section of the heart, usually the LV, becomes limited, causing the cells in that section of the heart, including CMs and CFs, to die. The heart cannot replace the lost CMs while the CFs multiply significantly, resulting in scar tissue formation and stiffening of the LV walls, leading to progressive and irreversible cardiovascular remodeling. As a result, the heart continues to lose its ability to pump as strongly and may fail over time. In addition to HF, these patients also have a persistent risk of arrhythmias and increased likelihood of a second heart attack or sudden death.

In the United States, greater than 800,000 people have a heart attack every year; of these approximately 200,000 already had a prior heart attack. Approximately 20% of patients age 45 and older will have another heart attack within five years of their first one. Despite advances in treatment options, mortality due to heart attack is still high; data from the U.S. National Vital Statistics Reports shows the median life expectancy among individuals aged 65 to 69 who have had a heart attack is just 8.3 years as compared to 18.7 years among those who have not.

There are no known therapies that address the loss of CMs associated with MI and the resulting morbidity and mortality.

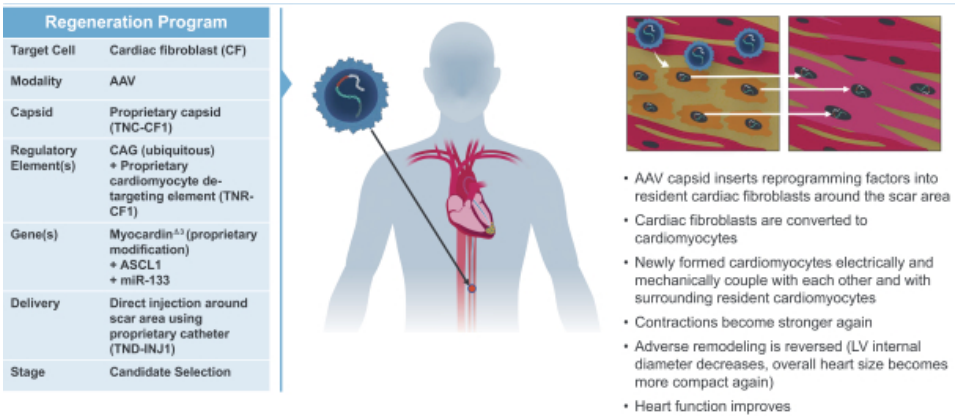
Our Solution: Direct In Vivo Reprogramming of Resident CFs to Create CMs

Cellular reprogramming is the process of converting cells of one type into another cell type. Shinya Yamanaka and John Gurdon won the Nobel Prize for their discovery that cells in the body can be reprogrammed to become stem cells, called iPSCs, capable of developing into any other type of cell in the body using a combination of four transcriptional factors. Since then, researchers have also found other combinations of factors capable of directly converting cells from one type to another without first going through the iPSC state. Dr. Srivastava, one of our co-founders and a member of our board of directors, was the first to demonstrate direct reprogramming of CFs into CMs in both *in vitro* and *in vivo* models, creating the potential for a new approach to cardiac regeneration.

Building on this pioneering work, we have developed a novel AAV-based therapy for direct *in vivo* reprogramming of resident CFs into CMs to replace the CMs lost due to an MI. Our goal is to convert the CFs into new CMs to help repair the heart after an MI, and ultimately slow down, stabilize or even potentially reverse the progression to HF. Our approach leverages substantial in-house advances in our reprogramming factors, capsid engineering, regulatory elements, and drug delivery to translate cardiac reprogramming science towards clinically relevant solutions.

- *Reprogramming factors*. Through extensive *in vitro* screening efforts in actual human CFs, we identified a unique combination of three genes encoding Myocardin, ASCL1, and miR-133 that together can drive robust direct *in vivo* reprogramming of CFs to CMs, and that we have designed to fit into a single AAV. We use the term reprogramming factors to refer to such combination of genes and any other combinations of genes that when delivered together in a single AAV into CFs, result in the direct reprogramming of the CFs into CMs.
- *Capsid engineering*. While AAV9 can be used to target CMs, it does not sufficiently transduce CFs. We have discovered a novel capsid, TNC-CF1, which has a higher transduction efficiency for human CFs as compared to currently known AAV serotypes. Initial data suggest this novel capsid may also be less susceptible to neutralizing antibodies compared to known serotypes.
- *Regulatory elements*. We have pursued rigorous, iterative optimization efforts to create proprietary reprogramming products. We have further optimized Myocardin and cassette regulatory elements to both decrease cassette size and improve reprogramming efficiency. After extensive exploration of single and double promoter strategies, we have selected the CAG promoter to drive robust expression of our reprogramming factors. We limit expression of our reprogramming factors in mature CMs by including a miR-208 binding site that decreases reprogramming factor expression in mature CMs after differentiation from fibroblasts.
- *Drug delivery*. We are developing, in conjunction with leaders in interventional cardiology, a proprietary percutaneous endomyocardial injection catheter (TND-INJ1) to inject and deliver our gene therapies around scars in the heart in a non-surgical, minimally-invasive procedure. Many potential sites for future clinical studies have experience with endomyocardial injection catheters through previous and ongoing cell therapy studies.

The schematic below summarizes the components of our intended reprogramming gene therapy product candidate and mechanism of action.

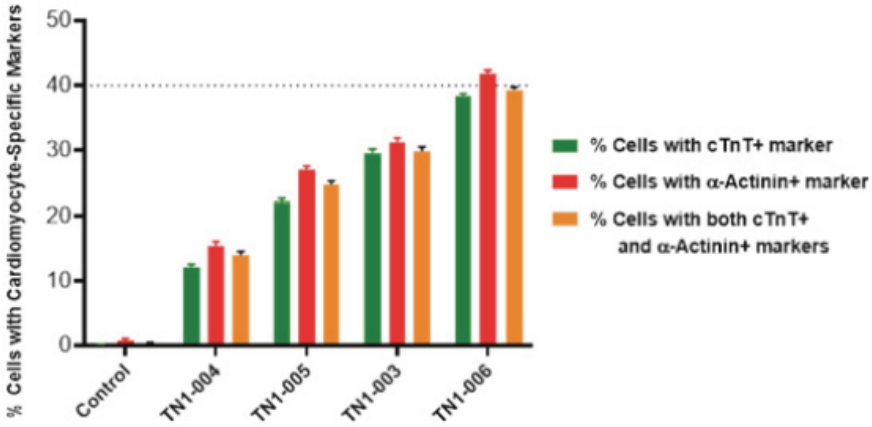


Preclinical Studies

We have conducted *in vitro* and *in vivo* experiments to optimize our direct reprogramming approach. Our most advanced results have been achieved primarily with two different constructs, TN1-002 and TN1-006.

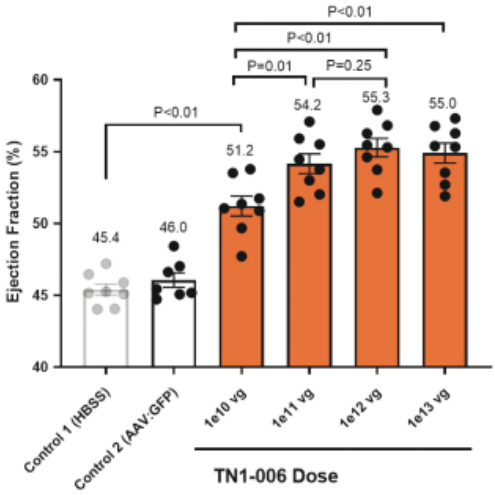
- *Results from in vitro conversion of human CFs*. Our reprogramming approach has been optimized *in vitro* in adult human CFs. We have conducted extensive iterative experiments to compare the relative efficiency of various constructs to convert CFs to CMs. CM-specific markers like cTnT and a-Actinin are measured to determine the proportion of cells that have been converted from CFs to CMs. The figure below illustrates the results from such an experiment, demonstrating how our TN1-006 construct can convert approximately 40% of human CFs to CMs:

***In vitro* Comparison of Reprogramming Efficiency**
of Adult Human Cardiac Fibroblasts to Cardiomyocytes with Different Constructs



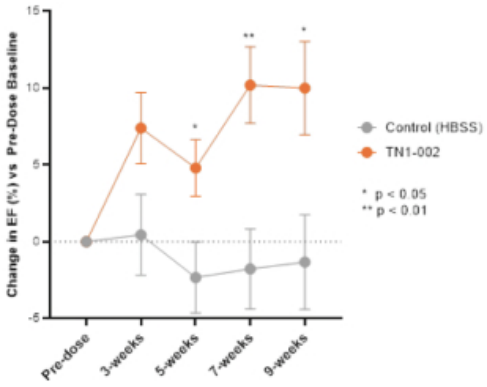
- *Results from rodent disease models*. We have demonstrated durable and dose-dependent improvement in EF in both mouse and rat models of HF following an induced MI. In our rat model, TN1-006 was injected directly around the scar area formed two weeks after an induced MI. The figure below demonstrates dose-dependent improvement in EF, with an approximately 10% improvement in EF achieved at the highest dose compared to controls that was sustained up to the end of the experiment at 29 weeks:

Improvement in Ejection Fraction with TN1-006 Reprogramming in Rat Model of Heart Failure Post-MI (after 29 weeks)



- *Results from pig disease model*. We have demonstrated durable improvement in EF in a pig model of HF following an induced MI. In a pig model, TN1-002 was injected directly around the scar area formed 28 days after an induced MI. The figure below demonstrates approximately 10% improvement in EF compared to each animal's own pre-dose baseline and more than 11% improvement compared to control-treated animals that remained sustained until the end of the experiment at nine weeks:

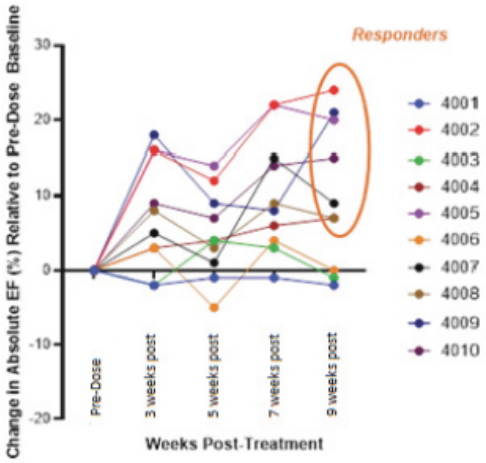
Improvement in Ejection Fraction (EF) following Treatment with TN1-002 from Reprogramming Study in Pig Model of Heart Failure Post-MI



These results were presented at the ASGCT conference in 2020. We believe these data compare favorably to published efficacy data for other cell and gene therapy interventions in large animal models. Very few previous therapeutic attempts have achieved meaningful improvement in EF compared to pre-dose baseline in large animal models, with typical improvements, when observed, of less than 5%. From an assessment of the published literature, including a meta-analysis of multiple therapeutics in HFrEF, we believe that each 5% increase in EF is expected to reduce mortality by approximately 15%.

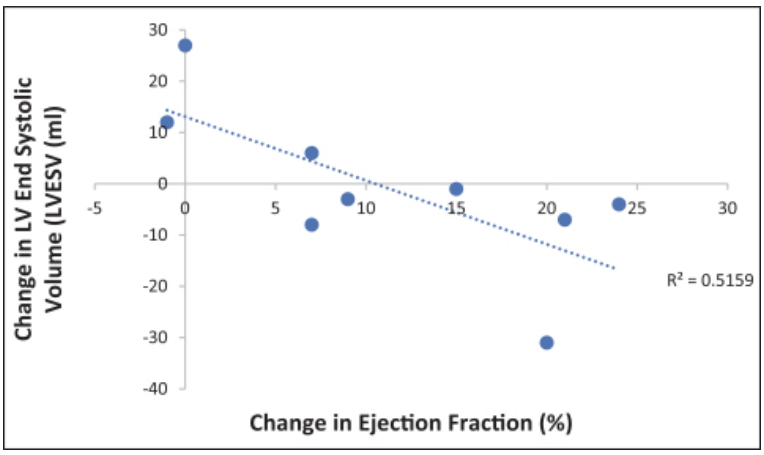
This pig model is known to have high variability in disease progression among individual animals. In order to confirm that the results obtained with TN1-002 reflected true improvements in heart function, we conducted extensive additional analysis of other parameters, including heart size (for example, LV diameter and volume during systole and diastole), measures of cardiac output (for example, stroke volume), measures of heart injury (for example, troponin levels), and final scar size at the level of individual animals. As shown in the figure below, our analysis revealed high heterogeneity in the change in absolute EF% among individual animal responses to TN1-002 from a decline of -2% to improvement of +24%, and that seven out of ten treated animals were considered "responders" (based on EF% increase of greater than 5% over pre-dose baseline) while three out of ten were considered "non-responders".

Analysis of Individual Animal Changes in Ejection Fraction Following Treatment with TN1-002 from Reprogramming Study in Pig Model of Heart Failure Post-MI



Further analysis of responder animals as compared to non-responder animals demonstrated responders generally had improvement in most parameters that were internally consistent and suggestive of positive heart remodeling. By comparison, the pattern of these additional parameters was not internally consistent among non-responders.

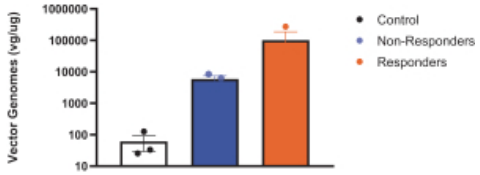
The figure below demonstrates the expected inverse correlation of the degree of EF improvement of responders to the change in heart size, as measured by LV end systolic volume:



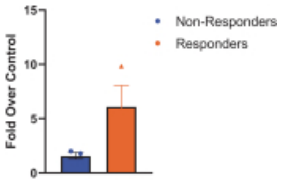
Further analysis of heart samples from responder as compared to non-responder animals from this study revealed that responder animals had significantly higher measurable levels of the TN1-002 vector and the reprogramming factors than the non-responder animals. This provides additional support that the improvements in EF results seen in this experiment were a direct result of the delivery and expression of reprogramming factors by our AAV capsid.

The figures below illustrate that the level of AAV transduction and transgene expression was observed to be higher in samples obtained from responders compared to non-responders to TN1-002 in the study of reprogramming in the pig model of heart failure post-MI:

Comparison of TN1-002 AAV Transduction in Heart Samples of Responders vs. Non-Responders from Reprogramming Study in Pig Model of Heart Failure Post-MI



Comparison of TN1-002 Transgene Expression in Heart Samples of Responders vs. Non-Responders from Reprogramming Study in Pig Model of Heart Failure Post-MI



These data provide direction to our ongoing candidate selection efforts. We continue to seek ways to ensure more consistent delivery and expression of our reprogramming factors to CFs, including with the use of novel capsids and novel delivery methods.

- *Safety*. To date, no negative safety findings have been associated with either TN1-002 or TN1-006 in *in vivo* experiments in rat and pig models, including clinical findings, histopathology, assessment of arrhythmia, and other measures.

Planned Clinical Development

We intend to . After selection of our product candidate, we plan to initiate IND-enabling studies. We have received feedback from the FDA through an INTERACT (INitial Targeted Engagement for Regulatory Advice on CBER producTs) review to inform the design of our future preclinical studies.

Our development plan is anticipated to include patients with advanced HF due to prior MI who meet qualifications for a heart transplant or LVAD as well as a broader patient population with severe ischemic cardiomyopathy. In the future, we also may explore potential for development in other forms of HF caused by a loss of cardiomyocytes, but not involving a myocardial infarction.

HDAC6i Program for HFpEF and gDCM

Our HDAC6i program is intended for development in multiple patient populations with significant unmet need including HFpEF and gDCM. We have discovered a highly specific and potent HDAC6i for which medicinal chemistry has been completed and we have filed patent applications for two chemical series. We have also demonstrated *in vivo* activity of these molecules in multiple animal models, including in two different models of HFpEF and a single model of gDCM. Our HDAC6i product candidate, TYA-11631, has not demonstrated evidence of toxicity at levels dosed to date in small and large animal species. This program is currently in IND-enabling studies.

Overview of HFpEF

HFpEF is generally defined as HF with an EF greater than or equal to 50%. In patients with HFpEF, the LV is stiffened and does not adequately relax, and increased pressure is needed for the ventricle to properly fill. As a result, blood begins to build up inside the left atrium of the heart and eventually swells into the lungs, veins and tissues of the body. HFpEF is progressive in many patients. Symptoms initially include fatigue, shortness of breath, and tissue swelling, resulting in reduced physical activity. Over time, this results in a substantial limitation in activities and impact on quality of life, and patients are at risk of premature death.

At least half of all hospital admissions for HF are related to HFpEF and approximately 24% of the HFpEF population is considered to have New York Heart Association Class III or Class IV disease, representing a disease burden that markedly impacts quality of life and limits physical activity. Among patients hospitalized for HFpEF, readmission for HF and mortality rates over a five-year period are as high as 40% and 75%, respectively.

Patients with HFpEF represent approximately half of HF patients. There are estimated to be over three million patients diagnosed with HFpEF in the United States alone. HFpEF prevalence is rapidly increasing, with prevalence anticipated to increase by more than 45% by 2030.

Despite limited data demonstrating efficacy in the HFpEF setting, patients generally receive therapies prescribed for HFrEF, including diuretics, beta-blockers, and ACE inhibitors. Patients with HFpEF are generally not responsive to therapies that have been shown to improve outcomes of patients with HFrEF. Without the development of more effective therapies specifically for HFpEF patients, disease management is mostly directed toward treating associated conditions and symptoms. Despite agreement for the need for therapies that alter the

trajectory of HFpEF, clinical trials that have enrolled patients with HFpEF have not led to new therapies that meaningfully improve morbidity or mortality for the HFpEF patient population. We believe that HFpEF remains one of the greatest unmet needs in cardiovascular medicine.

Overview of gDCM

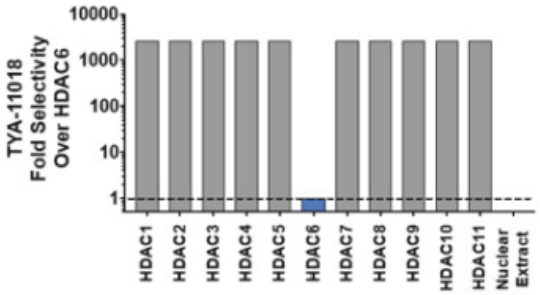
Genetic abnormalities linked to gDCM are estimated to be present in about 30% to 40% of DCM patients. Variants in more than 40 genes have been linked with gDCM with many patients having more than two mutations meeting criteria for causation of DCM. Despite a common disease phenotype, mutations linked to gDCM are present in proteins with diverse cellular locations within the cardiomyocyte, including localization to the nucleus, cellular membrane, sarcomere, and ion channels. Mutations, deletions, and truncations in one such protein, Bcl2-associated anthanogene 3 (BAG3), have been thought to be causative of DCM in a subset of gDCM patients. Patients with BAG3 DCM represents a particularly high unmet need with an average age of onset of 37 years and an increased rate of heart transplant and LVAD placement. For additional information regarding DCM and gDCM, see the "*DWORF Program for DCM and HFrEF— Overview of DCM*" above.

Our Solution: HDAC6 inhibitor (TYA-11631)

Following identification of HDAC6 as a prospective target for gDCM through our Precision Medicine platform, we have developed a number of highly selective proprietary HDAC6 small molecule inhibitors (HDAC6i), including TYA-11018 and our product candidate, TYA-11631. HDAC inhibitors have long been considered promising targets for many indications in a range of therapeutic areas, including oncology and other indications. Several partially selective HDAC6i are already in clinical development, but none yet for heart disease. There are currently no other HDAC inhibitors in clinical development for heart disease indications and we intend to be the first to advance a selective HDAC6i into clinical development for the treatment of HF.

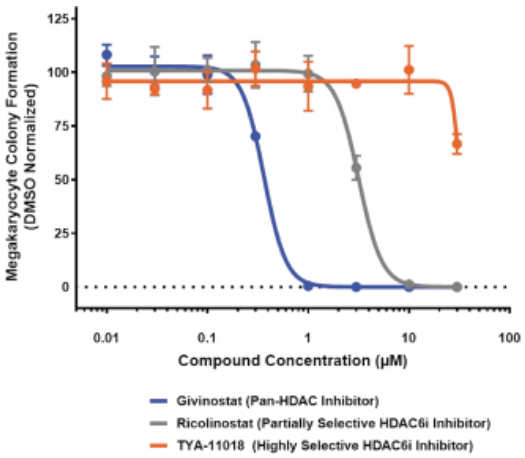
Less selective HDAC inhibitors in development in other indications have been associated with dose-limiting toxicities and safety liabilities, such as thrombocytopenia. In contrast, we have identified a number of highly selective and potent HDAC6i with high levels of selectivity for HDAC6. As demonstrated in the figure below, some of our proprietary inhibitors are greater than 1,000 times more selective for HDAC6 than for other HDAC family members.

TYA-11018 demonstrates 1000x Biochemical Selectivity for HDAC6 vs. Other HDACs



Internal data indicate that the higher selectivity of our compounds may translate to lower safety risks as compared to other selective compounds. As shown below, in *in vitro* experiments we have observed reduced off-target effects relative to other pan-HDAC inhibitors or partially selective HDAC6 inhibitors in clinical development, as measured by the relative number of megakaryocyte colonies formed in the presence of the compounds tested at different concentrations. No thrombocytopenia has been observed in animal models.

Significantly Reduced Risk of Thrombocytopenia

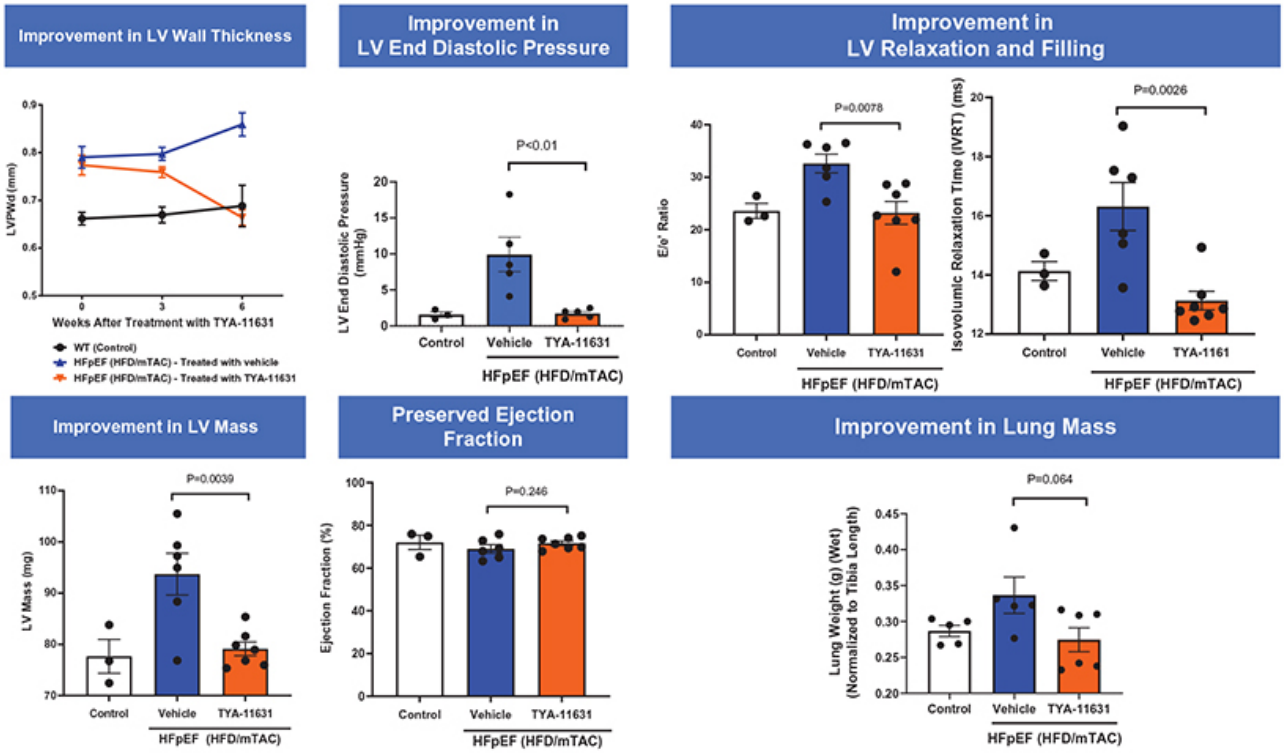


Our product candidate, TYA-11631, has favorable drug-like properties, including pharmacokinetics (PK), oral bioavailability, panel selectivity, protein-binding activity, and cellular toxicity, supporting the potential for once-daily oral dosing in humans. To date, there have been no adverse findings in multiple pilot toxicology studies in rats and NHPs with TYA-11631 and TYA-11018. We have filed patent applications across multiple chemical series encompassing TYA-11631, TYA-11018, and other potential back-up molecules.

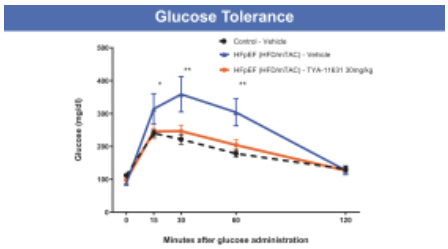
TYA-11631: Preclinical Studies in HFpEF

Treatment with TYA-11631 has reversed measures of HFpEF, including heart filling defects known as diastolic dysfunction, in multiple animal models. In one HFpEF model developed in-house, we surgically applied moderate aortic banding (mTAC) in wild type mice fed a high fat diet (HFD). These interventions induced a cardio-metabolic HF phenotype that simulated the systemic and cardiovascular features of HFpEF in humans. Aspects of the HFpEF phenotype included increased LV wall thickness, LV hypertrophy, increased diastolic pressure, impaired LV relaxation and filling, and glucose intolerance, all with a preserved EF.

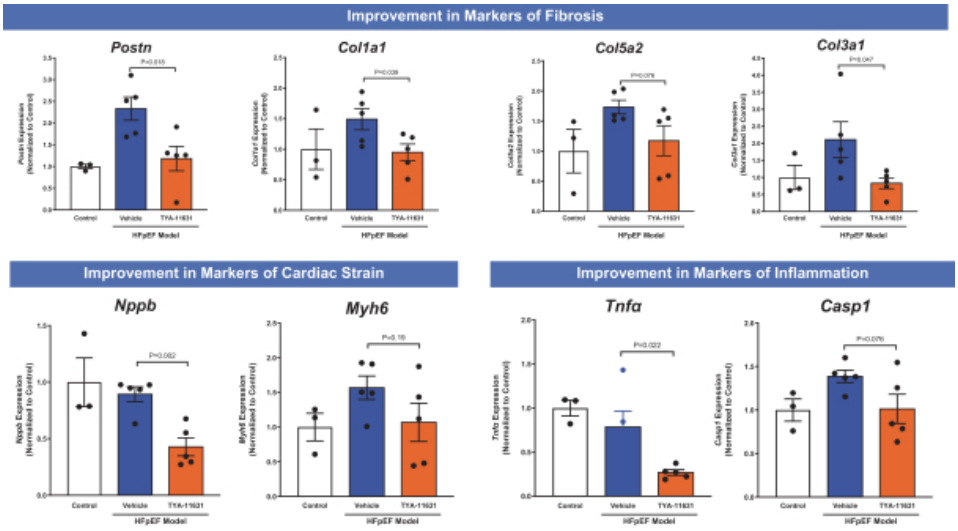
After the HFpEF phenotypes were established, animals were dosed orally with TYA-11631 or vehicle for six weeks. As illustrated below, TYA-11631 treatment reversed HFpEF disease phenotype across all studied parameters, including restoration of LV wall thickness, LV end diastolic pressure, LV relaxation and filling, and LV mass, compared to control. In addition, as shown below, the treated mice exhibited a clear trend of decreased lung weight, indicative of improvement in pulmonary congestion consistent with the reduction of filling pressure.



In addition, as illustrated below, in multiple studies in HFpEF models, we have also observed an improvement in glucose tolerance suggesting that treatment with a selective HDAC6i may have a positive impact on glucose metabolism.

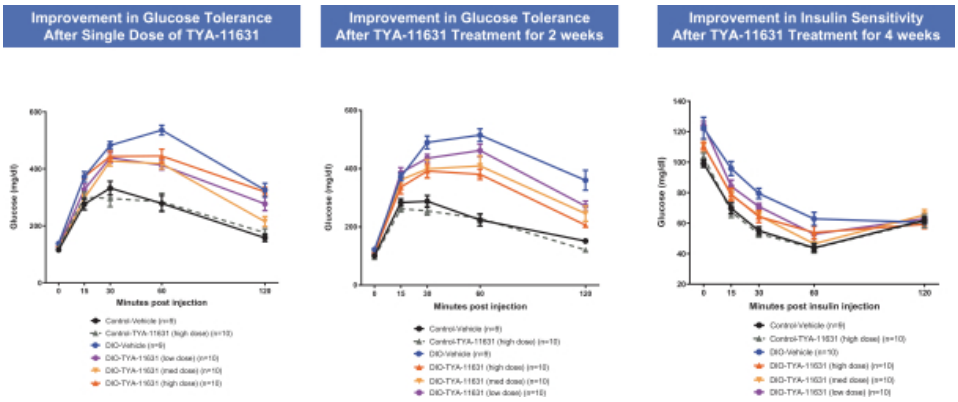


Consistent with the observed improvement in HFpEF phenotype, TYA-11631 treatment in this HFpEF model was also associated with reductions of key biomarkers of fibrosis, hypertrophy and cardiac damage, and inflammation in heart samples compared to levels observed in control animals, as shown in the figure below:

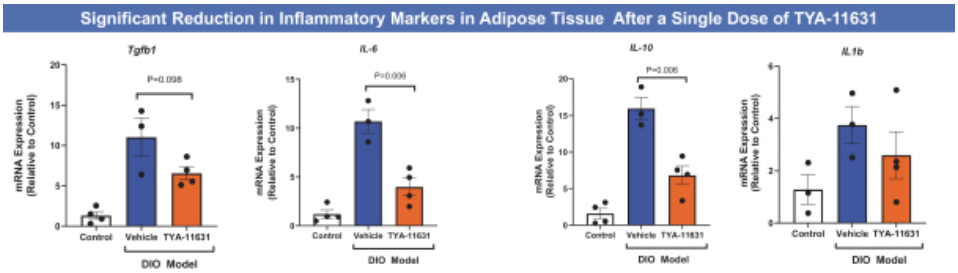


TYA-11631: Preclinical Studies in Models of Metabolic Disease

In addition to improvements in glucose metabolism associated with TYA-11631 treatment in HFpEF mouse models, treatment with TYA-11631 has also lead to improvements in glucose tolerance and insulin sensitivity in a Diet Induced Obesity (DIO) mouse model. As shown below, treatment with a single dose of TYA-11631 improves glucose tolerance in a dose-dependent manner in the DIO model. Furthermore, TYA-11631 treatment improves glucose tolerance in a dose-dependent manner after treatment for two weeks and insulin sensitivity in a dose-dependent manner after treatment for four weeks.



A single dose treatment of TYA-11631 in the DIO model is also associated with a significant reduction in inflammatory markers in adipose tissue relative to controls. These data are shown below. Inflammatory biomarkers in adipose tissue are thought to be linked to glucose tolerance and insulin sensitivity. For example, adipose IL-6 deficiency has been associated with improvements in glucose tolerance. Loss of IL-10 has also been shown to protect mice from diet-induced obesity and improve glucose tolerance and insulin sensitivity. Collectively, these data are supportive of a role for HDAC6 inhibition on glucose tolerance and insulin resistance with potential applicability to sub-populations of HFpEF patients with obesity, diabetes, or metabolic syndrome.



HDAC6 Inhibitors: Potential Mechanism of Action in HFpEF

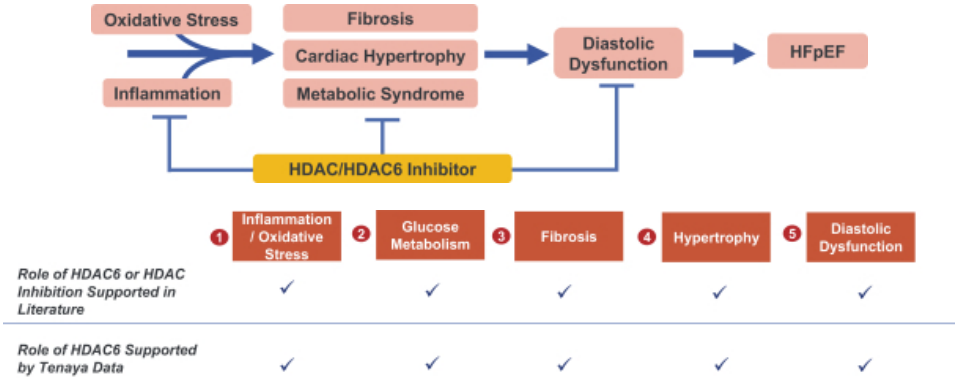
The mechanisms underlying HFpEF is an active area of scientific research. Defects in glucose metabolism have also been proposed to play a role in HFpEF onset and progression due to overlap in the HFpEF population with diabetes and obesity. One model is focused on a systemic inflammatory state leading to endothelial dysfunction, causing the hallmark pathophysiology associated with HFpEF. Key aspects of HFpEF disease biology include oxidative stress and inflammation, increased fibrosis, and hypertrophy, all resulting in diastolic dysfunction and decreased ability of the heart to fill its chambers during contraction.

In the literature, HDAC6 has been associated with several of these potential HFpEF mechanisms, including glucose metabolism, inflammation / oxidative stress, fibrosis, and hypertrophy, and diastolic dysfunction, suggesting a multi-modal mechanism of action that may address multiple aspects of disease.

- *Glucose metabolism:* In a published study, HDAC6 KO mice had a significant improvement in dexamethasone-induced whole-body glucose intolerance and insulin resistance compared to wildtype mice, suggesting that HDAC6 may be an important regulator of gluconeogenesis and glucose metabolism. Treatment with our lead HDAC6 inhibitors is also associated with an improvement in glucose tolerance in HFpEF models and dose-dependent improvements in glucose tolerance and insulin resistance in a DIO mouse model. The study of glucose metabolism and other bioenergetic pathways has been an active area of research and clinical investigation in HFpEF due to frequent diabetes and obesity comorbidities.
- *Inflammation / Oxidative stress:* Scientific literature has linked inhibition of HDAC6 with inflammasome biology and enhancement of regulatory T cell activity. In our preclinical studies, our lead compounds have also demonstrated improvement in inflammatory markers in a model of DCM.
- *Fibrosis:* In published studies, HDAC6 inhibition by siRNA or partially selective inhibitors attenuates myofibroblast markers and HDAC6 knockdown has been demonstrated to inhibit CF proliferation.
- *Hypertrophy:* HDAC inhibitors can prevent cardiac hypertrophy in animal models in response to various hypertrophic stimuli. In a published study, HDAC inhibition suppressed cardiac hypertrophy and fibrosis in a model of hypertension through regulation of HDAC6/HDAC8 enzyme activity, suggesting that a novel HDAC6 inhibitor may help treat or prevent pathological cardiac hypertrophy.

- *Diastolic dysfunction:* In a published study, pan-HDAC inhibitors improved diastolic dysfunction in two distinct murine models of HFpEF and HDAC inhibition and improved cardiopulmonary function in a feline model of diastolic dysfunction.

The schematic below shows a conceptual model of HFpEF disease biology highlighting key aspects (the yellow boxes in the figure below) for which there are external and internal data supporting the potential utility of HDAC6i.

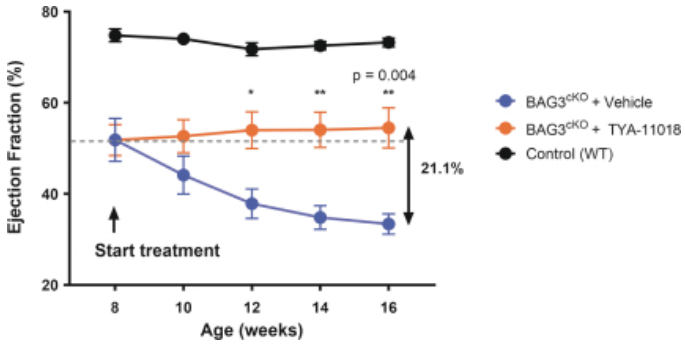


HDAC6 Inhibitors: Preclinical Studies in DCM

Through our target identification Precision Medicine platform, HDAC6 was initially identified as a target for a genetically defined subset of DCM, BAG3 mutant DCM. We screened a large chemical library to identify compounds able to reverse sarcomere defects in BAG3-deficient iPSC-CMs. Sarcomere defects were rapidly and systemically assessed through our proprietary machine learning algorithms. Whereas a pan-HDAC inhibitor was identified in the initial compound screen as reversing sarcomere defects, we conducted follow-up screens using RNAi knockdowns of HDAC family members to identify HDAC6 as a potential therapeutic target *in vitro*.

We have validated these *in vitro* findings by testing our HDAC6i compounds in BAG3 mutant mice models. As shown in the figure below, treatment of a rapidly worsening mouse model of BAG3 mutant DCM with TYA-11018 resulted in a greater than 20% improvement in EF after eight weeks of treatment compared to a control group treated with vehicle.

Significant and Durable Improvement in Ejection Fraction in Severe BAG3 Mutant DCM Mouse Model Treated with TYA-11018

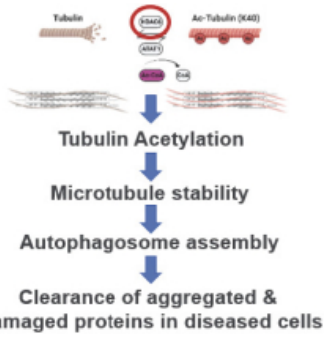


HDAC6 Inhibitors: Potential Mechanism of Action in DCM

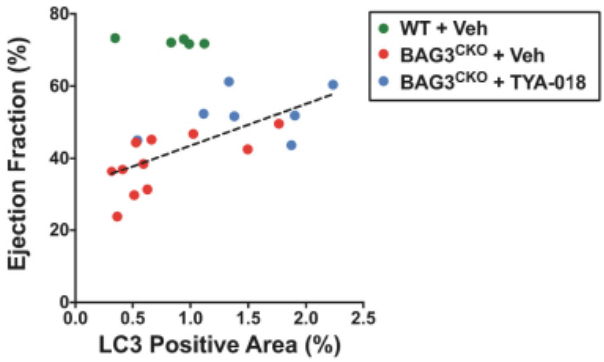
In contrast to other HDAC proteins, HDAC6 is a tubulin deacetylase. When HDAC6 is inhibited, tubulin acetylation is promoted, leading to increased microtubule stability. Increased microtubule stability has been linked to an increase in assembly of vesicles called autophagosomes which are involved in the clearance of aggregated and misfolded proteins in diseased cells. In the diseased heart, one potential mechanism of action for HDAC6 inhibition is promoting autophagy, driving a clearance of aggregated proteins in the heart, and thus restoring normal cellular function and structure. Protein aggregation is characteristic of some forms of DCM and have been linked to cardiomyocyte and cardiac dysfunction. The BAG3 mutant DCM patient population may be particularly sensitive to this mechanism of action for HDAC6 inhibition. BAG3 facilitates autophagy as a co-chaperone protein with heat shock proteins and mutation in BAG3 may lead to potentially defective autophagy in the heart.

The schematic below shows promotion of autophagy as a potential mechanism of action for HDAC6 inhibition in DCM.

Mechanism for HDAC6i Inhibition to Promote Autophagy



The role of HDAC6 inhibition in the promotion of autophagy is supported by biomarker analyses in TYA-11018 *in vivo* efficacy studies in the BAG3 DCM mouse model. As shown in the figure below, one autophagy marker, LC3, increases in correlation with functional measures such as EF in efficacy studies, suggestive of the potential role of autophagy as a mechanism of action for HDAC6 inhibition in DCM.



TYA-11631: Planned Clinical Development

We plan to submit an IND to the FDA in 2022 and, if approved, initiate first-in-human safety studies in healthy volunteers before initiating proof-of-concept studies in HFpEF and patient populations with DCM. During clinical development, we plan to examine the role of TYA-11631 in sub-populations of HFpEF patients with obesity, diabetes or metabolic syndrome.

Pipeline Expansion Opportunities

We believe the versatility of our three product platforms and our related differentiated capabilities enables us to rapidly expand our portfolio beyond the initial areas of focus. In addition to the named programs in our current pipeline, there are several programs emerging from each of our platforms that are intended to address rare genetic cardiomyopathies as well as more prevalent forms of heart disease. We continue to research, discover and evaluate new programs arising from our three product platforms. We also continue to explore opportunities to collaborate with leading academic and biopharmaceutical organizations with complementary science and capabilities that share our bold vision for the development of next-generation therapies to benefit individuals and families fighting heart disease.

Third Party Agreements

2020 License Agreement with The Board of Regents of the University of Texas System on behalf of UTSW

We have licensed intellectual property from UTSW in a license agreement effective January 10, 2020 with regard to our DWORF program. We entered into the license agreement with The Board of Regents of the University of Texas System on behalf of UTSW for a worldwide license to develop and commercialize products covered by the UTSW-licensed intellectual property relating to therapeutics overexpressing the peptide named DWORF for all uses. Our license under the license agreement is exclusive with respect to the UTSW patent rights licensed thereunder and non-exclusive with respect to the UTSW tangible materials provided thereunder. All of the DWORF gene therapy product candidates currently in our pipeline rely upon the license granted to us under this agreement.

Under the license agreement, we are obligated to make milestone payments to UTSW aggregating up to $2.75 million upon the achievement of specified development and regulatory approval milestones and up to $12 million upon the achievement of specified sales milestones, in each case, for products covered by the UTSW licensed patent rights. We are also obligated to pay single-digit royalties to UTSW based on net sales by us or our affiliates and sublicensees of products covered by the UTSW licensed patent rights. In addition, in the event we grant a sublicense or an option to obtain a sublicense under the UTSW licensed patent rights, we are obligated to pay UTSW a specified portion of the income we receive therefrom. Further, in the event we undergo a change of control, we may be obligated to make a payment to UTSW of up to $3 million.

Our royalty obligations with respect to each product covered by UTSW licensed patent rights in a country extend until the latest of expiration of the last-to-expire patent claim licensed from UTSW covering the product in the country, the exclusivity term covering the product in the country and a specified number of years after the first commercial sale of the product in the country.

Under the license agreement, we are obligated to use a certain level of effort to develop and commercialize one or more products covered by the UTSW licensed patent rights and to achieve certain development or regulatory approval milestones within set times, subject to certain extensions.

UTSW has the right to terminate the license agreement for our uncured material breach of the license agreement, including if we fail to use a certain level of effort to achieve specified development or regulatory approval milestones within specified timeframes, or if we unsuccessfully challenge the validity of the UTSW licensed patent rights or for certain events related to our bankruptcy. We have the right to terminate the agreement at any time.

Competition

The biotechnology and pharmaceutical industries are characterized by rapidly advancing technologies, intense competition and a strong emphasis on intellectual property. We believe our three product platforms, scientific know-how, five core internal capabilities, and experience provides us with competitive advantages. However, we face substantial competition from many different sources, including large and specialty pharmaceutical companies and biotechnology companies, academic research institutions and governmental agencies, and public and private research institutions. Any product candidate we develop and commercialize will have to compete with existing therapies as well as therapies currently in development and that may be developed in the future.

Due to the depth and diversity of our pipeline, we may face competition from a variety of companies, including:

- **General cardiovascular drug development:** Companies known to have approved products and active drug development efforts for cardiovascular disease include but are not limited to AstraZeneca, Bayer, Bristol Myers Squibb, Cytokinetics, Eli Lilly, Johnson & Johnson/Janssen, Maze Therapeutics, Merck, Novartis, and Novo Nordisk;
- **Gene Therapy platform:** Companies known to be pursuing gene therapy approaches for the heart include but are not limited to 4D Molecular Therapeutics, Bayer, Bristol Myers Squibb, BioMarin Pharmaceutical, DiNAQOR, Precigen, Renova Therapeutics, Renovacor, Rocket Pharmaceuticals, Sardicor, Stride Bio, and uniQure;
- **Cellular Regeneration platform:** Companies known to be pursuing approaches to cellular regeneration for the heart include but are not limited to AstraZeneca, Bayer, BioCardia, Cardior Pharmaceuticals, Jaan Biotherapeutics, Khloris Biosciences, Mesoblast, Mogrify, Sana Biotechnologies and Xylocor Therapeutics; and
- **Precision Medicine platform:** Companies known to be pursuing approaches to drug discovery for the heart using disease models based on iPSC-CMs include but are not limited to DiNAQOR and Tara Biosystems.

We cannot predict whether other therapies may be developed that demonstrate greater efficacy, and we may have direct and substantial competition from such therapies in the future. We expect to face increasing competition as new, more effective treatments enter the market and further advancements in technologies are made. We expect market adoption of any treatments that we develop and commercialize to be dependent on, among other things, efficacy, safety, delivery, price and the availability of reimbursement from government and other third-party payors.

Many of our current or potential competitors, either alone or with their collaboration partners, have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials and marketing approved products than we do. Mergers and acquisitions in the pharmaceutical, biotechnology and gene therapy industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These companies also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our product candidates.

Intellectual Property

Our success depends in part on our ability to obtain and maintain intellectual property protection for our product candidates, technology and know-how, to operate without infringing, misappropriating or otherwise violating the intellectual property or other the proprietary rights of others and to prevent others from infringing,

misappropriating or otherwise violating our intellectual property or other proprietary rights. To protect our intellectual property rights, we primarily rely on patent and trade secret laws, confidentiality procedures, and employee disclosure and invention assignment agreements. Our policy is to seek to protect our proprietary position by, among other methods, pursuing patent applications in the United States and in certain 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. Our patent portfolio is intended to cover our product candidates and components thereof, their methods of use and processes for their manufacture, our proprietary reagents and assays and any other inventions that are commercially important to our business. The development of our product candidates and technology is at an early stage and consequently, our patent portfolio is also at an early stage. For example, although we exclusively in-license one issued patent from UTSW related to our DWORF program, we do not currently own or license any other issued patents relating to any of our product candidates and technology and many of our and our licensors' patent applications are either at the provisional stage or at an early stage in prosecution. We cannot be sure that any 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 patents that may be granted to us in the future will be commercially useful in protecting our technology and product candidates.

Our owned and exclusively licensed patent portfolio covers various aspects of our programs and technology, including our small-molecule compounds, gene delivery vectors, and gene therapy programs. Further details on certain segments of our patent portfolio are included below.

Gene Therapy Platform

MYBPC3: With regard to our MYBPC3 program, as of April 15, 2021, we solely own two pending Patent Cooperation Treaty (PCT) patent applications and one pending U.S. patent application. Any U.S. or foreign patents issued from national stage filings of the PCT patent applications are expected to expire in 2041, assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees and that national phase entries are timely made based upon the pending PCT applications, and without taking potential patent term extensions or adjustments into account. The pending U.S. provisional patent applications cover various aspects of our MYBPC3 lead products, including *MYBPC3* gene expression vectors, recombinant AAV (rAAV) virions, rAAV viral genomes, expression cassettes, and methods of using such compositions for therapeutic indications.

PKP2: With regard to our PKP2 program, as of April 15, 2021, we have two pending U.S. provisional patent applications. Patents claiming priority to these two provisional patent applications, if issued, are expected to expire, in 2041, assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees and without taking potential patent term extensions or adjustments into account. The provisional patent application is related to proprietary *PKP2* gene expression vectors and methods of use.

DWORF: With regard to our DWORF program, as of April 15, 2021, we exclusively license one U.S. patent and one pending U.S. patent application from UTSW (the UT Patents). The U.S. patent is expected to expire, and the pending U.S. patent application, if issued, is expected to expire, in 2037, assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees and without taking potential patent term extensions or adjustments into account. The UT Patents covers methods of enhancing activity of the SERCA pump using the DWORF peptide and using such methods to treat heart disease. Furthermore, we solely own a pending U.S. provisional patent application related to proprietary vectors and methods of use. Patents claiming priority to this U.S. provisional patent application, if issued, are expected to expire in 2041, assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees, and without taking potential patent term extensions or adjustments into account.

Cellular Regeneration Platform

With respect to our Cellular Regeneration platform, as of April 15, 2021, we solely own three patent families directed to product candidates in our Reprogramming program, including two pending PCT patent applications, two pending U.S. patent applications, and nine foreign counterparts of these patent applications. Any U.S. or foreign patents issued from national stage filings of the PCT patent applications are expected to expire between 2039 and 2041, assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees and that national phase entries are timely made based upon the pending PCT applications, and without taking potential patent term extensions or adjustments into account. The three patent families cover various aspects of our Reprogramming program, including gene delivery vectors, methods of treating a heart condition, engineered myocardin proteins, vectors encoding engineered myocardins, and methods of use. Additionally, we solely own a fourth patent family that is directed to AAV-based gene vectors for cardiac cell transduction, with one pending international PCT patent application. Any U.S. or foreign patents issued from national stage filings of this PCT patent application are expected to expire in 2040, assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees and that national phase entries are timely made based upon the pending PCT applications, and without taking potential patent term extensions or adjustments into account.

Precision Medicine Platform

With regard to our HDA6i program, as of April 15, 2021, we solely own two pending PCT patent applications. Any U.S. or foreign patents issued from national stage filings of these PCT patent applications are expected to expire in 2040, assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees and that national phase entries are timely made based upon the pending PCT applications, and without taking potential patent term extensions or adjustments into account. Our patent applications cover our lead HDAC6i compounds and various analogs.

Trade Secrets

In addition to our reliance on patent protection for our technology and product candidates, we also rely on trade secret protection of our confidential information and know-how relating to our proprietary technology, product platforms and product candidates. Through development of internal manufacturing capabilities for AAV-based gene vectors, we have secured proprietary know-how and trade secrets related to our most-advanced programs as well as vector technologies widely applicable to potential AAV therapies. However, trade secrets can be difficult to protect. We seek to protect our trade secrets, proprietary technology and processes, in part, by entering into confidentiality and invention assignment agreements with our employees, consultants, scientific advisors, contractors and other third parties. However, we cannot guarantee that we have entered into such agreements with each party that has or may have had access to our trade secrets or proprietary information or has been involved in the development of intellectual property. Additionally, these agreements may be breached and we may not have adequate remedies for any breach. Furthermore, third parties may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose our technology. As a result, we may not be able to meaningfully protect our trade secrets. We also seek to preserve the integrity and confidentiality of our data and trade secrets by maintaining physical security of our premises and physical and electronic security of our information technology systems. However, such security measures may be breached and we may not have adequate remedies for such breaches.

For more information regarding the risks related to our intellectual property, see “Risk Factors—Risks Related to Our Intellectual Property.”

Manufacturing

We intend to rely on both our internal manufacturing capabilities and external CDMOs for our programs.

We plan to fully integrate and internalize AAV manufacturing capabilities to support our Gene Therapy and Cellular Regeneration platforms. We have established an in-house Pilot Plant Operation facility that operates at the 200L scale to support all non-clinical studies including IND-enabling efficacy, pharmacology and toxicology studies. This facility is compliant with Good Laboratory Practice (GLP) regulations and can produce materials sufficient for large animal studies including pigs and NHPs. Our initial production at this scale has been at yields and with full to empty capsid ratios that compare favorably to industry standards.

We have initiated construction of a dedicated approximately 94,000 square-foot cGMP facility for drug product manufacturing in the San Francisco Bay Area that we expect will be operational by the end of 2021. The facility will initially produce drug product at the 1000L scale to support first-in-human studies for our MYBPC3 program. The facility will use a modular pod design that will support scale-out and scale-up of manufacturing capacity in response to evolving needs.

In addition to our internal cGMP manufacturing capabilities, we have also negotiated and entered into master service agreements with two CDMOs for additional capacity and risk mitigation. Additionally, we will rely on third parties for certain manufacturing related release assays, for which we intend to secure dual-sourced capacity for risk mitigation.

To optimize our use of resources and utilize extensive experience in small molecule manufacturing, we intend to work with CDMOs for our small molecule programs. We intend to initiate cGMP manufacturing for our HDAC6 inhibitor program, TYA-11631, before the end of 2021.

Government Regulation

Government authorities in the United States at the federal, state and local level and in other countries regulate, among other things, the research, development, testing, manufacture, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting, marketing and export and import of biologic and small molecule therapeutic products. Generally, before a new therapeutic product can be marketed, considerable data demonstrating a biologic candidate's quality, safety, purity and potency, or a small molecule candidate's quality, safety and efficacy, must be obtained, organized into a format specific for each regulatory authority, submitted for review and approved by the regulatory authority. For biologic candidates, potency is similar to efficacy and is interpreted to mean the specific ability or capacity of the product, as indicated by appropriate laboratory tests or by adequately controlled clinical data obtained through the administration of the product in the manner intended, to effect a given result.

U.S. Biologic and Small Molecule Drug Product Development

In the United States, the FDA regulates small molecule and biologic therapeutic products under the Food, Drug and Cosmetic Act (FDCA) and the Public Health Service Act (PHSA). Biopharmaceuticals, including both small molecule and biologic products, also are subject to other federal, state and local statutes and regulations. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations requires the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or post-market may subject an applicant to administrative or judicial sanctions. These sanctions could include, among other actions, the FDA's refusal to approve pending applications, withdrawal of an approval, a clinical hold, untitled or warning letters, product recalls or market withdrawals, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, restitution, disgorgement and civil or criminal penalties. Any agency or judicial enforcement action could have a material adverse effect on us.

Biologics must be licensed by the FDA through a biologics license application (BLA), and small molecule products must be approved by the FDA through a new drug application (NDA), before they may be legally marketed in the United States. The process generally involves the following:

- Completion of extensive preclinical studies in accordance with applicable regulations, including studies conducted in accordance with GLP requirements;
- Submission to the FDA of an IND, which must become effective before human clinical trials may begin;
- Approval by an independent institutional review board (IRB), or ethics committee at each clinical trial site before each trial may be initiated;
- Performance of adequate and well-controlled human clinical trials in accordance with applicable IND regulations, GCP requirements and other clinical trial-related regulations to establish the safety and potency or efficacy of the investigational product for each proposed indication;
- Submission to the FDA of a BLA or NDA;
- A determination by the FDA within 60 days of its receipt of a BLA or NDA to accept the filing for review;
- Satisfactory completion of a FDA pre-approval inspection of the manufacturing facility or facilities where biologic or small molecule product will be produced to assess compliance with cGMP requirements to assure that the facilities, methods and controls are adequate to preserve the biologic's identity, strength, purity, potency, and quality controls, or the small molecule product's identity, chemistry, and quality controls;
- Potential FDA audit of the preclinical study and/or clinical trial sites that generated the data in support of the BLA or NDA;
- Satisfactory completion of other studies required by the FDA, including immunogenicity, carcinogenicity, genotoxicity, and stability studies;
- FDA review and approval of the BLA or NDA, including consideration of the views of any FDA advisory committee, prior to any commercial marketing or sale of the biologic or small molecular therapeutic in the United States; and
- Compliance with any post-approval requirements, including the potential requirement to implement a REMS, and the potential requirement to conduct post-approval studies.

The data required to support a BLA or NDA are generated in two distinct developmental stages: preclinical and clinical. The preclinical and clinical testing and approval process requires substantial time, effort and financial resources, and we cannot be certain that any approvals for any future product candidates will be granted on a timely basis, or at all.

Preclinical Studies and IND

Preclinical studies include laboratory evaluation of product biochemistry, formulation and stability, as well as *in vitro* and animal studies to assess the potential for toxicity and to establish a rationale for therapeutic use for supporting subsequent clinical testing. The conduct of preclinical studies is subject to federal regulations and requirements, including GLP regulations for safety/toxicology studies. An IND sponsor must submit the results of the preclinical tests, together with manufacturing information, analytical data, any available clinical data or literature and a proposed clinical protocol, among other things, to the FDA as part of an IND. An IND is a request for authorization from the FDA to administer an investigational product to humans and must become effective before human clinical trials may begin. Some long-term preclinical testing, such as animal tests of reproductive adverse events and carcinogenicity, may continue after the IND is submitted. An IND automatically becomes effective 30 days after receipt by the FDA, unless before that time the FDA raises concerns or questions

related to one or more proposed clinical trials and places the trial on clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. As a result, submission of an IND may not result in the FDA allowing clinical trials to commence.

Clinical Trials

The clinical stage of development involves the administration of the investigational product to healthy volunteers or patients under the supervision of qualified investigators, generally physicians not employed by or under the trial sponsor's control, in accordance with GCP requirements, which include the requirement that all research subjects provide their informed consent for their participation in any clinical trial. Clinical trials are conducted under protocols detailing, among other things, the objectives of the clinical trial, dosing procedures, subject selection and exclusion criteria and the parameters to be used to monitor subject safety and assess efficacy. Each protocol, and any subsequent amendments to the protocol, must be submitted to the FDA as part of the IND. Furthermore, each clinical trial must be reviewed and approved by an IRB for each institution at which the clinical trial will be conducted to ensure that the risks to individuals participating in the clinical trials are minimized and are reasonable in relation to anticipated benefits. The IRB also approves the informed consent form that must be provided to each clinical trial subject or his or her legal representative and must monitor the clinical trial until completed. There also are requirements governing the reporting of ongoing clinical trials and completed clinical trial results to public registries.

A sponsor who wishes to conduct a clinical trial outside of the United States may, but need not, obtain FDA authorization to conduct the clinical trial under an IND. If a foreign clinical trial is not conducted under an IND, the sponsor may submit data from the clinical trial to the FDA in support of a BLA or NDA. The FDA will accept a well-designed and well-conducted foreign clinical trial not conducted under an IND if the trial was conducted in accordance with GCP requirements and the FDA is able to validate the data through an onsite inspection if deemed necessary.

Clinical trials in the United States generally are conducted in three sequential phases, known as Phase 1, Phase 2 and Phase 3, and may overlap.

- Phase 1 clinical trials generally involve a small number of healthy volunteers or disease-affected patients who are initially exposed to a single dose and then multiple doses of the product candidate. The primary purpose of these clinical trials is to assess the metabolism, pharmacologic action, tolerability and safety of the drug.
- Phase 2 clinical trials involve studies in disease-affected patients to determine the dose required to produce the desired benefits. At the same time, safety and further pharmacokinetic and pharmacodynamic information is collected, possible adverse effects and safety risks are identified and a preliminary evaluation of efficacy is conducted.
- Phase 3 clinical trials generally involve a large number of patients at multiple sites and are designed to provide the data necessary to demonstrate the effectiveness of the product for its intended use, its safety in use and to establish the overall benefit/risk relationship of the product and provide an adequate basis for product approval. These trials may include comparisons with placebo and/or other comparator treatments. The duration of treatment is often extended to mimic the actual use of a product during marketing.

Post-approval trials, sometimes referred to as Phase 4 clinical trials, may be conducted after initial marketing approval. These trials are used to gain additional experience from the treatment of patients in the intended therapeutic indication. In certain instances, the FDA may mandate the performance of Phase 4 clinical trials as a condition of approval of a BLA or NDA.

Progress reports detailing the results of the clinical trials, among other information, must be submitted at least annually to the FDA and written IND safety reports must be submitted to the FDA and the investigators for serious and unexpected suspected adverse events, findings from other studies suggesting a significant risk to humans exposed to the investigational product, findings from animal or *in vitro* testing that suggest a significant risk for human subjects and any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator brochure.

Phase 1, Phase 2 and Phase 3 clinical trials may not be completed successfully within any specified period, if at all. The FDA or the sponsor may suspend or terminate a clinical trial at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk or non-compliance with GCP requirements. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the investigational product has been associated with unexpected serious harm to patients. Additionally, some clinical trials are overseen by an independent group of qualified experts organized by the clinical trial sponsor, known as a data safety monitoring board or committee. This group provides authorization for whether a trial may move forward at designated check-points based on access to certain data from the trial. Concurrent with clinical trials, companies usually complete additional animal studies and also must develop additional information about the biochemical and physical characteristics of the investigational product as well as 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 and, among other things, companies 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 candidates do not undergo unacceptable deterioration over their shelf life.

Further, as a result of the COVID-19 pandemic, the extent and length of which are uncertain, we will be required to develop and implement additional clinical trial policies and procedures designed to help protect trial participants from the COVID-19 virus, which may include using telemedicine visits and remote monitoring of patients and clinical sites. We will also need to ensure data from our clinical studies that may be disrupted as a result of the pandemic is collected pursuant to the trial protocol and is consistent with GCPs, with any material protocol deviation reviewed and approved by the site IRB. Patients who may miss scheduled appoints, any interruption in trial drug supply, or other consequence that may result in incomplete data being generated during a trial as a result of the pandemic must be adequately documented and justified. For example, on March 18, 2020, the FDA issued a guidance, as updated subsequently by the FDA, on conducting clinical trials during the pandemic. The guidance describes a number of considerations for sponsors of clinical trials impacted by the pandemic, including the requirement to include in the clinical trial report (or as a separate document) contingency measures implemented to manage the trial and any disruption of the trial as a result of COVID-19, among others. Other industry guidance issued by the FDA during the COVID-19 pandemic includes manufacturing, supply chain, and drug and biological product inspections during the COVID-19 public health emergency; GMP considerations for responding to COVID-19 infection in employees in biopharmaceutical manufacturing; and remote interactive evaluations of drug manufacturing and bioresearch monitoring facilities, among others. If new guidance and policies are promulgated by the FDA that require changes in our clinical protocol or clinical development plans, our anticipated timelines and regulatory approval may be delayed or materially impacted.

NDA and BLA Review Process

Following completion of the clinical trials, data is analyzed to assess whether the investigational product is safe and effective for the proposed indicated use or uses. The results of preclinical studies and clinical trials are then submitted to the FDA as part of a BLA for a biologic product or an NDA for a small molecule drug product, along with proposed labeling, biochemistry and manufacturing information to ensure product quality, identity, purity and other relevant data. In short, the BLA or NDA is a request for approval to market the biologic or drug product for one or more specified indications and must contain proof of safety, purity and potency for a biologic,

or safety and efficacy for a small molecule drug product. The application may include both negative and ambiguous results of preclinical studies and clinical trials, as well as positive findings. Data may come from company-sponsored clinical trials intended to test the safety and efficacy of a product's use or from a number of alternative sources, including studies initiated by investigators. To support marketing approval, the data submitted must be sufficient in quality and quantity to establish the safety and efficacy of the investigational product to the satisfaction of the FDA. FDA approval of a BLA or NDA must be obtained before the product may be marketed in the United States.

Under the Prescription Drug User Fee Act (PDUFA), as amended, each BLA or NDA must be accompanied by a user fee. FDA adjusts the PDUFA user fees on an annual basis. According to the FDA's FY 2021 fee schedule, effective through September 30, 2021, the user fee for an application requiring clinical data, such as a BLA or NDA, is approximately $2.9 million. PDUFA also imposes an annual program fee for each marketed human prescription drug product ($336,432 in 2021) and an annual establishment fee on facilities used to manufacture prescription biologics or small molecular drug products. Fee waivers or reductions are available in certain circumstances, including a waiver of the application fee for the first application filed by a small business. Additionally, no user fees are assessed on BLAs or NDA for products designated as orphan drugs, unless the product also includes a non-orphan indication.

The FDA reviews all submitted BLAs and NDAs before it accepts them for filing and may request additional information rather than accepting the BLA or NDA for filing. The FDA must make a decision on accepting a BLA or NDA for filing within 60 days of receipt. Once the submission is accepted for filing, the FDA begins an in-depth review of the BLA or NDA. Under the goals and policies agreed to by the FDA under PDUFA, the FDA has ten months, from the filing date, in which to complete its initial review of an original BLA or NDA and respond to the applicant, and six months from the filing date of an original BLA or NDA designated for priority review. The FDA does not always meet its PDUFA goal dates for standard and priority BLAs or NDAs, and the review process is often extended by FDA requests for additional information or clarification.

Before approving a BLA or NDA, the FDA will conduct a pre-approval inspection of the manufacturing facilities for the new product to determine whether they comply with cGMP requirements. The FDA will not approve the product unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. The FDA also may audit data from clinical trials to ensure compliance with GCP requirements. Additionally, the FDA may refer applications for novel drug products or drug products which present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes physicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved and under what conditions, if any. The FDA is not bound by recommendations of an advisory committee, but it considers such recommendations when making decisions on approval. The FDA likely will reanalyze the clinical trial data, which could result in extensive discussions between the FDA and the applicant during the review process. After the FDA evaluates a BLA or NDA, it will issue an approval letter or a Complete Response Letter. An approval letter authorizes commercial marketing of the drug product with specific prescribing information for specific indications. A Complete Response Letter indicates that the review cycle of the application is complete and the application will not be approved in its present form. A Complete Response Letter usually describes all of the specific deficiencies in the BLA or NDA identified by the FDA. The Complete Response Letter may require additional clinical data, additional pivotal Phase 3 clinical trial(s) and/ or other significant and time-consuming requirements related to clinical trials, preclinical studies or manufacturing. If a Complete Response Letter is issued, the applicant may either resubmit the BLA or NDA, addressing all of the deficiencies identified in the letter, or withdraw the application. Even if such data and information are submitted, the FDA may decide that the BLA or NDA does not satisfy the criteria for approval. Data obtained from clinical trials are not always conclusive and the FDA may interpret data differently than we interpret the same data.

Orphan Drugs

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug product intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the United States, or more than 200,000 individuals in the United States and for which there is no reasonable expectation that the cost of developing and making the product available in the United States for this type of disease or condition will be recovered from sales of the product.

For biologic or small molecule drug products, an orphan drug designation must be requested before submitting a BLA or NDA. After the FDA grants orphan drug designation, the identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. Orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review and approval process.

If a product that has orphan designation subsequently receives the first FDA approval for the disease or condition for which it has such designation, the product is entitled to orphan drug exclusivity, which means that the FDA may not approve any other applications to market the same drug for the same indication for seven years from the date of such approval, except in limited circumstances, such as a showing of clinical superiority to the product with orphan exclusivity by means of greater effectiveness, greater safety or providing a major contribution to patient care or in instances of drug supply issues. However, competitors may receive approval of either a different product for the same indication or the same product for a different indication but that could be used off-label in the orphan indication. Orphan drug exclusivity also could block the approval of one of our products for seven years if a competitor obtains approval before we do for the same product, as defined by the FDA, for the same indication we are seeking approval, or if a product candidate is determined to be contained within the scope of the competitor's product for the same indication or disease. If one of our products designated as an orphan drug receives marketing approval for an indication broader than the indication for which it is designated, it may not be entitled to orphan drug exclusivity. Orphan drug status in the European Union has similar, but not identical, requirements and benefits.

Expedited Development and Review Programs

The FDA has a fast-track program that is intended to expedite or facilitate the process for reviewing new drug products that meet certain criteria. Specifically, new drug products are eligible for fast-track designation if they are intended to treat a serious or life-threatening condition and preclinical or clinical data demonstrate the potential to address unmet medical needs for the condition. Fast track designation applies to both the product and the specific indication for which it is being studied. The sponsor can request the FDA to designate the product for fast-track status any time before receiving a BLA or NDA approval, but ideally no later than the pre-BLA or pre-NDA meeting.

Any product submitted to the FDA for marketing, including under a fast-track program, may be eligible for other types of FDA programs intended to expedite development and review, such as priority review and accelerated approval. Any product is eligible for priority review if it treats a serious or life-threatening condition and, if approved, would provide a significant improvement in safety and effectiveness compared to available therapies.

A product may also be eligible for accelerated approval, if it treats a serious or life-threatening condition and generally provides a meaningful advantage over available therapies. In addition, it must demonstrate 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 (IMM), which is reasonably likely to predict an effect on IMM or other clinical benefit. As a condition of approval, the FDA may require that a sponsor of a drug product receiving accelerated approval to perform adequate and well-controlled post-marketing clinical trials. If the FDA concludes that a biologic or small molecule drug product shown to be potent or effective for the proposed indication can be safely used only if distribution or use is restricted, it may require such post-marketing restrictions as it deems necessary to assure safe use of the product. In some cases, FDA may limit the scope of the indication. Such restrictions could have a materially adverse effect on our business and our ability to obtain profitability.

Additionally, a drug product may be eligible for designation as a breakthrough therapy if the product is intended, alone or in combination with one or more other drug products, to treat a serious or life-threatening condition and preliminary clinical evidence indicates that the product may demonstrate substantial improvement over currently approved therapies on one or more clinically significant endpoints. The benefits of breakthrough therapy designation include the same benefits as fast-track designation, plus intensive guidance from the FDA to ensure an efficient drug development program. Fast track designation, priority review, accelerated approval and breakthrough therapy designation do not change the standards for approval, but may expedite the development or approval process. Depending on other factors that impact clinical trial timelines and development, such as our ability to identify and onboard clinical sites and rates of study participant enrollment and drop-out, we may not realize all the benefits of these expedited or accelerated review programs.

Abbreviated Licensure Pathway of Biological Products as Biosimilars or Interchangeable Biosimilars

The Patient Protection and Affordable Care Act (Affordable Care Act or ACA), signed into law in 2010, includes the Biologics Price Competition and Innovation Act of 2009 (BPCIA), which created an abbreviated approval pathway for biological products shown to be highly similar to an FDA-licensed reference biological product. The BPCIA attempts to minimize duplicative testing, and thereby lower development costs and increase patient access to affordable treatments. An application for licensure of a biosimilar product must include information demonstrating biosimilarity based upon the following, unless the FDA determines otherwise:

- Analytical studies demonstrating that the proposed biosimilar product is highly similar to the approved product notwithstanding minor differences in clinically inactive components;
- Animal studies (including the assessment of toxicity); and
- A clinical trial or trials (including the assessment of immunogenicity and pharmacokinetic or pharmacodynamic) sufficient to demonstrate safety, purity and potency in one or more conditions for which the reference product is licensed and intended to be used.

In addition, an application must include information demonstrating that:

- The proposed biosimilar product and reference product utilize the same mechanism of action for the condition(s) of use prescribed, recommended or suggested in the proposed labeling, but only to the extent the mechanism(s) of action are known for the reference product;
- The condition or conditions of use prescribed, recommended or suggested in the labeling for the proposed biosimilar product have been previously approved for the reference product;
- The route of administration, the dosage form and the strength of the proposed biosimilar product are the same as those for the reference product; and
- The facility in which the biological product is manufactured, processed, packed or held meets standards designed to assure that the biological product continues to be safe, pure and potent.

Biosimilarity means that the biological product is highly similar to the reference product notwithstanding minor differences in clinically inactive components, and that there are no clinically meaningful differences between the biological product and the reference product in terms of the safety, purity and potency of the product. In addition, the law provides for a designation of “interchangeability” between the reference and biosimilar products, whereby the biosimilar may be substituted for the reference product without the intervention of the healthcare provider who prescribed the reference product. The higher standard of interchangeability must be demonstrated by information sufficient to show that:

- The proposed product is biosimilar to the reference product;
- The proposed product is expected to produce the same clinical result as the reference product in any given patient; and

- For a product that is administered more than once to an individual, the risk to the patient in terms of safety or diminished efficacy of alternating or switching between the biosimilar and the reference product is no greater than the risk of using the reference product without such alternation or switch.

FDA approval is required before a biosimilar may be marketed in the United States. However, complexities associated with the large and intricate structures of biological products and the process by which such products are manufactured pose significant hurdles to the FDA's implementation of the law that are still being worked out by the FDA. For example, the FDA has discretion over the kind and amount of scientific evidence—laboratory, preclinical and/or clinical—required to demonstrate biosimilarity to a licensed biological product.

The FDA intends to consider the totality of the evidence provided by a sponsor to support a demonstration of biosimilarity and recommends that sponsors use a stepwise approach in the development of their biosimilar products. Biosimilar product applications thus may not be required to duplicate the entirety of preclinical and clinical testing used to establish the underlying safety and effectiveness of the reference product. However, the FDA may refuse to approve a biosimilar application if there is insufficient information to show that the active ingredients are the same or to demonstrate that any impurities or differences in active ingredients do not affect the safety, purity or potency of the biosimilar product. In addition, as with BLAs, biosimilar product applications will not be approved unless the product is manufactured in facilities designed to assure and preserve the biological product's safety, purity and potency.

The submission of a biosimilar application does not guarantee that the FDA will accept the application for filing and review, as the FDA may refuse to accept applications that it finds are insufficiently complete. The FDA will treat a biosimilar application or supplement as incomplete if, among other reasons, any applicable user fees assessed under the Biosimilar User Fee Act of 2012 have not been paid. In addition, the FDA may accept an application for filing but deny approval on the basis that the sponsor has not demonstrated biosimilarity, in which case the sponsor may choose to conduct further analytical, preclinical or clinical studies and submit a BLA for licensure as a new biological product.

The timing of final FDA approval of a biosimilar for commercial distribution depends on a variety of factors, including whether the manufacturer of the branded product is entitled to one or more statutory exclusivity periods, during which time the FDA is prohibited from approving any products that are biosimilar to the branded product. The FDA cannot approve a biosimilar application for twelve years from the date of first licensure of the reference product.

Additionally, a biosimilar product sponsor may not submit an application for four years from the date of first licensure of the reference product. A reference product may also be entitled to exclusivity under other statutory provisions. For example, a reference product designated for a rare disease or condition (an orphan drug) may be entitled to seven years of exclusivity, in which case no product that is biosimilar to the reference product may be approved until either the end of the twelve-year period provided under the biosimilarity statute or the end of the seven-year orphan drug exclusivity period, whichever occurs later. In certain circumstances, a regulatory exclusivity period can extend beyond the life of a patent, and thus block biosimilarity applications from being approved on or after the patent expiration date. In addition, the FDA may under certain circumstances extend the exclusivity period for the reference product by an additional six months if the FDA requests, and the manufacturer undertakes, studies on the effect of its product in children, a so-called pediatric extension.

The first biological product determined to be interchangeable with a branded product for any condition of use is also entitled to a period of exclusivity, during which time the FDA may not determine that another product is interchangeable with the reference product for any condition of use. This exclusivity period extends until the earlier of: one year after the first commercial marketing of the first interchangeable product; 18 months after resolution of a patent infringement suit against the applicant that submitted the application for the first interchangeable product, based on a final court decision regarding all of the patents in the litigation or dismissal of the litigation with or without prejudice; 42 months after approval of the first interchangeable product, if a

patent infringement suit against the applicant that submitted the application for the first interchangeable product is still ongoing; or 18 months after approval of the first interchangeable product if the applicant that submitted the application for the first interchangeable product has not been sued.

Abbreviated NDA Pathway for Generic Drug Products

The Drug Price Competition and Patent Term Restoration Act of 1984, commonly known as "the Hatch-Waxman Act," established abbreviated FDA approval procedures for drugs that are shown to be bioequivalent to drugs previously approved by the FDA through its NDA process, which are commonly referred to as the "innovator" or "reference" drugs. Approval to market and to distribute these bioequivalent drugs is obtained by filing an abbreviated NDA (ANDA) with the FDA. An ANDA is a comprehensive submission that contains, among other things, data and information pertaining to the API, drug product formulation, specifications, stability, analytical methods, manufacturing process validation data, quality control procedures and bioequivalence. Rather than demonstrating safety and effectiveness, an ANDA applicant must demonstrate that its product is bioequivalent to an approved reference drug. In certain situations, an applicant may submit an ANDA for a product with a strength or dosage form that differs from a reference drug based upon FDA approval of an ANDA Suitability Petition. The FDA will approve an ANDA Suitability Petition if it finds that the product does not raise questions of safety and efficacy requiring new clinical data. ANDAs generally cannot be submitted for products that are not bioequivalent to the referenced drug or that are labeled for a use that is not approved for the reference drug. Applicants seeking to market such products can submit an NDA under Section 505(b)(2) of the FDCA with supportive data from clinical trials.

Post-Approval Requirements

Following approval of a new product, the manufacturer and the approved product are subject to continuing regulation by the FDA, including, among other things, monitoring and record-keeping requirements, requirements to report adverse experiences and comply with promotion and advertising requirements, which include restrictions on promoting drugs for unapproved uses or patient populations, known as "off-label use," and limitations on industry-sponsored scientific and educational activities. Although physicians may prescribe legally available drugs for off-label uses, manufacturers may not market or promote such uses. Prescription drug promotional materials must be submitted to the FDA in conjunction with their first use. Further, if there are any modifications to the drug product, including changes in indications, labeling or manufacturing processes or facilities, the applicant may be required to submit and obtain FDA approval of a new application or supplement, which may require the development of additional data or preclinical studies and clinical trials.

The FDA may also place other conditions on approvals including the requirement for REMS, to assure the safe use of the product. A REMS 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. Any of these limitations on approval or marketing could restrict the commercial promotion, distribution, prescription or dispensing of products. Product approvals may be withdrawn for non-compliance with regulatory standards or if problems occur following initial marketing.

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;
- Warning letters, or holds on post-approval clinical studies;

- Refusal of the FDA to approve pending applications or supplements to approved applications;
- Applications, or suspension or revocation of product license approvals;
- Product seizure or detention, or refusal to permit the import or export of products; or
- Injunctions or the imposition of civil or criminal penalties.

The FDA strictly regulates marketing, labeling, advertising and promotion of products that are placed on the market. Drugs and biologics may be promoted only for the approved indications 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, and a company that is found to have improperly promoted off-label uses may be subject to significant liability.

FDA Regulation of Combination Biologic-Medical Device Products

Certain products may be comprised of components, such as biologic components and device components, that would normally be regulated under different types of regulatory authorities and frequently by different Centers at the FDA. These products are known as combination products. Under the FDCA and its implementing regulations, the FDA is charged with assigning a Center with primary jurisdiction, or a lead Center, for review of a combination product. The designation of a lead Center generally eliminates the need to receive approvals from more than one FDA component for combination products, although it does not preclude consultations by the lead Center with other components of the FDA. The determination of which Center will be the lead Center is based on the "primary mode of action" of the combination product. Thus, if the primary mode of action of a biologic-device combination product candidate is attributable to the biologic product candidate, the FDA Center responsible for premarket review of the drug product would have primary jurisdiction for the combination product. The FDA has also established an Office of Combination Products to address issues surrounding combination products and provide more certainty to the regulatory review process. That Office serves as a focal point for combination product issues for agency reviewers and industry. It is also responsible for developing guidance and regulations to clarify the regulation of combination products, and for assignment of the FDA Center that has primary jurisdiction for review of combination products where the jurisdiction is unclear or in dispute.

A combination product with a biologic product candidate as the primary mode of action generally would be reviewed and approved pursuant to the biologic approval processes under the FDCA. In reviewing the BLA application for such a product, however, FDA reviewers in the Center for Biologics Evaluation and Research could consult with their counterparts in the device center to ensure that the device component of the combination product meet applicable requirements regarding safety, effectiveness, durability and performance. In addition, under FDA regulations, combination products are subject to cGMP requirements applicable to both biologics and devices, including the Quality System (QS), regulations applicable to medical devices.

We may develop one or more of our biologic product candidates in combination with a novel delivery medical device, such as an injection catheter device for more precise delivery of a biologic product candidate. Regulatory review of such combination product candidate will increase the timing, cost, and the complexity of the FDA review and approval process, and subject us to additional regulations and exposure to liability. Pending discussion with the FDA, if the medical device is considered a significant risk device under the FDA's Investigational Device Exemption (IDE) regulations, then we may be required to comply with the IDE regulations for clinical studies in addition to the IND regulations and may be required to submit both an IDE and an IND before commencing clinical testing of the combination product. We cannot provide any assurance regarding how FDA will regulate our combination product, or if we will be successful in obtaining approval for any combination product.

510(k) clearance process

To obtain 510(k) clearance, a pre-market notification is submitted to the FDA demonstrating that the proposed device is substantially equivalent to a previously cleared 510(k) device or a device that was in commercial distribution before May 28, 1976 for which the FDA has not yet required the submission of a PMA application. The FDA's 510(k) clearance process may take three to twelve months from the date the application is submitted and filed with the FDA, but may take longer if FDA requests additional information, among other reasons. In some cases, the FDA may require clinical data to support substantial equivalence. In reviewing a pre-market notification submission, the FDA may request additional information, which may significantly prolong the review process. Notwithstanding compliance with all these requirements, clearance is never assured.

After a device receives 510(k) clearance, any subsequent modification of the device that could significantly affect its safety or effectiveness, or that would constitute a major change in its intended use, will require a new 510(k) clearance or require a PMA. In addition, the FDA may make substantial changes to industry requirements, including which devices are eligible for 510(k) clearance, which may significantly affect the process.

De novo classification process

If a new medical device does not qualify for the 510(k) premarket notification process because no predicate device to which it is substantially equivalent can be identified, the device is automatically classified into Class III. The Food and Drug Administration Modernization Act of 1997 established a different route to market for low to moderate risk medical devices that are automatically placed into Class III due to the absence of a predicate device, called the "Request for Evaluation of Automatic Class III Designation," or the de novo classification process. This process allows a manufacturer whose novel device is automatically classified into Class III to request down-classification of its medical device into Class I or Class II on the basis that the device presents low or moderate risk, rather than requiring the submission and approval of a PMA. If the manufacturer seeks reclassification into Class II, the manufacturer must include a draft proposal for special controls that are necessary to provide a reasonable assurance of the safety and effectiveness of the medical device. The FDA may reject the reclassification petition if it identifies a legally marketed predicate device that would be appropriate for a 510(k) or determines that the device is not low to moderate risk and requires PMA or that general controls would be inadequate to control the risks and special controls cannot be developed. Obtaining FDA marketing authorization, de novo down-classification, or approval for medical devices is expensive and uncertain, and may take several years, and generally requires significant scientific and clinical data.

PMA approval process

The PMA process, including the gathering of clinical and nonclinical data and the submission to and review by the FDA, can take several years or longer. The applicant must prepare and provide the FDA with reasonable assurance of the device's safety and effectiveness, including information about the device and its components regarding, among other things, device design, manufacturing, and labeling. PMA applications are subject to an application fee. In addition, PMAs for medical devices must generally include the results from extensive preclinical and adequate and well-controlled clinical trials to establish the safety and effectiveness of the device for each indication for which FDA approval is sought. As part of the PMA review, the FDA will typically inspect the manufacturer's facilities for compliance with the Quality System Regulation (QSR), which imposes extensive testing, control, documentation, and other quality assurance and GMP requirements.

Other U.S. Regulatory Matters

Manufacturing, sales, promotion and other activities following product approval are also subject to regulation by numerous regulatory authorities in the United States in addition to the FDA, including the Centers for Medicare & Medicaid Services (CMS), other divisions of the Department of Health and Human Services, the Department of Justice, the Drug Enforcement Administration, the Consumer Product Safety Commission, the Federal Trade Commission, the Occupational Safety & Health Administration, the Environmental Protection Agency, and state and local governments.

For example, in the United States, sales, marketing and scientific and educational programs must also comply with state and federal fraud and abuse laws. These laws include the federal Anti-Kickback Statute, which makes it illegal for any person, including a prescription drug manufacturer (or a party acting on its behalf), to knowingly and willfully solicit, receive, offer or pay any remuneration that is intended to induce or reward referrals, including the purchase, recommendation, order or prescription of a particular drug, for which payment may be made under a federal healthcare program, such as Medicare or Medicaid. Violations of this law are punishable by up to five years in prison, criminal fines, administrative civil money penalties and exclusion from participation in federal healthcare programs. Moreover, the ACA provides that the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act.

Pricing and rebate programs must comply with the Medicaid rebate requirements of the U.S. Omnibus Budget Reconciliation Act of 1990 and more recent requirements in the ACA. If products are made available to authorized users of the Federal Supply Schedule of the General Services Administration, additional laws and requirements apply. Products must meet applicable child-resistant packaging requirements under the U.S. Poison Prevention Packaging Act. Manufacturing, sales, promotion and other activities also are potentially subject to federal and state consumer protection and unfair competition laws.

The distribution of biologic and pharmaceutical products is subject to additional requirements and regulations, including extensive record-keeping, licensing, storage and security requirements intended to prevent the unauthorized sale of pharmaceutical products.

The failure to comply with any of these laws or regulatory requirements subjects firms to possible legal or regulatory action. Depending on the circumstances, failure to meet applicable regulatory requirements can result in criminal prosecution, fines or other penalties, injunctions, requests for recall, seizure of products, total or partial suspension of production, denial or withdrawal of product approvals or refusal to allow a firm to enter into supply contracts, including government contracts. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. Prohibitions or restrictions on sales or withdrawal of future products marketed by us could materially affect our business in an adverse way.

Changes in regulations, statutes or the interpretation of existing regulations could impact our business in the future by requiring, for example: changes to our manufacturing arrangements; additions or modifications to product labeling; the recall or discontinuation of our products; or additional record-keeping requirements. If any such changes were to be imposed, they could adversely affect the operation of our business.

U.S. Data Privacy and Security Laws

In the United States, there are a broad variety of laws, rules, regulations and standards relating to privacy, data protection and information security that may apply to our activities, such as state data breach notification laws, state personal data privacy laws (for example, the California Consumer Privacy Act of 2018 (CCPA)), state health information privacy laws, and federal and state consumer protection laws (for example, Section 5(c) of the Federal Trade Commission Act). A range of enforcement agencies exist at both the state and federal levels that can enforce these laws, rules, regulations and standards. For example, the CCPA, which took effect on January 1, 2020, requires covered businesses that process personal information of California residents to disclose their data collection, use, and sharing practices. Further, the CCPA provides California residents with new data privacy rights (including the ability to opt out of certain disclosures of personal information), imposes new operational requirements for covered businesses, provides for significant civil penalties for violations as well as a private right of action for certain data breaches and statutory damages (that is expected to increase data breach class action litigation and result in significant exposure to costly legal judgements and settlements). Aspects of the CCPA and its interpretation and enforcement remain uncertain. In addition, California voters passed the California Privacy Rights Act of 2020 (CPRA) in November 2020, which becomes effective in most material

respects on January 1, 2023. The CPRA will, among other things, give California residents the ability to limit use of certain sensitive personal information, further restrict the use of cross-contextual advertising, establish restrictions on the retention of personal information, expand the types of data breaches subject to the CCPA's private right of action, provide for increased penalties for CPRA violations concerning California residents under the age of 16, and establish a new California Privacy Protection Agency to implement and enforce the new CCPA and CPRA. Although there are limited exemptions for clinical trial data under the CCPA, the CCPA and other similar laws could impact our business activities, depending on their interpretation. Further, laws in all 50 states require businesses to provide notice to customers whose personal data has been disclosed as a result of a data breach. We will continue to monitor and assess the impact of these state laws, which may impose substantial penalties for violations, impose significant costs for investigation and compliance, allow private class-action litigation and carry significant potential liability for our business. For more information, see "Risk Factors— Risks Related to Regulatory Approval and Other Legal Compliance Matters—We are subject to stringent laws, rules, regulations, policies, industry standards and contractual obligations regarding data privacy and security and may be subject to additional laws and regulations in jurisdictions into which we expand. Many of these laws and regulations are subject to change and reinterpretation and could result in claims, changes to our business practices, monetary penalties, increased cost of operations or other harm to our business."

U.S. Patent-Term Restoration and Marketing Exclusivity

Depending upon the timing, duration and specifics of FDA approval of any future product candidates, some of our U.S. patents may be eligible for limited patent term extension under the Hatch-Waxman Act. The Hatch-Waxman Act permits restoration of the patent term of up to five years as compensation for patent term lost during product development and FDA regulatory review process. Patent-term restoration, however, cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date. The patent-term restoration period is generally one-half the time between the effective date of an IND and the submission date of a BLA or NDA plus the time between the submission date of a BLA or NDA and the approval of that application, except that the review period is reduced by any time during which the applicant failed to exercise due diligence. Only one patent applicable to an approved drug is eligible for the extension and the application for the extension must be submitted prior to the expiration of the patent. The USPTO, in consultation with the FDA, reviews and approves the application for any patent term extension or restoration. In the future, we may apply for restoration of patent term for our currently owned or licensed patents to add patent life beyond its current expiration date, depending on the expected length of the clinical trials and other factors involved in the filing of the relevant BLA or NDA. However, there can be no assurance that our pending patent applications will issue or that we will benefit from any patent term extension or favorable adjustments to the terms of any patents we may own or in-license in the future.

Market exclusivity provisions under the FDCA also can delay the submission or the approval of certain applications. A reference biological product is granted twelve years of data exclusivity from the time of first licensure of the product, and the FDA will not accept an application for a biosimilar or interchangeable product based on the reference biological product until four years after the date of first licensure of the reference product. "First licensure" typically means the initial date the particular product at issue was licensed in the United States. Date of first licensure does not include the date of licensure of (and a new period of exclusivity is not available for) a biological product if the licensure is for a supplement for the biological product or for a subsequent application by the same sponsor or manufacturer of the biological product (or licensor, predecessor in interest or other related entity) for a change (not including a modification to the structure of the biological product) that results in a new indication, route of administration, dosing schedule, dosage form, delivery system, delivery device or strength or for a modification to the structure of the biological product that does not result in a change in safety, purity or potency. Therefore, one must determine whether a new product includes a modification to the structure of a previously licensed product that results in a change in safety, purity or potency to assess whether the licensure of the new product is a first licensure that triggers its own period of exclusivity. Whether a subsequent application, if approved, warrants exclusivity as the "first licensure" of a biological product is determined on a case-by-case basis with data submitted by the sponsor.

The FDCA provides a five-year period of non-patent marketing exclusivity in the United States to the first applicant to gain approval of an NDA for a new chemical entity. A drug is a new chemical entity if the FDA has not previously approved any other new drug containing the same active moiety, which is the molecule or ion responsible for the action of the drug substance. During the exclusivity period, the FDA may not accept for review an ANDA, or a 505(b)(2) NDA submitted by another company for a generic version of such drug where the applicant does not own or have a legal right of reference to all the data required for approval. However, an application may be submitted after four years if it contains a certification of patent invalidity or non-infringement with respect to one or more patents listed for the drug in the FDA's Approved Drug Products with Therapeutic Equivalence Evaluations publication. The FDCA also provides three years of marketing exclusivity for a NDA, 505(b)(2) NDA or supplement to an existing NDA if new clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application, for example, new indications, dosages or strengths of an existing drug. This three-year exclusivity covers only the conditions of use associated with the new clinical investigations and does not prohibit the FDA from approving ANDAs for drugs containing the original active agent. Five-year and three-year exclusivity will not delay the submission or approval of a full NDA. However, an applicant submitting a full NDA would be required to conduct or obtain a right of reference to all of the preclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness or generate such data themselves.

European Union Drug Development

Similar to the United States, the various phases of preclinical and clinical research in the European Union are subject to significant regulatory controls. Although the EU Clinical Trials Directive 2001/20/EC has sought to harmonize the EU clinical trials regulatory framework, setting out common rules for the control and authorization of clinical trials in the European Union, the EU Member States have transposed and applied the provisions of the Directive differently. This has led to significant variations in the member state regimes. Under the current regime, before a clinical trial can be initiated, it must be approved in each of the EU countries where the trial is to be conducted by two distinct bodies: the National Competent Authority (NCA) and one or more Ethics Committees (ECs). Under the current regime, all suspected unexpected serious adverse reactions to the investigated drug that occur during the clinical trial have to be reported to the NCA and ECs of the Member State where they occurred.

The EU clinical trials legislation currently is undergoing a transition process mainly aimed at harmonizing and streamlining clinical-trial authorization, simplifying adverse-event reporting procedures, improving the supervision of clinical trials and increasing their transparency. Recently enacted Clinical Trials Regulation EU No 536/2014 ensures that the rules for conducting clinical trials in the European Union will be identical. In the meantime, Clinical Trials Directive 2001/20/EC continues to govern all clinical trials performed in the European Union.

EU Drug Review and Approval

In the European Economic Area (EEA), which is comprised of the 27 Member States of the European Union (including Norway and excluding Croatia), Iceland and Liechtenstein, medicinal products can only be commercialized after obtaining a Marketing Authorization (MA). There are two types of Marketing Authorizations:

- The Community MA is issued by the European Commission through the Centralized Procedure, based on the opinion of the Committee for Medicinal Products for Human Use (CHMP), of the EMA, and is valid throughout the entire territory of the EEA. The Centralized Procedure is mandatory for certain types of products, such as biotechnology medicinal products, orphan medicinal products, advanced-therapy medicines such as gene-therapy, somatic cell-therapy or tissue-engineered medicines and medicinal products containing a new active substance indicated for the treatment of HIV, AIDS, cancer, neurodegenerative disorders, diabetes, auto-immune and other immune dysfunctions and viral

diseases. The Centralized Procedure is optional for products containing a new active substance not yet authorized in the EEA, or for products that constitute a significant therapeutic, scientific or technical innovation or for products that are in the interest of public health in the European Union.

- National MAs, which are issued by the competent authorities of the Member States of the EEA and only cover their respective territory, are available for products not falling within the mandatory scope of the Centralized Procedure. Where a product has already been authorized for marketing in a Member State of the EEA, this National MA can be recognized in another Member States through the Mutual Recognition Procedure. If the product has not received a National MA in any Member State at the time of application, it can be approved simultaneously in various Member States through the Decentralized Procedure. Under the Decentralized Procedure an identical dossier is submitted to the competent authorities of each of the Member States in which the MA is sought, one of which is selected by the applicant as the Reference Member State (RMS). The competent authority of the RMS prepares a draft assessment report, a draft summary of the product characteristics (SPC) and a draft of the labeling and package leaflet, which are sent to the other Member States (referred to as the Member States Concerned) for their approval. If the Member States Concerned raise no objections, based on a potential serious risk to public health, to the assessment, SPC, labeling or packaging proposed by the RMS, the product is subsequently granted a national MA in all the Member States (i.e., in the RMS and the Member States Concerned).

Under the above described procedures, before granting the MA, the EMA or the competent authorities of the member states of the EEA make an assessment of the risk-benefit balance of the product on the basis of scientific criteria concerning its quality, safety and efficacy.

Foreign Data Privacy and Security Laws

Outside of the United States, legal requirements relating to the collection, storage, processing, and transfer of personal data continue to evolve. For example, in the EU, the GDPR requires data controllers to implement more stringent operational requirements for processors and controllers of personal data, including transparent and expanded disclosure to data subjects about how their personal data is to be used, limitations on retention of information, mandatory data breach notification requirements, and higher standards for data controllers to demonstrate that they have obtained valid consent for certain data processing activities. Failure to comply with the GDPR may result in fines up to €20,000,000 or 4% of the total worldwide annual turnover of the preceding financial year, whichever is higher, and other administrative penalties. The GDPR may increase our responsibility and liability in relation to personal data that we may process, and we may be required to implement additional measures in an effort to comply with the GDPR and with other laws, rules and regulations in the EU, including those of EU member states, relating to privacy and data protection. We are also subject to the UK GDPR, a version of the GDPR as implemented into UK law. If our efforts to comply with GDPR or other applicable foreign laws, rules and regulations are not successful, or are perceived to be unsuccessful, it could adversely affect our business. For more information, see “Risk Factors—Risks Related to Regulatory Approval and Other Legal Compliance Matters—We are subject to stringent laws, rules, regulations, policies, industry standards and contractual obligations regarding data privacy and security and may be subject to additional laws and regulations in jurisdictions into which we expand. Many of these laws and regulations are subject to change and reinterpretation and could result in claims, changes to our business practices, monetary penalties, increased cost of operations or other harm to our business.”

Coverage and Reimbursement

Sales of our products will depend, in part, on the extent to which our products will be covered by third-party payors, such as government health programs, commercial insurance and managed healthcare organizations. In the United States, no uniform policy of coverage and reimbursement for drug products exists. Accordingly, decisions regarding the extent of coverage and amount of reimbursement to be provided for any of our products will be made on a payor-by-payor basis. 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 products to each payor separately, with no assurance that coverage and adequate reimbursement will be obtained.

The U.S. government, state legislatures, and foreign governments have shown significant interest in implementing cost containment programs to limit the growth of government-paid healthcare costs, including price-controls, restrictions on reimbursement and requirements for substitution of generic products for branded prescription drugs. For example, the ACA contains provisions that may reduce the profitability of drug products through increased rebates for drugs reimbursed by Medicaid programs, extension of Medicaid rebates to Medicaid managed care plans, mandatory discounts for certain Medicare Part D beneficiaries and annual fees based on pharmaceutical companies' share of sales to federal health care programs. Adoption of general controls and measures, coupled with the tightening of restrictive policies in jurisdictions with existing controls and measures, could limit payments for pharmaceutical drugs.

The Medicaid Drug Rebate Program requires pharmaceutical manufacturers to enter into and have in effect a national rebate agreement with the Secretary of the Department of Health and Human Services as a condition for states to receive federal matching funds for the manufacturer's outpatient drugs furnished to Medicaid patients. The ACA made several changes to the Medicaid Drug Rebate Program, including increasing pharmaceutical manufacturers' rebate liability by raising the minimum basic Medicaid rebate on most branded prescription drugs from 15.1% of average manufacturer price (AMP), to 23.1% of AMP and adding a new rebate calculation for "line extensions" (i.e., new formulations, such as extended release formulations) of solid oral dosage forms of branded products, as well as potentially impacting their rebate liability by modifying the statutory definition of AMP. The ACA also expanded the universe of Medicaid utilization subject to drug rebates by requiring pharmaceutical manufacturers to pay rebates on Medicaid managed care utilization and by enlarging the population potentially eligible for Medicaid drug benefits. The CMS has proposed to expand Medicaid rebate liability to the territories of the United States as well.

The Medicare Prescription Drug, Improvement and Modernization Act of 2003 (MMA), established the Medicare Part D program to provide a voluntary prescription drug benefit to Medicare beneficiaries. Under Part D, Medicare beneficiaries may enroll in prescription drug plans offered by private entities that provide coverage of outpatient prescription drugs. Unlike Medicare Part A and B, Part D coverage is not standardized. While all Medicare drug plans must give at least a standard level of coverage set by Medicare, Part D prescription drug plan sponsors are not required to pay for all covered Part D drugs, and each drug plan can develop its own drug formulary that identifies which drugs it will cover and at what tier or level. However, Part D prescription drug formularies must include drugs within each therapeutic category and class of covered Part D drugs, though not necessarily all the drugs in each category or class. Any formulary used by a Part D prescription drug plan must be developed and reviewed by a pharmacy and therapeutic committee. Government payment for some of the costs of prescription drugs may increase demand for products for which we receive marketing approval. However, any negotiated prices for our products covered by a Part D prescription drug plan likely will be lower than the prices we might otherwise obtain. Moreover, while the MMA applies only to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their own payment rates. Any reduction in payment that results from the MMA may result in a similar reduction in payments from non-governmental payors.

For a drug product to receive federal reimbursement under the Medicaid or Medicare Part B programs, or to be sold directly to U.S. government agencies, the manufacturer must extend discounts to entities eligible to participate in the 340B drug pricing program. The required 340B discount on a given product is calculated based on the AMP and Medicaid rebate amounts reported by the manufacturer.

As noted above, the marketability of any products for which we receive regulatory approval for commercial sale may suffer if the government and third-party payors fail to provide adequate coverage and reimbursement. An increasing emphasis on cost containment measures in the United States has increased and we expect it will continue to increase the pressure on pharmaceutical pricing. Coverage policies and third-party reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

In addition, in most foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing and reimbursement vary widely from country to country. For example, the European Union provides options for its member states to restrict the range of medicinal products for which their national health insurance systems provide reimbursement, in order to control the prices of medicinal products for human use. A member state may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product in the market. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our products. Historically, products launched in the European Union do not follow price structures of the United States and generally, prices tend to be significantly lower.

We are unable to predict the future course of federal or state healthcare legislation in U.S. or foreign legislation directed at containing or lowering the cost of healthcare and prescription drug prices. These and any further changes in the law or regulatory framework that reduce our revenue or increase our costs could have a material and adverse effect on our business, financial condition and results of operations. It is also possible that additional governmental action will be taken to address the COVID-19 pandemic. The continuing efforts of the government, insurance companies, managed care organizations, and other payors of healthcare services and medical products to contain or reduce costs of healthcare and/or impose price controls may adversely affect the demand for our product candidates, if approved, and our ability to achieve or maintain profitability.

Employees and Human Capital Resources

As of March 31, 2021, we had more than 75 full-time employees, with approximately 45 engaged in research and development activities and approximately 20 engaged in manufacturing activities. None of our employees are represented by a labor union or covered under a collective bargaining agreement. We consider our relationship with our employees to be good, in part as measured by relatively high scores from employees surveys and our relatively low turnover.

Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing and integrating our existing and new employees, advisors and consultants. The principal purposes of our equity and cash incentive plans are to attract, retain and reward personnel through the granting of stock-based and cash-based compensation awards, in order to increase stockholder value and the success of our company by motivating such individuals to perform to the best of their abilities and achieve our objectives.

Facilities

Our corporate headquarters are in South San Francisco, where we lease a facility containing approximately 32,370 square feet of office and laboratory space located at 171 Oyster Point Blvd., 5th Floor, South San Francisco, CA 94080. The lease expires on May 31, 2025, unless earlier terminated in accordance with the lease, and we may renew the lease term for two additional five-year periods.

We also have subleased space at another facility in South San Francisco containing approximately 24,000 square feet of additional office and laboratory space located at 131 Oyster Point Blvd, 4th Floor, South San Francisco, CA 94080. The sublease expires on November 30, 2021, unless earlier terminated in accordance with the sublease.

We also have a leased space at a facility in Union City containing approximately 94,000 square feet of manufacturing and office space located at 33498 Central Avenue, Union City, CA 94587. The lease expires ten years and three months following the date the premises is delivered by the landlord in the required condition, unless earlier terminated in accordance with the lease. We may renew the lease term for one additional five-year period.

We believe that these existing facilities are adequate for our current needs and that suitable additional or alternative space will be available in the future on commercially reasonable terms, if required.

Legal Proceedings

From time to time, we may become involved in litigation or other legal proceedings. We are not currently a party to any litigation or legal proceedings that, in the opinion of our management, are likely to have a material adverse effect on our business. Regardless of outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources, and other factors.

MANAGEMENT

Executive Officers and Directors

The following table sets forth the names and positions of our executive officers and directors and their ages as of March 31, 2021:

Name	Age	Position
Executive Officers:		
Faraz Ali	48	Chief Executive Officer, Secretary and Director
Timothy Charles Hoey, Ph.D.	62	Chief Scientific Officer
Whittemore (Whit) Tingley, M.D., Ph.D.	53	Chief Medical Officer
Non-Employee Directors:		
Eli Casdin	47	Director
Jin-Long Chen, Ph.D.	58	Director
David Goeddel, Ph.D.	69	Director
JeenJoo (JJ) Kang, Ph.D.	37	Director
Deepak Srivastava, M.D.	54	Director
Catherine Stehman-Breen, M.D.	58	Director
Jeffrey T. Walsh	55	Director
R. Sanders (Sandy) Williams, M.D.	72	Director

(1) Member of the audit committee.
(2) Member of the compensation committee.
(3) Member of the corporate governance and nominating committee.

Executive Officers

Faraz Ali has served as our Chief Executive Officer and Secretary since June 2018 and as a member of our board of directors since September 2018. Prior to joining us, Mr. Ali was Chief Business Officer at REGENXBIO, a public biotechnology company, from February 2016 to January 2018. From May 2011 to February 2016, Mr. Ali was Vice President, Global Commercial Development and External Affairs at bluebird bio, a public biotechnology company. From August 2001 to November 2010, Mr. Ali held various roles at Genzyme, including Head of U.S. Marketing and Strategic Planning for the rare disease business unit. Prior to Genzyme, Mr. Ali served in leadership roles at GE Corporate and GE Healthcare. Mr. Ali holds a B.S. in Electrical Engineering from Stanford University and an M.B.A. with distinction from Harvard Business School.

We believe Mr. Ali is qualified to serve on our board of directors because of the perspective and experience he brings as our Chief Executive Officer, his experience in leadership and corporate development positions in the biotechnology industry and with companies focused on gene therapies, and his educational background.

Timothy Charles Hoey, Ph.D. has served as our Chief Scientific Officer since August 2017. From 2005 to June 2017, he held various roles at OncoMed Pharmaceuticals, a public biotechnology company, including as the Senior Vice-President, Cancer Biology and co-Chief Scientific Officer from January 2016 to June 2017. From 1993 to 2005, Dr. Hoey served in various roles at Tularik, a public biopharmaceutical company acquired by Amgen in 2004, including as Director, Biology Department at both Tularik and Amgen. Dr. Hoey received a B.S. in Biology from the University of Michigan and a Ph.D. in Biological Sciences from Columbia University.

Whittemore (Whit) Tingley, M.D., Ph.D. has served as our Chief Medical Officer since December 2018. Before joining us, he served as the Vice President of Clinical Research, Cardiology, at Cytokinetics, a public biotechnology company, from September 2017 to December 2018. From 2009 to September 2017, Dr. Tingley held various medical director and group medical director roles at Genentech. Before that, Dr. Tingley was adjunct associate professor of medicine in the cardiology division at the University of California, San Francisco, and was an attending cardiologist in the UCSF Cardiology Faculty Practice. Dr. Tingley earned a B.A. degree from Brown University and an M.D. and a Ph.D. from the Johns Hopkins University School of Medicine. He completed internship and residency programs at the Johns Hopkins Hospital, a cardiology fellowship at University of California, San Francisco and post-doctoral research at Gladstone Institutes.

Non-Employee Directors

Eli Casdin has served as a member of our board of directors since August 2019 and as a member of our audit committee since September 2019. Since founding Casdin Capital LLC in 2011, Mr. Casdin has served as its Chief Investment Officer. Mr. Casdin has served as Chief Executive Officer and a director of CM Life Sciences, Inc., CM Life Sciences II Inc., and CM Life Sciences III Inc., respectively, since July 2020, December 2020, and January 2021, all blank check companies. Mr. Casdin also served as a director of Exact Science, a public biotechnology company, from October 2017 to September 2020. From 2007 to July 2011, Mr. Casdin served as a Vice President and Analyst at Alliance Bernstein, with a focus on the life science and healthcare industries. Mr. Casdin was an Associate at Bear Stearns in 2007, and an Analyst at Cooper Hill Partners, one of the earliest biotechnology-focused investment firms, from 2003 to 2006. Mr. Casdin earned a B.S. from Columbia University and an M.B.A. from Columbia Business School and he currently serves on the Columbia University School of General Studies Board of Directors.

We believe Mr. Casdin is qualified to serve on our board because his extensive expertise and experience analyzing and investing in the life sciences industry.

Jin-Long Chen, Ph.D. has served as member of our board of directors since October 2016. Dr. Chen is the founder of NGM Biopharmaceuticals and has served as a member of the NGM board of directors and as Chief Scientific Officer since January 2008. He was also NGM's President until November 2014. Previously, Dr. Chen held various positions at Amgen, most recently as Vice President, Metabolic Disorders. Prior to joining Amgen when Amgen acquired Tularik in 2004, Dr. Chen served as Vice President of Biology at Tularik. Dr. Chen received a B.S. in nutrition and food science from Fu-Jen Catholic University, an M.S. in biochemistry from National Taiwan University, and a Ph.D. in molecular and cell biology from the University of California, Berkeley.

We believe Dr. Chen is qualified to serve on our board because of his extensive medical research experience, and his experience as a founder, executive, and director of a public biopharmaceutical company.

David Goeddel, Ph.D. has served as a member of our board of directors since August 2016 and as a member of our compensation committee since December 2018. Dr. Goeddel has served as a Managing Partner of The Column Group, a venture capital firm, since 2007. Dr. Goeddel is a member of the board of directors at NGM Biopharmaceuticals, a public biopharmaceutical company. Additionally, Dr. Goeddel serves on the board of directors for A2 Biotherapeutics (Chairman), Surrozen and Hexagon Bio (Chairman), all privately held biopharmaceutical companies. Dr. Goeddel co-founded Tularik in November 1991, was Vice President of Research until 1996, and served as Chief Executive Officer from 1996 until 2004. He then served as Amgen's first Senior Vice President until May 2006. Prior to Tularik, he was the first scientist hired by Genentech, and from 1978 to 1993 served in various positions, including Fellow, Staff Scientist and Director of Molecular Biology. His pioneering work in the fields of gene cloning and expression of human proteins was the basis for five marketed therapeutics developed by Genentech, including human insulin, human growth hormone, interferon-alpha, interferon-gamma and tissue plasminogen activator. Dr. Goeddel has received numerous scientific awards including the Scheele Medal, the Eli Lilly Award in Biological Chemistry, the Inventor of the Year Award, the Jacob Heskel Gabbay Award, the Howley Prize for Arthritis Research and the Warren Alpert

Foundation Prize. He is a member of the National Academy of Sciences and the American Academy of Arts and Sciences. He holds a B.A. in chemistry from the University of California, San Diego and a Ph.D. in biochemistry from the University of Colorado.

We believe Dr. Goeddel is qualified to serve on our board of directors because of his experience serving as a board member of public and private life sciences companies, his experience as a founder and Chief Executive Officer of a public biopharmaceutical company, his depth of knowledge and substantial experience as a research scientist, and his extensive experience in investing in diverse biotechnology companies.

JeenJoo (JJ) Kang, Ph.D. has served as a member of our board of directors since August 2016. Dr. Kang has also served as a member of our compensation committee since December 2018, as a member of our audit committee since September 2019, and as our President, Treasurer and Secretary from August 2016 to June 2018. Dr. Kang has served as a Venture Partner at The Column Group since 2020, and prior to that served as an Associate beginning in 2015, then as a Partner from 2019 to 2020. She has served as the Chief Executive Officer of Appia Bio, a private biotechnology company, since July 2020. Previously, she worked at FibroGen in project management and corporate strategy from 2005 to 2009. Dr. Kang earned a B.A. in Chemistry from Harvard University and a Ph.D. in chemical biology at the California Institute of Technology.

We believe Dr. Kang is qualified to serve on our board of directors due to her educational background and her experience in investing in the life sciences industry.

Deepak Srivastava, M.D. has served as a member of our board of directors since October 2016. Dr. Srivastava has been a consultant for our company since September 2016 and Chairman of our Scientific Advisory Board since October 2016. Dr. Srivastava has been President of Gladstone Institutes since January 2018. He is currently the Younger Family Professor and a senior investigator at the Gladstone Institute of Cardiovascular Disease and director of the Roddenberry Stem Cell Center. Since 2005, Dr. Srivastava has been a professor in the Departments of Pediatrics and Biochemistry and Biophysics at UC San Francisco, and he is the Wilma and Adeline Pirag Distinguished Professor in pediatric developmental cardiology. He is the immediate past-president of the International Society for Stem Cell Research. Dr. Srivastava is a member of the American Academy of Arts and Sciences and the National Academy of Medicine. He received a B.S. from Rice University and an M.D. from the University of Texas. He trained in pediatrics at the University of California, San Francisco, and in pediatric cardiology at Harvard Medical School.

We believe Dr. Srivastava is qualified to serve on our board because of his scientific and educational background and his extensive expertise in the cardiovascular field.

Catherine Stehman-Breen, M.D. has served as a member of our board of directors since June 2020. Beginning in December 2020, Dr. Stehman-Breen has served as the Chief Executive Officer and a member of the board of directors of Chroma Medicine, a private biotechnology company. From July 2019 to December 2020, Dr. Stehman-Breen served as Chief Development Officer of Obsidian Therapeutics, a private biotechnology company. Since March 2018, she has served as an entrepreneur-in-residence at Atlas Ventures, a venture capital firm. Dr. Stehman-Brown serves as a director of Generation Bio, a public biotechnology company. Dr. Stehman-Breen also serves a member of the board of directors of Dyne Therapeutics, a public biotechnology company. She also previously served as Dyne's Chief Medical Officer from March 2018 to July 2019. From April 2018 to July 2019, Dr. Stehman-Breen served as Chief Medical Officer Disarm Therapeutics, a private biotechnology company. From March 2017 to December 2017, she served as Chief Medical Officer of Sarepta Therapeutics, a public biopharmaceutical company. Before that, she served as Vice President, Clinical Development and Regulatory Affairs at Regeneron Pharmaceuticals, a public biotechnology company, from January 2015 to March 2017. From 2003 to 2015, she held senior leadership roles at Amgen including Vice President, Global Development, leading the neuroscience, nephrology and bone therapeutic areas. Dr. Stehman-Breen earned a B.A. in biology and psychology from Colby College, an M.S. in epidemiology from the University of Washington, where she also completed her residency and fellowship training, and an M.D. from the University of Chicago in 1990. Dr. Stehman-Breen spent six years as a faculty member in the Division of Nephrology at the University of Washington.

We believe Dr. Stehman-Breen is qualified to serve on our board based on her medical expertise, her expertise as an executive in the biotechnology industry and her experience as a public company board member, including within the biotechnology industry.

Jeffrey T. Walsh has served as a member of our board of directors since March 2020 and as a member of our audit committee since September 2020. Since 2011, Mr. Walsh has served in various roles at bluebird bio, including most recently as Strategic Advisor from January 2020 to April 2021, and previously as Chief Operating Officer, Chief Financial Officer, and Chief Strategy Officer. From 2008 to 2011, Mr. Walsh served as Chief Business Officer of Taligen Therapeutics, Inc. until it was acquired by Alexion Pharmaceuticals, Inc. Mr. Walsh started his career at SmithKline Beecham Corporation in finance and worldwide business development roles from 1987 to 1995. He subsequently held senior business development, finance, sales and operations roles at Allscripts Healthcare Solutions Inc. from 1995 to 1998, PathoGenesis Corp. from 1998 to 2000, EXACT Sciences Corporation from 2000 to 2004, and Inotek Pharmaceuticals Corp. from 2004 to 2008. He received a B.A. in sociology and economics from Yale University and an M.B.A. from the Kellogg Graduate School of Management at Northwestern University.

We believe that Mr. Walsh's qualifications to serve on our board of directors include his leadership and management experience in the biotechnology industry and his experience in business development and strategic planning as an executive officer at multiple healthcare companies.

R. Sanders (Sandy) Williams, M.D. has served as a member of our board of directors since October 2016 and as a member of our compensation committee since December 2018. Dr. Williams has served as the President Emeritus of Gladstone Institutes, a non-profit biomedical research enterprise since January 2018 and previously served as its President from November 2009 to December 2017. Dr. Williams also served as the Chief Executive Officer of Gladstone Foundation, a not-for-profit organization supporting Gladstone Institutes from January 2016 to December 2018. Since January 2018, Dr. Williams has served as Professor of Medicine and Senior Advisor for International Strategy at Duke University and, beginning in February 2021, is acting as its Interim Vice President for Research and Innovation. Dr. Williams has also served as a Professor of Medicine at the University of California, San Francisco since 2010. From 2010 to 2017, Dr. Williams was the President and the Robert W. and Linda L. Mahley Distinguished Professor of Medicine of Gladstone Institutes. Prior to this, Dr. Williams served in various roles, including as Dean and Senior Vice Chancellor of the Duke University School of Medicine, from 2001 to 2010. He was the founding Dean of the Duke-NUS Graduate Medical School, Singapore, from 2003 to 2008 and served on its Governing Board from 2003 to 2010. From 1990 to 2001, Dr. Williams was Chief of Cardiology and Director of the Ryburn Center for Molecular Cardiology at the University of Texas, Southwestern Medical Center. Dr. Williams is a member of the board of directors of the Laboratory Corporation of America Holdings, a public diagnostic technologies company, serving on the audit committee and chairing the quality and compliance committee. Dr. Williams also serves as a member of the board of directors of Amgen, Inc., a biotechnology company, serving as a member of the governance and nominating and corporate responsibility and compliance committees. Dr. Williams was elected to the National Academy of Medicine in 2002. Dr. Williams received an A.B. from Princeton University and an M.D. from Duke University.

We believe Dr. Williams is qualified to serve on our board because of his scientific and educational background and his extensive expertise in the cardiovascular field.

Family Relationships

There are no family relationships among any of our executive officers or directors.

Legal Proceedings and Bankruptcy

There are no material legal proceedings to which any of our directors is a party adverse to us or in which any such person has a material interest adverse to us.

Board Composition

Our board of directors currently consists of nine members. After the completion of this offering, the number of directors will be fixed from time to time by our board of directors, subject to the terms of our amended and restated certificate of incorporation and amended and restated bylaws. 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.

Our amended and restated certificate of incorporation will provide that our board of directors will be divided into three classes with staggered three-year terms. Only one class of directors will be elected at each annual meeting of stockholders, with the other classes continuing for the remainder of their respective three-year terms. Our current directors will be divided among the three classes as follows:

- the Class I directors will be , and their terms will expire at the annual meeting of stockholders to be held in 2022;
- the Class II directors will be , and their terms will expire at the annual meeting of stockholders to be held in 2023; and
- the Class III directors will be , and their terms will expire at the annual meeting of stockholders to be held in 2024.

At each annual meeting of stockholders, upon the expiration of the term of a class of directors, the successor to each such director in the class will be elected to serve from the time of election and qualification until the third annual meeting following his or her election and until his or her successor is duly elected and qualified, in accordance with our amended and restated certificate of incorporation. 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 our directors.

This classification of our board of directors may have the effect of delaying or preventing changes in control of our company.

Director Independence

Upon the completion of this offering, we anticipate that our common stock will be listed on . Under the rules of , independent directors must comprise a majority of a listed company's board of directors within one year of the completion of this offering. In addition, the rules of require that, subject to specified exceptions, each member of a listed company's audit, compensation and corporate governance and nominating committees be independent. Audit committee members and compensation committee members must also satisfy the independence criteria set forth in Rule 10A-3 and Rule 10C-1, respectively, under the Securities Exchange Act of 1934, as amended (the Exchange Act). Under the rules of , a director will only qualify as an "independent director" if, in the opinion of that company's board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director.

To be considered to be independent for purposes of Rule 10A-3 and under the rules of , a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, the board of directors or any other board committee: (i) accept, directly or indirectly, any consulting, advisory or other compensatory fee from the listed company or any of its subsidiaries or (ii) be an affiliated person of the listed company or any of its subsidiaries.

To be considered independent for purposes of Rule 10C-1 and under the rules of , the board of directors must affirmatively determine that each member of the compensation committee is independent, including a consideration of all factors specifically relevant to determining whether the director has a relationship

to the company which is material to that director's ability to be independent from management in connection with the duties of a compensation committee member, including: (i) the source of compensation of such director, including any consulting, advisory or other compensatory fee paid by the company to such director and (ii) whether such director is affiliated with the company, a subsidiary of the company or an affiliate of a subsidiary of the company.

Our board of directors undertook a review of its composition, the composition of its committees and the independence of our directors and considered whether any director has a material relationship with us that could compromise his or her ability to exercise independent judgment in carrying out his or her responsibilities. Based upon information requested from and provided by each director concerning his or her background, employment and affiliations, including family relationships, our board of directors has determined that representing of our nine directors, do not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is "independent" as that term is defined under the rules of .

In making these determinations, our board of directors considered the current and prior relationships that each non-employee director has with our company and all other facts and circumstances our board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director, and the transactions involving them described in the section titled "Certain Relationships and Related Party Transactions."

Board Leadership Structure

Our board of directors is currently chaired by . As a general policy, our board of directors believes that separation of the positions of Chair of our board of directors and Chief Executive Officer reinforces the independence of our board of directors from management, creates an environment that encourages objective oversight of management's performance and enhances the effectiveness of our board of directors as a whole. As such, Mr. Ali serves as our Chief Executive Officer while serves as the Chair of our board of directors but is not an officer. We currently expect and intend the positions of Chair of our board of directors and Chief Executive Officer to continue to be held by two individuals in the future.

Role of the Board in Risk Oversight

Our board of directors has an active role, as a whole and also at the committee level, in overseeing the management of our risks. Our board of directors is responsible for general oversight of risks and regular review of information regarding our risks, including credit risks, liquidity risks and operational risks. The compensation committee is responsible for overseeing the management of risks relating to our executive compensation plans and arrangements. The audit committee is responsible for overseeing the management of risks relating to accounting matters and financial reporting. The corporate governance and nominating committee is responsible for overseeing the management of risks associated with the independence of our board of directors and potential conflicts of interest. Although each committee is responsible for evaluating certain risks and overseeing the management of such risks, our entire board of directors is regularly informed through discussions from committee members about such risks.

Board Committees

Prior to the completion of this offering, our board of directors will have an audit committee, a compensation committee and a corporate governance and nominating committee, each of which will have the composition and the responsibilities described below.

Audit Committee

Upon the effectiveness of the registration statement of which this prospectus forms a part, the members of our audit committee will be . will be the chair of our audit committee and is an audit

committee financial expert, as that term is defined under the SEC rules implementing Section 407 of the Sarbanes-Oxley Act of 2002, and possesses financial sophistication, as defined under the rules of . Our audit committee will oversee our corporate accounting and financial reporting process and assist our board of directors in monitoring our financial systems. Our audit committee will also:

- select and hire the independent registered public accounting firm to audit our financial statements;
- help to ensure the independence and performance of the independent registered public accounting firm;
- approve audit and non-audit services and fees;
- review financial statements and discuss with management and the independent registered public accounting firm our annual audited and quarterly financial statements, the results of the independent audit and the quarterly reviews and the reports and certifications regarding internal controls over financial reporting and disclosure controls;
- prepare the audit committee report that the SEC requires to be included in our annual proxy statement;
- review reports and communications from the independent registered public accounting firm;
- review the adequacy and effectiveness of our internal controls and disclosure controls and procedure;
- review our policies on risk assessment and risk management;
- review and monitor conflicts of interest situations, and approve or prohibit any involvement in matters that may involve a conflict of interest or taking of a corporate opportunity;
- review related party transactions; and
- establish and oversee procedures for the receipt, retention and treatment of accounting related complaints and the confidential submission by our employees of concerns regarding questionable accounting or auditing matters.

Our audit committee will operate under a written charter, to be effective upon the effectiveness of the registration statement of which this prospectus forms a part, which will satisfy the applicable rules of the SEC and the listing standards of the Nasdaq Stock Market.

Compensation Committee

Upon the effectiveness of the registration statement of which this prospectus forms a part, the members of our compensation committee will be . will be the chair of our compensation committee. Our compensation committee will oversee our compensation policies, plans and benefits programs. The compensation committee will also:

- oversee our overall compensation philosophy and compensation policies, plans and benefit programs;
- review and approve compensation for our executive officers and directors;
- prepare the compensation committee report that the SEC will require to be included in our annual proxy statement; and
- administer our equity compensation plans.

Our compensation committee will operate under a written charter, to be effective upon the effectiveness of the registration statement of which this prospectus forms a part, which will satisfy the applicable rules of the SEC and the listing standards of the Nasdaq Stock Market.

Corporate Governance and Nominating Committee

Upon the effectiveness of the registration statement of which this prospectus forms a part, the members of our corporate governance and nominating committee will be . will be the chair of our corporate

governance and nominating committee. Our corporate governance and nominating committee will oversee and assist our board of directors in reviewing and recommending nominees for election as directors. Specifically, the corporate governance and nominating committee will:

- identify, evaluate and make recommendations to our board of directors regarding nominees for election to our board of directors and its committees;
- consider and make recommendations to our board of directors regarding the composition of our board of directors and its committees;
- review developments in corporate governance practices;
- evaluate the adequacy of our corporate governance practices and reporting; and
- evaluate the performance of our board of directors and of individual directors.

Our corporate governance and nominating committee will operate under a written charter, to be effective upon the effectiveness of the registration statement of which this prospectus forms a part, which will satisfy the applicable rules of the SEC and the listing standards of the Nasdaq Stock Market.

Director Compensation

Prior to this offering, we have not implemented a formal policy with respect to compensation payable to our non-employee directors. We reimburse our directors for expenses associated with attending meetings of our board of directors and its committees. Following the completion of this offering, we expect to implement an annual cash and equity compensation program for our non-employee directors.

The following table presents the total compensation each of our non-employee directors received during the year ended December 31, 2020.

Name	Option Awards($)(1)	All Other Compensation ($)	Total ($)
Eli Casdin	—	—	—
Jin-Long Chen, Ph.D.	—	—	—
David Goeddel, Ph.D.	—	—	—
JeenJoo (JJ) Kang, Ph.D.	—	—	—
Deepak Srivastava, M.D.	—	75,000(2)	75,000
Catherine Stehman-Breen, M.D.	151,983	—	151,983
Jeffrey T. Walsh	142,713	—	142,713
R. Sanders (Sandy) Williams, M.D.	—	—	—

(1) The amounts disclosed represent the aggregate grant date fair value of the award as calculated in accordance with ASC 718. The assumptions used in calculating the grant date fair value of the award disclosed in this column are set forth in Note 2 to our audited financial statements included elsewhere in this prospectus. These amounts do not correspond to the actual value that may be recognized by the named executive officers upon vesting of the applicable awards.

(2) The amount disclosed relates to compensation paid under the Company's consulting agreement with Dr. Srivastava.

Compensation Committee Interlocks and Inside Participation

None of the members of our board of directors who will serve on our compensation committee upon the effectiveness of the registration statement of which this prospectus forms a part is or has been an officer or employee of our company.

None of our executive officers currently serves, or in the past fiscal year has served, as a member of the board of directors or compensation committee (or other board committee performing equivalent functions or, in the absence of any such committee, the entire board of directors) of any entity that has one or more executive officers serving on our board of directors or compensation committee.

Code of Business Conduct and Ethics

In , our board of directors adopted a written code of business conduct and ethics that will apply to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller or persons performing similar functions. Following this offering, the code of business conduct and ethics will be available on our website at www. tenayatherapeutics.com. We intend to disclose future amendments to such code, or any waivers of its requirements, applicable to any principal executive officer, principal financial officer, principal accounting officer or controller or persons performing similar functions or our directors on our website identified above or in a current report on Form 8-K. Information contained on the website is not incorporated by reference into this prospectus and should not be considered to be part of this prospectus. The inclusion of our website address in this prospectus is an inactive textual reference only.

EXECUTIVE COMPENSATION

Our named executive officers for 2020, which consist of our principal executive officer and the next two most highly compensated executive officers during 2020, are:

- Faraz Ali, Chief Executive Officer;
- Timothy Charles Hoey, Ph.D., Chief Scientific Officer; and
- Whittemore (Whit) Tingley, M.D., Ph.D., Chief Medical Officer.

Summary Compensation Table

The following table sets forth information regarding the compensation of our named executive officers for the year ended December 31, 2020.

Name and Principal Position	Year	Salary ($)	Bonus ($)	Option Awards ($)(1)	All Other Compensation ($)	Total ($)
Faraz Ali *Chief Executive Officer*	2020	425,000	126,500	197,500	1,300	750,300
Timothy Charles Hoey, Ph.D. *Chief Scientific Officer*	2020	375,000	95,000	46,800	3,557	520,357
Whittemore (Whit) Tingley, M.D., Ph.D. *Chief Medical Officer*	2020	371,000	95,000	—	1,520	467,520

(1) The amounts disclosed represent the aggregate grant date fair value of the award as calculated in accordance with ASC 718. The assumptions used in calculating the grant date fair value of the award disclosed in this column are set forth in Note 2 to our audited financial statements included elsewhere in this prospectus. These amounts do not correspond to the actual value that may be recognized by the named executive officers upon vesting of the applicable awards.

Outstanding Equity Awards at Fiscal Year End

The following table sets forth information concerning outstanding equity awards held by each of our named executive officers as of December 31, 2020:

		Option Awards				Stock Awards	
Name	Grant Date(1)	Number of Securities Underlying Unexercised Options Exercisable (#)	Number of Securities Underlying Unexercised Options Unexercisable (#)	Option Exercise Price ($)(2)	Option Expiration Date	Number of Shares of Stock that Have Not Vested (#)	Market Value of Shares of Stock that Have Not Vested ($)(3)
Faraz Ali	9/6/2018	2,550,000(4)	—	0.11	9/5/2028	—	—
	3/10/2020	46,875	203,125(5)	0.45	3/9/2030	—	—
Timothy Charles Hoey, Ph.D.	9/13/2017	—	—	—	—	166,667	13,333
	2/6/2019	200,000(6)	—	0.13	2/5/2029	—	—
	2/7/2020	13,750	46,250(5)	0.45	2/6/2030	—	—
Whittemore (Whit) Tingley, M.D., Ph.D.	12/10/2018	450,000(7)	—	0.13	12/9/2028	—	—

(1) Each of the outstanding equity awards was granted pursuant to our Amended and Restated 2016 Equity Incentive Plan (the 2016 Plan).
(2) This column represents the fair market value of a share of our common stock on the date of grant, as determined by our board of directors.

(3) This column represents the fair market value of a share of our common stock as of December 31, 2020, the market value has been calculated based on an estimated per-share common stock value of $0.08 per share as of December 31, 2020.
(4) 1/5th of the shares subject to this option vested on the first anniversary of the vesting commencement date and 1/60th of the shares vest monthly thereafter, subject to the optionee's continued status as a service provider through each vest date. All of the shares underlying this option are subject to an early exercise provision.
(5) 1/48th of the shares subject to this option vest monthly after the grant date, subject to the optionee's continued status as a service provider through each vest date.
(6) 1/48th of the shares subject to this option vest monthly after the grant date, subject to the optionee's continued status as a service provider through each vest date. All of the shares underlying this option are subject to an early exercise provision.
(7) 1/4th of the shares subject to this option vested on the first anniversary of the vesting commencement date and 1/48th of the shares vest monthly thereafter, subject to the optionee's continued status as a service provider through each vest date. All of the shares underlying this option are subject to an early exercise provision.

Executive Employment Arrangements

Each of our current executive officers has executed our standard form of confidential information, invention assignment and arbitration agreement.

Prior to the completion of this offering, we intend to enter into a confirmatory employment letter with each of our executive officers. Each confirmatory employment letter will provide for continued employment with us on an at-will basis and include terms for base salary, benefits and target cash incentive payments.

Potential Payments Upon Termination or Change in Control

Prior to the completion of this offering, we expect to adopt arrangements for our executive officers that provide for certain severance and change in control benefits.

Employee Benefit and Stock Plans

2021 Equity Incentive Plan

Prior to the effectiveness of this offering, we expect that our board of directors will adopt, and our stockholders will approve, our 2021 Equity Incentive Plan (2021 Plan). The 2021 Plan will be effective on the business day immediately prior to the effective date of the registration statement of which this prospectus forms a part. Our 2021 Plan will provide for the grant of incentive stock options, within the meaning of Section 422 of the Internal Revenue Code (the Code), to our employees and any of our parent and subsidiary corporations' employees, and for the grant of nonstatutory stock options, restricted stock, restricted stock units, stock appreciation rights, performance units, and performance shares to our employees, directors, and consultants and our subsidiary corporations' employees and consultants.

Authorized shares. A total of shares of our common stock are reserved for issuance pursuant to our 2021 Plan. In addition, the shares reserved for issuance under our 2021 Plan will also include (1) those shares reserved but unissued under our 2016 Plan as of the date of stockholder approval of the 2021 Plan and (2) shares of our common stock subject to or issued pursuant to awards granted under our 2016 Plan that, after the date of stockholder approval of the 2021 Plan, expire or otherwise terminate without having been exercised in full or are forfeited to or repurchased by us due to failure to vest (provided that the maximum number of shares that may be added to the 2021 Plan pursuant to (1) and (2) is shares). The number of shares available for issuance under our 2021 Plan will also include an annual increase on the first day of each fiscal year beginning with our

2022 fiscal year, equal to the least of: shares; percent (%) of the outstanding shares of our common stock as of the last day of the immediately preceding fiscal year; or such other amount as our board of directors may determine.

This annual increase will operate only until the ten year anniversary of our board's approval of the 2021 Plan.

If an award expires or becomes unexercisable without having been exercised in full, is surrendered pursuant to an exchange program, or, with respect to restricted stock, restricted stock units, performance units or performance shares, is forfeited to or repurchased by us due to failure to vest, the unpurchased shares (or for awards other than stock options or stock appreciation rights, the forfeited or repurchased shares) will become available for future grant or sale under the 2021 Plan (unless the 2021 Plan has terminated). With respect to stock appreciation rights, only the net shares actually issued will cease to be available under the 2021 Plan and all remaining shares under stock appreciation rights will remain available for future grant or sale under the 2021 Plan (unless the 2021 Plan has terminated). Shares that have actually been issued under the 2021 Plan will not be returned to the 2021 Plan except if shares issued pursuant to awards of restricted stock, restricted stock units, performance shares, or performance units are repurchased by or forfeited to us due to failure to vest, such shares will become available for future grant under the 2021 Plan. Shares used to pay the exercise price of an award or satisfy the tax withholding obligations related to an award will become available for future grant or sale under the 2021 Plan. To the extent an award is paid out in cash rather than shares, such cash payment will not result in a reduction in the number of shares available for issuance under the 2021 Plan.

Plan administration. Our board of directors or one or more committees appointed by our board of directors will administer our 2021 Plan. The compensation committee of our board of directors will initially administer our 2021 Plan. In addition, if we determine it is desirable to qualify transactions under our 2021 Plan as exempt under Rule 16b-3 of the Exchange Act, such transactions will be structured to satisfy the requirements for exemption under Rule 16b-3. Subject to the provisions of our 2021 Plan, the administrator has the power to administer our 2021 Plan and make all determinations deemed necessary or advisable for administering the 2021 Plan, including but not limited to, the power to determine the fair market value of our common stock, select the service providers to whom awards may be granted, determine the number of shares covered by each award, approve forms of award agreements for use under the 2021 Plan, determine the terms and conditions of awards (including, but not limited to, the exercise price, the time or times at which awards may be exercised, any vesting acceleration or waiver or forfeiture restrictions and any restriction or limitation regarding any award or the shares relating thereto), construe and interpret the terms of our 2021 Plan and awards granted under it, prescribe, amend and rescind rules relating to our 2021 Plan, including creating sub-plans, modify or amend each award, including but not limited to the discretionary authority to extend the post-termination exercisability period of awards (except no option or stock appreciation right will be extended past its original maximum term), and allow a participant to defer the receipt of payment of cash or the delivery of shares that would otherwise be due to such participant under an award. The administrator also has the authority to allow participants the opportunity to transfer outstanding awards to a financial institution or other person or entity selected by the administrator and to institute an exchange program by which outstanding awards may be surrendered or cancelled in exchange for awards of the same type, which may have a higher or lower exercise price and/or different terms, awards of a different type, and/or cash or by which the exercise price of an outstanding award is increased or reduced. The administrator's decisions, interpretations, and other actions are final and binding on all participants.

Stock options. Stock options may be granted under our 2021 Plan. The exercise price of options granted under our 2021 Plan must at least be equal to the fair market value of our common stock on the date of grant. The term of an option may not exceed ten years. With respect to any participant who owns more than 10% of the voting power of all classes of our (or any parent or subsidiary of ours) outstanding stock, the term of an incentive stock option granted to such participant must not exceed five years and the exercise price must equal at least 110% of the fair market value on the grant date. The administrator will determine the methods of payment of the exercise price of an option, which may include cash, shares or other property acceptable to the administrator, as

well as other types of consideration permitted by applicable law. After the termination of service of an employee, director, or consultant, he or she may exercise his or her option for the period of time stated in his or her option agreement. In the absence of a specified time in an award agreement, if termination is due to death or disability, the option will remain exercisable for twelve months following the termination of service. In all other cases, in the absence of a specified time in an award agreement, the option will remain exercisable for three months following the termination of service. An option, however, may not be exercised later than the expiration of its term. Subject to the provisions of our 2021 Plan, the administrator determines the other terms of options.

Stock appreciation rights. Stock appreciation rights may be granted under our 2021 Plan. Stock appreciation rights allow the recipient to receive the appreciation in the fair market value of our common stock between the exercise date and the date of grant. Stock appreciation rights may not have a term exceeding ten years. After the termination of service of an employee, director, or consultant, he or she may exercise his or her stock appreciation right for the period of time stated in his or her stock appreciation rights agreement. In the absence of a specified time in an award agreement, if termination is due to death or disability, the stock appreciation rights will remain exercisable for twelve months following the termination of service. In all other cases, in the absence of a specified time in an award agreement, the stock appreciation rights will remain exercisable for three months following the termination of service. However, in no event may a stock appreciation right be exercised later than the expiration of its term. Subject to the provisions of our 2021 Plan, the administrator determines the other terms of stock appreciation rights, including when such rights become exercisable and whether to pay any increased appreciation in cash or with shares of our common stock, or a combination thereof, except that the per share exercise price for the shares to be issued pursuant to the exercise of a stock appreciation right will be no less than 100% of the fair market value per share on the date of grant.

Restricted stock. Restricted stock may be granted under our 2021 Plan. Restricted stock awards are grants of shares of our common stock that vest in accordance with terms and conditions established by the administrator. The administrator will determine the number of shares of restricted stock granted to any employee, director, or consultant and, subject to the provisions of our 2021 Plan, will determine the terms and conditions of such awards. The administrator may impose whatever vesting conditions it determines to be appropriate (for example, the administrator may set restrictions based on the achievement of specific performance goals or continued service to us), except the administrator, in its sole discretion, may accelerate the time at which any restrictions will lapse or be removed. Recipients of restricted stock awards generally will have voting and dividend rights with respect to such shares upon grant without regard to vesting, unless the administrator provides otherwise. Shares of restricted stock that do not vest are subject to our right of repurchase or forfeiture.

Restricted stock units. Restricted stock units may be granted under our 2021 Plan. Restricted stock units are bookkeeping entries representing an amount equal to the fair market value of one share of our common stock. Subject to the provisions of our 2021 Plan, the administrator determines the terms and conditions of RSUs, including the vesting criteria and the form and timing of payment. The administrator may set vesting criteria based upon the achievement of company-wide, divisional, business unit or individual goals (including, but not limited to, continued employment or service), applicable federal or state securities laws or any other basis determined by the administrator in its discretion. The administrator, in its sole discretion, may pay earned restricted stock units in the form of cash, in shares or in some combination thereof. In addition, the administrator, in its sole discretion, may accelerate the time at which any restrictions will lapse or be removed.

Performance units and performance shares. Performance units and performance shares may be granted under our 2021 Plan. Performance units and performance shares are awards that will result in a payment to a participant only if performance objectives established by the administrator are achieved or the awards otherwise vest. The administrator will establish performance objectives or other vesting criteria in its discretion, which, depending on the extent to which they are met, will determine the number or the value of performance units and performance shares to be paid out to participants. The administrator may set performance objectives based on the achievement of company-wide, divisional, business unit, or individual goals (including, but not limited to, continued employment or service), applicable federal or state securities laws or any other basis determined by the

administrator in its discretion. After the grant of a performance unit or performance share, the administrator, in its sole discretion, may reduce or waive any performance objectives or other vesting provisions for such performance units or performance shares. Performance units will have an initial value established by the administrator on or prior to the grant date. Performance shares will have an initial value equal to the fair market value of our common stock on the grant date. The administrator, in its sole discretion, may pay out earned performance units or performance shares in cash, shares, or in some combination thereof.

Non-transferability of awards. Unless the administrator provides otherwise, our 2021 Plan generally does not allow for the transfer of awards and only the recipient of an award may exercise an award during his or her lifetime. If the administrator makes an award transferrable, such award will contain such additional terms and conditions as the administrator deems appropriate.

Certain adjustments. In the event of certain changes in our capitalization, to prevent diminution or enlargement of the benefits or potential benefits available under our 2021 Plan, the administrator will adjust the number and class of shares that may be delivered under our 2021 Plan and/or the number, class, and price of shares covered by each outstanding award and the numerical share limits set forth in our 2021 Plan.

Dissolution or liquidation. In the event of our proposed liquidation or dissolution, the administrator will notify participants as soon as practicable and, to the extent not exercised, all awards will terminate immediately prior to the consummation of such proposed transaction.

Merger or change in control. Our 2021 Plan provides that in the event of a merger or change in control, as defined under our 2021 Plan, each outstanding award will be treated as the administrator determines, without a participant's consent. The administrator is not required to treat all awards, all awards held by a participant or all awards of the same type similarly.

If a successor corporation does not assume or substitute for any outstanding award, then the participant will fully vest in and have the right to exercise all of his or her outstanding options and stock appreciation rights, all restrictions on restricted stock and restricted stock units will lapse, and for awards with performance-based vesting, unless specifically provided for otherwise under the applicable award agreement or other agreement or policy applicable to the participant, all performance goals or other vesting criteria will be deemed achieved at 100% of target levels and all other terms and conditions met. If an option or stock appreciation right is not assumed or substituted in the event of a change in control, the administrator will notify the participant in writing or electronically that such option or stock appreciation right will be exercisable for a period of time determined by the administrator in its sole discretion and the option or stock appreciation right will terminate upon the expiration of such period.

For awards granted to an outside director, in the event of a change in control, the outside director will fully vest in and have the right to exercise all of his or her outstanding options and stock appreciation rights, all restrictions on restricted stock and restricted stock units will lapse and, for awards with performance-based vesting, unless specifically provided for otherwise under the applicable award agreement or other agreement or policy applicable to the participant, all performance goals or other vesting criteria will be deemed achieved at 100% of target levels and all other terms and conditions met.

Clawback. Awards will be subject to any clawback policy of ours, and the administrator also may specify in an award agreement that the participant's rights, payments, and/or benefits with respect to an award will be subject to reduction, cancellation, forfeiture, and/or recoupment upon the occurrence of certain specified events. Our board of directors may require a participant to forfeit, return, or reimburse us all or a portion of the award and/or shares issued under the award, any amounts paid under the award, and any payments or proceeds paid or provided upon disposition of the shares issued under the award in order to comply with such clawback policy or applicable laws.

Amendment; termination. The administrator has the authority to amend, alter, suspend or terminate our 2021 Plan, provided such action does not materially impair the rights of any participant.

2021 Employee Stock Purchase Plan

Prior to the effectiveness of this offering, we expect that our board of directors will adopt, and our stockholders will approve, our 2021 Employee Stock Purchase Plan (ESPP). We expect that our ESPP will be effective on the business day immediately prior to the effective date of the registration statement of which this prospectus forms a part. However, no offering period or purchase period under the ESPP will begin unless and until otherwise determined by our board of directors.

Authorized shares. A total of shares of our common stock will be available for sale under our ESPP. The number of shares of our common stock that will be available for sale under our ESPP also includes an annual increase on the first day of each fiscal year following the fiscal year in which the first offering period under the ESPP commences, equal to the least of: shares; percent (%) of the outstanding shares of our common stock as of the last day of the immediately preceding fiscal year; or such other amount as the administrator may determine.

This annual increase will operate only until the ten year anniversary of our board's approval of our ESPP.

ESPP administration. We expect that the compensation committee of our board of directors will administer our ESPP and will have full and exclusive discretionary authority to construe, interpret, and apply the terms of the ESPP, delegate ministerial duties to any of our employees, designate separate offerings under the ESPP, designate our subsidiaries and affiliates as participating in the ESPP, determine eligibility, adjudicate all disputed claims filed under the ESPP, and establish procedures that it deems necessary for the administration of the ESPP, including, but not limited to, adopting such procedures and sub-plans as are necessary or appropriate to permit participation in the ESPP by employees who are foreign nationals or employed outside the United States. The administrator's findings, decisions and determinations are final and binding on all participants to the full extent permitted by law.

Eligibility. Generally, all of our employees will be eligible to participate if they are customarily employed by us, or any participating subsidiary or affiliate, for at least 20 hours per week and more than five months in any calendar year. The administrator, in its discretion, may, prior to an enrollment date, for all options to be granted on such enrollment date in an offering, determine that an employee who (1) has not completed at least two years of service (or a lesser period of time determined by the administrator) since his or her last hire date, (2) customarily works not more than 20 hours per week (or a lesser period of time determined by the administrator), (3) customarily works not more than five months per calendar year (or a lesser period of time determined by the administrator), (4) is a highly compensated employee within the meaning of Section 414(q) of the Code, or (5) is a highly compensated employee within the meaning of Section 414(q) of the Code with compensation above a certain level or is an officer or subject to disclosure requirements under Section 16(a) of the Exchange Act, is or is not eligible to participate in such offering period.

However, an employee may not be granted rights to purchase shares of our common stock under our ESPP if such employee: immediately after the grant would own capital stock and/or hold outstanding options to purchase such stock possessing or more of the total combined voting power or value of all classes of capital stock of ours or of any parent or subsidiary of ours; or holds rights to purchase shares of our common stock under all employee stock purchase plans of ours or any parent or subsidiary of ours that accrue at a rate that exceeds $ worth of shares of our common stock for each calendar year in which such rights are outstanding at any time.

Offering periods. Our ESPP will include a component that allows us to make offerings intended to qualify under Section 423 of the Code and a component that allows us to make offerings not intended to qualify under

Section 423 of the Code to designated companies, as described in our ESPP. Our ESPP provides for offering periods. The offering periods are scheduled to start on the first trading day on or after and of each year, except for the first offering period, which will commence on the effective date of the registration statement of which this prospectus forms a part and will end on the first trading day on or before and the second offering period, which will commence on the first trading day on or after . Unless the administrator of our ESPP determines otherwise, each offering period will include -month purchase periods, which will commence on or after, and end on or before, and , respectively. The administrator is authorized to establish the duration of offering periods and purchase periods, including the starting and ending dates of offering periods and purchase periods, provided that no offering period may have a duration exceeding 27 months.

Contributions. Our ESPP will permit participants to purchase shares of our common stock through contributions (in the form of payroll deductions or otherwise to the extent permitted by the administrator) of up to of their eligible compensation. A participant may purchase a maximum of shares of our common stock during a purchase period.

Exercise of purchase right. If our board of directors authorizes an offering and purchase period under the ESPP, amounts contributed and accumulated by the participant during any offering period will be used to purchase shares of our common stock at the end of each purchase period. The purchase price of the shares will be 85% of the lower of the fair market value of our common stock on the first trading day of the offering period or on the exercise date. Participants may end their participation at any time during an offering period and will be paid their accrued contributions that have not yet been used to purchase shares of our common stock. Participation ends automatically upon termination of employment with us.

Non-transferability. A participant may not transfer rights granted under our ESPP (other than by will, the laws of descent and distribution or as otherwise provided under our ESPP).

Merger or change in control. Our ESPP will provide that in the event of a merger or change in control, as defined under our ESPP, a successor corporation may assume or substitute each outstanding purchase right. If the successor corporation refuses to assume or substitute for the outstanding purchase right, the offering period then in progress will be shortened, and a new exercise date will be set that will be before the date of the proposed merger or change in control. The administrator will notify each participant that the exercise date has been changed and that the participant's option will be exercised automatically on the new exercise date unless prior to such date the participant has withdrawn from the offering period.

Amendment; termination. The board will have the authority suspend or terminate our ESPP and the administrator will have the authority to amend the ESPP, except that, subject to certain exceptions described in our ESPP, no such action may adversely affect any outstanding rights to purchase shares of our common stock under our ESPP. Our ESPP automatically will terminate in , unless we terminate it sooner.

Amended and Restated 2016 Equity Incentive Plan

Our Amended and Restated 2016 Equity Incentive Plan (2016 Plan) allows us to provide incentive stock options, within the meaning of Section 422 of the Code, nonstatutory stock options, stock appreciation rights, restricted stock awards and restricted stock units (each, an "award" and the recipient of such award, a participant) to eligible employees, directors and consultants, including employees and consultants of any of our parent or subsidiary companies. It is expected that as of one business day prior to the effectiveness of the registration statement of which this prospectus forms a part, our 2016 Plan will terminate and we will not grant any additional awards under our 2016 Plan thereafter. However, our 2016 Plan will continue to govern the terms and conditions of the outstanding awards previously granted under our 2016 Plan.

As of March 31, 2021, stock options covering 10,368,032 shares of our common stock were outstanding under our 2016 Plan and there were no stock appreciation rights, restricted stock awards or restricted stock units outstanding under our 2016 Plan.

Plan administration. Our compensation committee has the authority, concurrent with our board of directors to administer our 2016 Plan. Different committees may administer our 2016 Plan with respect to different service providers. The administrator has all authority and discretion necessary or appropriate to administer our 2016 Plan and to control its operation, including the authority to construe and interpret the terms of our 2016 Plan and the awards granted under our 2016 Plan. The administrator's decisions are final and binding on all participants and any other persons holding awards.

The administrator's powers include the power to institute an exchange program (without stockholder approval) under which (1) outstanding awards are surrendered or cancelled in exchange for awards of the same type (which may have higher or lower exercise prices and different terms), awards of a different type and/or cash, (2) participants would have the opportunity to transfer any outstanding awards to a financial institution or other person or entity selected by the administrator and/or (3) the exercise price of an outstanding award is increased or reduced. The administrator's powers also include the power to prescribe, amend and rescind rules and regulations relating to our 2016 Plan, to modify or amend each award and to make all other determinations deemed necessary or advisable for administering our 2016 Plan.

Eligibility. Employees, directors and consultants, including employees and consultants of any of our parent or subsidiary companies, are eligible to receive awards, provided such consultants render bona fide services not in connection with the offer or sale of securities in a capital-raising transaction and do not directly promote or maintain a market for our securities. Only our employees or employees of our parent or subsidiary companies are eligible to receive incentive stock options.

Stock options. Stock options have been granted under our 2016 Plan. Subject to the provisions of our 2016 Plan, the administrator determines the term of an option, the number of shares subject to an option, and the time period in which an option may be exercised.

The term of an option is stated in the applicable award agreement, but the term of an option may not exceed 10 years from the grant date. The administrator determines the exercise price of options, which generally may not be less than 100% of the fair market value of our common stock on the grant date, except as provided for in the 2016 Plan. However, an incentive stock option granted to an individual who directly or by attribution owns more than 10% of the total combined voting power of all of our classes of stock or of any our parent or subsidiary companies will have a term of no longer than five years from the grant date and will have an exercise price of at least 110% of the fair market value of our common stock on the grant date. In addition, to the extent that the aggregate fair market value of the shares with respect to which incentive stock options are exercisable for the first time by an employee during any calendar year (under all plans of ours and any of our parent or subsidiary companies) exceeds $100,000, such options will be treated as nonstatutory stock options.

The administrator determines how a participant may pay the exercise price of an option, and the permissible methods are generally set forth in the applicable award agreement. If a participant's status as a "service provider" (as defined in our 2016 Plan) terminates, that participant may exercise the vested portion of his or her option for the period of time stated in the applicable award agreement. Vested options generally will remain exercisable for 30 days or such longer period of time as set forth in the applicable award agreement if a participant's status as a service provider terminates for a reason other than death or disability. If a participant's status as a service provider terminates due to death or disability, vested options generally will remain exercisable for six months from the date of termination (or such other longer period as set forth in the applicable award agreement). In no event will an option remain exercisable beyond its original term. If a participant does not exercise his or her option within the time specified in the award agreement, the option will terminate. Except as described above, the administrator has the discretion to determine the post-termination exercisability periods for an option.

Non-transferability of awards. Unless determined otherwise by the administrator, awards may not be sold, transferred, pledged, assigned or otherwise alienated or hypothecated in any manner other than by will or by the laws of descent and distribution. In addition, during an applicable participant's lifetime, only that participant may exercise their award. If the administrator makes an award transferable, such award may only be transferred (1) by will, (2) by the laws of descent and distribution or (3) as permitted by Rule 701 of the Securities Act of 1933, as amended (the Securities Act).

Certain adjustments. If there is a dividend or other distribution (whether in the form of cash, shares, other securities or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase, exchange of shares or our other securities or other change in our corporate structure affecting the shares, the administrator will make proportionate adjustments to the number and class of shares that may be delivered under our 2016 Plan or the number, class and price of shares covered by each outstanding award. The administrator's determination regarding such adjustments will be final, binding and conclusive.

Dissolution or liquidation. In the event of our proposed dissolution or liquidation, the administrator will notify each participant as soon as practicable prior to the effective date of such proposed transaction. To the extent it has not been previously exercised, an award will terminate immediately prior to the consummation of such proposed action.

Merger and change in control. In the event of our merger with or into another corporation or entity or a "change in control" (as defined in our 2016 Plan), each outstanding award will be treated as the administrator determines, including, without limitation, that (1) awards will be assumed, or substantially equivalent awards will be substituted, by the acquiring or succeeding corporation (or an affiliate thereof) with appropriate adjustments as to the number and kind of shares and prices; (2) upon written notice to a participant, the participant's awards will terminate upon or immediately prior to the consummation of such merger or change in control; (3) outstanding awards will vest and become exercisable, realizable or payable, or restrictions applicable to an award will lapse, in whole or in part, prior to or upon consummation of such merger or change in control, and, to the extent the administrator determines, terminate upon or immediately prior to the effectiveness of such merger or change in control; (4) (a) the termination of an award in exchange for an amount of cash or property, if any, equal to the amount that would have been attained upon the exercise of such award or realization of the participant's rights as of the date of the occurrence of the transaction (and, for the avoidance of doubt, if as of the date of the occurrence of the transaction the administrator determines in good faith that no amount would have been attained upon the exercise of such award or realization of the participant's rights, then such award may be terminated by us without payment) or (b) the replacement of such award with other rights or property selected by the administrator in its sole discretion; or (5) any combination of the foregoing. The administrator will not be obligated to treat all awards, all awards a participant holds or all awards of the same type, similarly.

In the event that the successor corporation does not assume or substitute for an award (or portion thereof), the participant will fully vest in and have the right to exercise all of his or her outstanding options and stock appreciation rights, including shares as to which such awards would not otherwise be vested or exercisable, all restrictions on restricted stock and restricted stock units will lapse, and, with respect to awards with performance-based vesting, all performance goals or other vesting criteria will be deemed achieved at 100% of target levels and all other terms and conditions met. In addition, if an option or stock appreciation right is not assumed or substituted in the event of a merger or change in control, the administrator will notify the participant in writing or electronically that the option or stock appreciation right will be exercisable for a period of time determined by the administrator in its sole discretion, and the option or stock appreciation right will terminate upon the expiration of such period.

Amendment and termination. Our board of directors may, at any time, amend, alter, suspend or terminate our 2016 Plan in any respect, including, without limitation, amendment of any form of award agreement or instrument to be executed pursuant to our 2016 Plan. To the extent necessary and desirable to comply with

applicable laws, we will obtain stockholder approval of any amendment to our 2016 Plan. No amendment, alteration, suspension or termination of our 2016 Plan will impair the rights of a participant, unless mutually agreed otherwise between the participant and the administrator in writing. As noted above, it is expected that as of one business day prior to the effectiveness of the registration statement of which this prospectus forms a part, our 2016 Plan will be terminated, and we will not grant any additional awards under our 2016 Plan thereafter.

Executive Incentive Compensation Plan

Prior to the effectiveness of this offering, we expect that our board of directors will adopt the Executive Incentive Compensation Plan (Incentive Compensation Plan). We expect that our Incentive Compensation Plan will be effective on the business day immediately prior to the effective date of the registration statement of which this prospectus forms a part. Our Incentive Compensation Plan will allow our compensation committee to grant incentive awards, generally payable in cash, to employees selected by our compensation committee, including our executive officers, based upon performance goals established by our compensation committee.

Under our Incentive Compensation Plan, our compensation committee will determine the performance goals applicable to any award, which goals may include, without limitation, goals related to research and development, regulatory milestones or regulatory-related goals, gross margin, financial milestones, new product or business development, operating margin, product release timelines or other product release milestones, publications, cash flow, procurement, savings, internal structure, leadership development, project, function or portfolio-specific milestones, license or research collaboration agreements, capital raising, initial public offering preparations, patentability and individual objectives such as peer reviews or other subjective or objective criteria. The performance goals may differ from participant to participant and from award to award.

We expect that the compensation committee of our board of directors will administer our Incentive Compensation Plan and will, in its sole discretion and at any time, increase, reduce or eliminate a participant's actual award, and/or increase, reduce or eliminate the amount allocated to the bonus pool for a particular performance period. The actual award may be below, at or above a participant's target award, in the discretion of the administrator. The administrator may determine the amount of any increase, reduction or elimination on the basis of such factors as it deems relevant, and it will not be required to establish any allocation or weighting with respect to the factors it considers.

Actual awards generally will be paid in cash (or its equivalent) only after they are earned, and, unless otherwise determined by the administrator, to earn an actual award a participant must be employed by us through the date the actual award is paid. The compensation committee may reserve the right to settle an actual award with a grant of an equity award under our then-current equity compensation plan, which equity award may have such terms and conditions, including vesting, as the compensation committee determines. Payment of awards will occur as soon as practicable after they are earned, but no later than the dates set forth in our Incentive Compensation Plan.

Our board of directors and our compensation committee will have the authority to amend, suspend or terminate our Incentive Compensation Plan, provided such action does not impair the existing rights of any participant with respect to any earned awards.

Limitation of Liability and Indemnification

Our amended and restated certificate of incorporation and amended and restated bylaws, each to be effective upon the completion of this offering, will provide that we will indemnify our directors and officers, and may indemnify our employees and other agents, to the fullest extent permitted by Delaware law. Delaware law prohibits our amended and restated certificate of incorporation from limiting the liability of our directors for the following:

- any breach of the director's duty of loyalty to us or to our stockholders;
- acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- unlawful payment of dividends or unlawful stock repurchases or redemptions; and
- any transaction from which the director derived an improper personal benefit.

If Delaware law is amended to authorize corporate action further eliminating or limiting the personal liability of a director, then the liability of our directors will be eliminated or limited to the fullest extent permitted by Delaware law, as so amended. Our amended and restated certificate of incorporation does not eliminate a director's duty of care and, in appropriate circumstances, equitable remedies, such as injunctive or other forms of non-monetary relief, remain available under Delaware law. This provision also does not affect a director's responsibilities under any other laws, such as the federal securities laws or other state or federal laws. Under our amended and restated bylaws, we will also be empowered to purchase insurance on behalf of any person whom we are required or permitted to indemnify.

In addition to the indemnification required in our amended and restated certificate of incorporation and amended and restated bylaws, we intend to enter into an indemnification agreement with each member of our board of directors and each of our officers prior to the completion of the offering. These agreements provide for the indemnification of our directors and officers for certain expenses and liabilities incurred in connection with any action, suit, proceeding or alternative dispute resolution mechanism or hearing, inquiry or investigation that may lead to the foregoing, to which they are a party, or are threatened to be made a party, by reason of the fact that they are or were a director, officer, employee, agent or fiduciary of our company, or any of our subsidiaries, by reason of any action or inaction by them while serving as an officer, director, agent or fiduciary, or by reason of the fact that they were serving at our request as a director, officer, employee, agent or fiduciary of another entity. In the case of an action or proceeding by or in the right of our company or any of our subsidiaries, no indemnification will be provided for any claim where a court determines that the indemnified party is prohibited from receiving indemnification. We believe that these charter and bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit us and our stockholders. Moreover, a stockholder's investment may be harmed to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions. Insofar as indemnification for liabilities arising under the Securities Act, may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable. There is no pending litigation or proceeding naming any of our directors or officers as to which indemnification is being sought, nor are we aware of any pending or threatened litigation that may result in claims for indemnification by any director or officer.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Other than compensation arrangements, including employment, termination of employment and change in control arrangements, with our directors and executive officers, including those discussed in the sections titled "Management" and "Executive Compensation" and the registration rights described in the section titled "Description of Capital Stock-Registration Rights," the following is a description of each transaction since January 1, 2018 and each currently proposed transaction in which:

- we have been or are to be a participant;
- the amount involved exceeded or exceeds $120,000; and
- any of our directors, executive officers or holders of more than 5% of our outstanding capital stock, or any immediate family member of, or person sharing the household with, any of these individuals or entities, had or will have a direct or indirect material interest.

Convertible Preferred Stock Issuances

In August 2019, March 2020 and August 2020, we issued and sold an aggregate of 55,555,527 shares of our Series B convertible preferred stock at a purchase price of $1.656 per share for an aggregate purchase price of approximately $92.0 million.

Purchasers of our Series B convertible preferred stock include venture capital funds that beneficially own more than 5% of our outstanding capital stock and/or are represented on our board of directors. The following table presents the number of shares and total purchase price paid by these entities.

Investor	Shares of Series B Convertible Preferred Stock	Total Purchase Price
Casdin Partners Master Fund, L.P.(1)	12,077,292	$ 19,999,995.55
SymBiosis II, LLC	9,057,969	$ 14,999,996.66
Funds affiliated with The Column Group(2)	6,038,646	$ 9,999,997.78

(1) Eli Casdin, a member of our board of directors is the Chief Investment Officer of Casdin Capital LLC and the managing member of Casdin Partners GP, LLC.

(2) Entities affiliated with The Column Group holding our securities are aggregated for reporting ownership information include The Column Group III, LP and The Column Group III-A, LP. David V. Goeddel, a member of our board of directors, is the Managing Partner of The Column Group, and JeenJoo Kang, a member of our board of directors, is a Venture Partner of The Column Group.

In December 2020 and January 2021, we issued and sold an aggregate of 51,158,291 shares of our Series C convertible preferred stock at a purchase price of $2.072 per share for an aggregate purchase price of approximately $106.0 million.

Purchasers of our Series C convertible preferred stock include venture capital funds that beneficially own more than 5% of our outstanding capital stock and/or are represented on our board of directors. The following table presents the number of shares and total purchase price paid by these entities.

Investor	Shares of Series C Convertible Preferred Stock	Total Purchase Price
Funds affiliated with Casdin Capital LLC(1)	4,343,629	$ 8,999,999.29
Funds affiliated with FMR LLC(2)	9,652,509	$ 19,999,998.65
Funds affiliated with RTW Investments, LP(3)	9,652,509	$ 19,999,998.65
SymBiosis II, LLC	2,895,752	$ 5,999,998.14

(1) Entities affiliated with Casdin Capital LLC holding our securities are aggregated for reporting ownership information include Casdin Partners Master Fund, L.P. and Casdin Private Growth Equity Fund, L.P. Eli Casdin, a member of our board of directors is the Chief Investment Officer of Casdin Capital LLC and the managing member of Casdin Partners GP, LLC.
(2) Entities affiliated with Fidelity holding our securities are aggregate for reporting ownership information include Fidelity Advisor Series VII: Fidelity Advisor Biotechnology Fund and Fidelity Select Portfolios: Biotechnology Portfolio.
(3) Entities affiliated with RTW Investments, LP holding our securities are aggregate for reporting ownership information include RTW Innovation Master Fund, Ltd., RTW Master Fund, Ltd., and RTW Venture Fund Limited.

Promissory Note

On September 13, 2017, we entered into a full recourse note (the Note) with Timothy Charles Hoey, Ph.D., our Chief Scientific Officer, pursuant to which we loaned $70,000 to cover the aggregate exercise price of Dr. Hoey's early exercise stock option for 1,000,000 shares of our common stock. As of March 31, 2021, the amount of the Note outstanding was $74,951.

Investors' Rights Agreement

We are party to an investors' rights agreement, as amended, with certain holders of our capital stock, including entities affiliated with The Column Group III, LP, The Column Group III-A, LP, Casdin Partners Master Fund, L.P., Casdin Private Growth Equity Fund, L.P., Fidelity Advisor Series VII: Fidelity Advisor Biotechnology Fund, Fidelity Select Portfolios: Biotechnology Portfolio, RTW Master Fund, Ltd., RTW Innovation Master Fund, Ltd. and RTW Venture Fund Limited, and SymBiosis II, LLC,. Under our investors' rights agreement, among other things, certain holders of our capital stock have the right to demand that we file a registration statement or request that their shares of our capital stock be covered by a registration statement that we are otherwise filing. See the section titled "Description of capital stock—Registration rights" for additional information regarding these registration rights.

Voting Agreement

We are party to a voting agreement, as amended, with certain holders of our capital stock, including entities affiliated with The Column Group III, LP, The Column Group III-A, LP, Casdin Partners Master Fund, L.P., Casdin Private Growth Equity Fund, L.P., Fidelity Advisor Series VII: Fidelity Advisor Biotechnology Fund, Fidelity Select Portfolios: Biotechnology Portfolio, RTW Master Fund, Ltd., RTW Innovation Master Fund, Ltd. and RTW Venture Fund Limited, SymBiosis II, LLC, JeenJoo Kang, a member of our board directors, and Deepak Srivastava, a member of our board of directors. The parties to the voting agreement have agreed, among other things and subject to certain conditions, to vote the shares of our capital stock held by them so as to elect the following individuals as directors: (1) two individuals designated by The Column Group III, LP and/or The Column Group III-A, LP, currently JeenJoo Kang and David Goeddel, (2) one individual designated by Casdin Master Fund L.P., currently Eli Casdin, (3) our chief executive officer, currently Faraz Ali, and (4) five individuals designated by the holders of a majority the outstanding shares of common stock and preferred stock (voting together as a single class on an as-converted basis), currently Deepak Srivastava, R. Sanders Williams, Jin-Long Chen, Jeff Walsh, and Catherine Stehman-Breen. Upon the consummation of this offering, the obligations of the parties to the voting agreement to vote their shares so as to elect these nominees, as well as the other rights and obligations under the voting agreement, will terminate, and none of our stockholders will have any special rights regarding the nomination, election or designation of members of our board of directors. Our existing certificate of incorporation contains provisions regarding election of members of the board of directors that correspond to the voting agreement; however, such provisions will be removed in the amended and restated certificate of incorporation that will be effective at the closing of this offering.

Indemnification Agreements

We have entered into separate indemnification agreements with each of our directors and executive officers, in addition to the indemnification provided for in our amended and restated certificate of incorporation and bylaws. The indemnification agreements and our amended restated certificate of incorporation and bylaws that will be in effect upon the closing of this offering require us to indemnify our directors, executive officers and certain controlling persons to the fullest extent permitted by Delaware law. See the section titled "Executive Compensation-Limitation of Liability and Indemnification" for additional information.

Related Party Transaction Policy

Our audit committee will have the primary responsibility for reviewing and approving or disapproving "related party transactions," which are transactions between us and related persons in which the aggregate amount involved exceeds or may be expected to exceed $120,000 and in which a related person has or will have a direct or indirect material interest. The charter of our audit committee will provide that our audit committee shall review and approve in advance any related party transaction.

In , our board of directors adopted a formal written policy providing that we are not permitted to enter into any transaction that exceeds $120,000 and in which any related person has a direct or indirect material interest without the consent of our audit committee. In approving or rejecting any such transaction, our audit committee is to consider the relevant facts and circumstances available and deemed relevant to our audit committee, including whether the transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances and the extent of the related person's interest in the transaction.

PRINCIPAL STOCKHOLDERS

The following table sets forth the beneficial ownership of our common stock as of March 31, 2021 by:

- each person, or group of affiliated persons, who is known by us to beneficially own more than 5% of our common stock;
- each of the named executive officers;
- each of our directors; and
- all of our current executive officers and directors as a group.

We have determined beneficial ownership in accordance with the rules of the SEC, and thus it represents sole or shared voting or investment power with respect to our securities. Unless otherwise indicated below, to our knowledge, the persons and entities named in the table have sole voting and sole investment power with respect to all shares that they beneficially owned, subject to community property laws where applicable. The information does not necessarily indicate beneficial ownership for any other purpose, including for purposes of Sections 13(d) and 13(g) of the Exchange Act.

We have based our calculation of the percentage of beneficial ownership prior to this offering on shares of our common stock outstanding as of March 31, 2021, after giving effect to the automatic conversion of all outstanding shares of our convertible preferred stock into 156,613,818 shares of our common stock immediately prior to the completion of this offering. We have based our calculation of the percentage of beneficial ownership after this offering on shares of our common stock outstanding immediately after the completion of this offering, assuming no exercise by the underwriters of their option to purchase additional shares. We have deemed shares of our common stock subject to stock options that are currently exercisable or exercisable within 60 days of March 31, 2021, to be outstanding and to be beneficially owned by the person holding the stock option for the purpose of computing the percentage ownership of that person. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other person.

The following table does not reflect any potential purchases by our executive officers, directors, their affiliated entities or holders of more than 5% of our common stock in this offering. If any shares are purchased by these persons or entities, the number and percentage of shares of our common stock beneficially owned by them after this offering will differ from the amounts set forth in the following table.

Unless otherwise indicated, the address of each beneficial owner listed in the table below is c/o Tenaya Therapeutics, Inc., 171 Oyster Point Boulevard, 5th Floor, South San Francisco, CA 94080.

Name of Beneficial Owner	Shares Beneficially Owned Prior to this Offering		Shares Beneficially Owned After this Offering	
	Shares	Percentage	Shares	Percentage
5% or Greater Stockholders:				
Entities affiliated with The Column Group(1)	56,401,773	34.4%		
Entities affiliated with Casdin Group(2)	16,420,921	10.0		
SymBiosis II, LLC(3)	11,953,721	7.3		
Entities affiliated with FMR LLC(4)	9,652,509	5.9		
Entities affiliated with RTW(5)	9,652,509	5.9		
Named Executive Officers and Directors:				
Faraz Ali(6)	2,831,249	1.7		
Timothy Hoey(7)	1,227,083	*		
Whittemore Tingley(8)	462,500	*		
Eli Casdin(2)	16,420,921	10.0		
Jin-Long Chen(9)	180,000	*		
David V. Goeddel(1)	56,401,773	34.4		
JeenJoo Kang(10)	150,000	*		
Catherine Stehman-Breen(11)	41,250	*		
Deepak Srivastava(12)	1,983,333	1.2		
Jeffrey Walsh(13)	52,500	*		
R. Sanders Williams(14)	180,000	*		
All executive officers and directors as a group (11 persons)(15)	79,930,609	47.7%		

* Represents beneficial ownership of less than 1% of the outstanding shares of our common stock.

(1) Consists of 26,488,338 shares held directly by The Column Group III, LP and 29,913,435 shares held directly by The Column Group III-A, LP (Column Group Funds). The Column Group III GP, LP (TCG III GP) is the general partner of each of the Column Group Funds. The managing partners of TCG III GP are David Goeddel, Peter Svennilson and Tim Kutzkey who may be deemed to share voting and investment power with respect to the shares, and each of whom disclaim beneficial ownership of the shares held by the Column Group Funds except to the extent of their pecuniary interests therein, if any. Dr. Goeddel is a member of our board of directors. The address of the Column Group Funds is 1 Letterman Drive, Building D, Suite DM-900, San Francisco, CA 94129.

(2) Consists of 14,249,106 shares held directly by Casdin Partners Master Fund, L.P. (CPMF) and 2,171,815 shares held directly by Casdin Private Growth Equity Fund, L.P. (CPGEF). Casdin Capital, LLC is the investment advisor to CPMF and CPGEF. Casdin Partners GP, LLC is the general partner of CPMF. Casdin Private Growth Equity Fund GP, LLC is the general partner of CPGEF. Eli Casdin, a member of our board of directors, is the managing member of Casdin Capital, LLC, Casdin Partners GP, LLC and Casdin Private Growth Equity Fund GP, LLC and may be deemed to have voting and investment power with respect to the shares and who disclaims beneficial ownership of the shares except to the extent of his pecuniary interests therein, if any. The address of these entities and individuals is 1350 Avenue of the Americas, Suite 2600, New York, NY 10019.

(3) These shares are beneficially owned by Thomas Layton Walton. The shares are directly held by SymBiosis II, LLC over which Mr. Walton exercises sole investment power. The address of Mr. Walton is PO Box 1860, Bentonville, AR 72712.

(4) Consists of 2,413,127 shares held by Fidelity Advisor Series VII: Advisor Biotechnology Fund (Advisor Series VII) and 7,239,382 shares held directly by Fidelity Select Portfolios: Biotechnology Portfolio (Select Portfolios). These accounts are managed by direct or indirect subsidiaries of FMR LLC. Abigail P. Johnson is a director, the chairman, the chief executive officer and president of FMR LLC. Members of the Johnson family, including Abigail P. Johnson, are the predominant owners, directly or through trusts, of Series B

voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940 to form a controlling group with respect to FMR LLC. Neither FMR LLC nor Abigail P. Johnson has the sole power to vote or direct the voting of the shares owned directly by the various investment companies registered under the Investment Company Act (the Fidelity Funds) advised by Fidelity Management & Research Company (FMR Co.), a wholly owned subsidiary of FMR LLC, which power resides with the Fidelity Funds' Board of Trustees. FMR Co. carries out the voting of the shares under written guidelines established by the Fidelity Funds' Board of Trustees. The address of FMR LLC is 245 Summer Street, Boston, MA 02210.

(5) Consists of 9,652,509 shares in the aggregate held by RTW Innovation Master Fund, Ltd., RTW Master Fund, Ltd. and RTW Venture Fund Limited. Roderick Wong is the managing partner and chief investment officer of RTW Investments, LP and as such has sole voting and investment control over the shares. Dr. Wong disclaims beneficial ownership of the shares except to the extent of his pecuniary interest therein, if any. The address of the RTW funds is 40 10th Avenue, Floor 7, New York, NY 10014.

(6) Consists of 2,831,249 shares subject to outstanding options that are exercisable within 60 days of March 31, 2021, of which 1,062,500 shares may be repurchased by us, if exercised, at the original exercise price per share.

(7) Consists of 1,000,000 shares held directly by Dr. Hoey and 227,083 shares subject to outstanding options that are exercisable within 60 days of March 31, 2021, of which 83,334 shares may be repurchased by us, if exercised, at the original exercise price per share.

(8) Consists of 462,500 shares subject to outstanding options that are exercisable within 60 days of March 31, 2021, of which 178,125 shares may be repurchased by us, if exercised, at the original exercise price per share.

(9) Includes 30,000 shares subject to outstanding options that are exercisable within 60 days of March 31, 2021.

(10) Consists of 150,000 shares held directly by Dr. Kang. Excludes 56,401,773 shares held by The Column Group funds as set forth in footnote (1) above for which Dr. Kang has no voting or investment control.

(11) Consists of 41,250 shares subject to outstanding options that are exercisable within 60 days of March 31, 2021.

(12) Consists of 975,000 shares held directly by Dr. Srivastava and 850,000 shares held directly by Gladstone Institutes for which Dr. Srivastava serves as President and may be deemed to have voting and investment control over the shares. Dr. Srivastava disclaims beneficial ownership of the shares held by Gladstone Institutes. Also includes 158,333 shares subject to outstanding options that are exercisable within 60 days of March 31, 2021.

(13) Includes 52,500 shares subject to outstanding options that are exercisable within 60 days of March 31, 2021.

(14) Consists of 180,000 shares held directly by Dr. Williams.

(15) Includes 3,802,915 shares subject to outstanding options that are exercisable within 60 days of March 31, 2021, of which 1,323,959 shares may be repurchased by us, if exercised, at the original exercise price per share.

DESCRIPTION OF CAPITAL STOCK

The following descriptions of our capital stock and certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws are summaries and are qualified by reference to the amended and restated certificate of incorporation and the amended and restated bylaws that will be in effect upon completion of this offering. Copies of these documents will be filed with the SEC as exhibits to our registration statement of which this prospectus forms a part. The descriptions of the common stock and preferred stock reflect changes to our capital structure that will occur upon the completion of this offering.

Immediately prior to the completion of this offering, upon the filing of our amended and restated certificate of incorporation to be effective upon completion of this offering, 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.

Immediately prior to the completion of this offering, all the outstanding shares of our convertible preferred stock will automatically convert into an aggregate of 156,613,818 shares of our common stock.

Based on 163,948,679 shares of common stock outstanding as of March 31, 2021, and after giving effect to the automatic conversion of all of our outstanding convertible preferred stock into an aggregate of 156,613,818 shares of common stock immediately prior to the completion of this offering and the issuance of shares of common stock in this offering, there will be shares of common stock outstanding upon the completion of this offering. As of March 31, 2021, we had 82 stockholders of record.

Common Stock

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 amended and restated certificate of incorporation and amended and restated bylaws to be in effect upon the completion of this offering do not provide for cumulative voting rights. Because of this, the holders of a plurality of the shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they should so choose. With respect to matters other than the election of directors, at any meeting of the stockholders at which a quorum is present or represented, the affirmative vote of a majority of the voting power of the shares present in person or represented by proxy at such meeting and entitled to vote on the subject matter shall be the act of the stockholders, except as otherwise required by law. The holders of a majority of the stock issued and outstanding and entitled to vote, present in person or represented by proxy, shall constitute a quorum for the transaction of business at all meetings of the stockholders.

Dividends

Subject to preferences that may be applicable to any then-outstanding preferred stock, holders of our common stock are entitled to receive dividends, if any, 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 and 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, subscription or other 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 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, upon payment and delivery in accordance with the underwriting agreement, will be fully paid and nonassessable.

Preferred Stock

Upon the completion of this offering, our board of directors will have the authority, without further action by the 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, redemption rights, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of common stock. The issuance of 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 liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change in our control or other corporate action. Upon the completion of this offering, no shares of preferred stock will be outstanding, and we have no present plan to issue any shares of preferred stock.

Options

As of March 31, 2021, we had outstanding options to purchase an aggregate of 10,368,032 shares of our common stock, with a weighted-average exercise price of $0.51 per share, under our 2016 Plan.

Registration Rights

After the completion of this offering, under our investors' rights agreement, as amended, the holders of shares of common stock or their transferees, will have the right to require us to register the offer and sale of their shares or to include their shares in any registration statement we file, in each case as described below.

Demand Registration Rights

After the completion of this offering, the holders of up to 156,613,818 shares of our common stock will be entitled to certain demand registration rights. At any time beginning after 180 days following the date of effectiveness of the registration statement of which this prospectus forms a part, the holders of at least 50% of the shares having registration rights then outstanding can request that we file a registration statement to register the offer and sale of their shares. We are only obligated to effect up to two such registrations. Each such request for registration must cover securities of which the anticipated aggregate gross proceeds, before deducting underwriting discounts and expenses, is at least $10.0 million. These demand registration rights are subject to specified conditions and limitations, including the right of the underwriters to limit the number of shares included in any such registration under certain circumstances. If we determine that it would be materially detrimental to us and our stockholders to effect such a demand registration, we have the right to defer such registration, not more than twice in any twelve-month period, for a period of up to 90 days.

Form S-3 Registration Rights

After the completion of this offering, the holders of up to 156,613,818 shares of our common stock will be entitled to certain Form S-3 registration rights. At any time after the completion of this offering when we are

eligible to file a registration statement on Form S-3, any holders having these rights then outstanding can request that we register the offer and sale of their shares of our common stock on a registration statement on Form S-3 so long as the request covers securities the anticipated aggregate public offering price of which is at least $1.0 million. These stockholders may make an unlimited number of requests for registration on a registration statement on Form S-3. However, we will not be required to effect a registration on Form S-3 if we have effected two such registrations within the twelve month period preceding the date of the request. These Form S-3 registration rights are subject to specified conditions and limitations, including the right of the underwriters to limit the number of shares included in any such registration under certain circumstances. Additionally, if we determine that it would be seriously detrimental to us and our stockholders to effect such a demand registration, we have the right to defer such registration, not more than twice in any twelve month period, for a period of up to 90 days.

Piggyback Registration Rights

After the completion of this offering, the holders of up to 156,613,818 shares of our common stock will be entitled to certain "piggyback" registration rights. If we propose to register the offer and sale of shares of our common stock under the Securities Act, the holders of these shares can request that we include their shares in such registration, subject to certain marketing and other limitations, including the right of the underwriters to limit the number of shares included in any such registration statement under certain circumstances. As a result, whenever we propose to file a registration statement under the Securities Act, other than with respect to (i) a registration solely to employee benefit plans; (ii) a registration relating to the offer and sale of debt securities; (iii) a registration relating to a corporate reorganization or other transaction covered by Rule 145 promulgated under the Securities Act; (iv) a registration on any registration form that does not permit secondary sales; or (v) a registration pursuant to the demand or Form S-3 registration rights described in the preceding two paragraphs above, the holders of these shares are entitled to notice of the registration and have the right, subject to certain limitations, to include their shares in the registration.

Expenses of Registration

We will pay all expenses relating to any demand registrations, Form S-3 registrations and piggyback registrations, subject to specified exceptions.

Termination

The registration rights terminate upon the earliest of (i) the date that is four years after the closing of this offering; (ii) immediately prior to the closing of certain liquidation events; and (iii) as to a given holder of registration rights, the date after the closing of this offering when such holder of registration rights can sell all of such holder's registrable securities during any 90-day period pursuant to Rule 144 promulgated under the Securities Act.

Anti-Takeover Effects of Certain Provisions of Delaware Law, Our Amended and Restated Certificate of Incorporation and Our Amended and Restated Bylaws

Certain provisions of Delaware law and certain provisions that will be included in our amended and restated certificate of incorporation and amended and restated bylaws summarized below may be deemed to have an anti-takeover effect and may delay, deter or prevent a tender offer or takeover attempt that a stockholder might consider to be in its best interests, including attempts that might result in a premium being paid over the market price for the shares held by stockholders.

Preferred Stock

Our amended and restated certificate of incorporation will contain provisions that permit our board of directors to issue, without any further vote or action by the stockholders, shares of preferred stock in one or more

series and, with respect to each such series, to fix the number of shares constituting the series and the designation of the series, the voting rights (if any) of the shares of the series and the powers, preferences or relative, participation, optional and other special rights, if any, and any qualifications, limitations or restrictions, of the shares of such series.

Classified Board

Our amended and restated certificate of incorporation will provide that our board of directors is divided into three classes, designated Class I, Class II and Class III. Each class will be an equal number of directors, as nearly as possible, consisting of one third of the total number of directors constituting the entire board of directors. The term of initial Class I directors shall terminate on the date of the 2022 annual meeting, the term of the initial Class II directors shall terminate on the date of the 2023 annual meeting, and the term of the initial Class III directors shall terminate on the date of the 2024 annual meeting. At each annual meeting of stockholders beginning in 2022, the class of directors whose term expires at that annual meeting will be subject to reelection for a three-year term.

Removal of Directors

Our amended and restated certificate of incorporation will provide that stockholders may only remove a director for cause by a vote of no less than a majority of the shares present in person or by proxy at the meeting and entitled to vote.

Director Vacancies

Our amended and restated certificate of incorporation will authorize only our board of directors to fill vacant directorships.

No Cumulative Voting

Our amended and restated certificate of incorporation will provide that stockholders do not have the right to cumulate votes in the election of directors.

Special Meetings of Stockholders

Our amended and restated certificate of incorporation and amended and restated bylaws will provide that, except as otherwise required by law, special meetings of the stockholders may be called only by an officer at the request of a majority of our board of directors, by the Chair of our board of directors or by our Chief Executive Officer.

Advance Notice Procedures for Director Nominations

Our amended and restated bylaws will provide that stockholders seeking to nominate candidates for election as directors at an annual or special meeting of stockholders must provide timely notice thereof in writing. To be timely, a stockholder's notice generally will have to be delivered to and received at our principal executive offices before notice of the meeting is issued by the secretary of the company, with such notice being served not less than 90 nor more than 120 days before the meeting. Although the amended and restated bylaws will not give the board of directors the power to approve or disapprove stockholder nominations of candidates to be elected at an annual meeting, the amended and restated bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed or may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of the company.

Action by Written Consent

Our amended and restated certificate of incorporation and amended and restated bylaws will provide that any action to be taken by the stockholders must be effected at a duly called annual or special meeting of stockholders and may not be effected by written consent.

Amending Our Certificate of Incorporation and Bylaws

Our amended and restated certificate of incorporation may be amended or altered in any manner provided by the Delaware General Corporation Law (DGCL). Our amended and restated bylaws may be adopted, amended, altered or repealed by stockholders only upon approval of at least majority of the voting power of all the then outstanding shares of the common stock, except for any amendment of the above provisions, which would require the approval of a two-thirds majority of our then outstanding common stock. Additionally, our amended and restated certificate of incorporation will provide that our bylaws may be amended, altered or repealed by the board of directors.

Authorized but Unissued Shares

Our authorized but unissued shares of common stock and preferred stock will be available for future issuances without stockholder approval, except as required by the listing standards of the Nasdaq Stock Market, and could be utilized for a variety of corporate purposes, including future offerings to raise additional capital, acquisitions and employee benefit plans. The existence of authorized but unissued and unreserved common stock and preferred stock could render more difficult or discourage an attempt to obtain control of the company by means of a proxy contest, tender offer, merger or otherwise.

Exclusive Jurisdiction

Our amended and restated bylaws will provide that, unless we consent to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a claim of breach of fiduciary duty, any action asserting a claim arising pursuant to the DGCL, any action regarding our amended and restated certificate of incorporation or amended and restated bylaws, or any action asserting a claim against us that is governed by the internal affairs doctrine. This provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act or any other claim for which the U.S. federal courts have exclusive jurisdiction. Our amended and restated bylaws further provide that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. Any person or entity purchasing or otherwise acquiring any interest in our securities shall be deemed to have notice of and consented to these provisions. Although we believe these provisions benefit us by providing increased consistency in the application of 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. There is uncertainty as to whether a court would enforce such provisions, and the enforceability of similar choice of forum provisions in other companies' charter documents has been challenged in legal proceedings. We also note that stockholders cannot waive compliance (or consent to noncompliance) with the federal securities laws and the rules and regulations thereunder. See the section titled "Risk factors-Our amended and restated bylaws that will become effective upon the closing of this offering provide that the Court of Chancery of the State of Delaware and the federal district courts of the United States of America 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."

Business Combinations with Interested Stockholders

We are governed by Section 203 of the DGCL. Subject to certain exceptions, Section 203 of the DGCL prohibits a public Delaware corporation from engaging in a business combination (as defined in such section)

with an "interested stockholder" (defined generally as any person who beneficially owns 15% or more of the outstanding voting stock of such corporation or any person affiliated with such person) for a period of three years following the time that such stockholder became an interested stockholder, unless (i) prior to such time the board of directors of such corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder; (ii) upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of such corporation at the time the transaction commenced (excluding for purposes of determining the voting stock of such corporation outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (1) by persons who are directors and also officers of such corporation and (2) by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or (iii) at or subsequent to such time the business combination is approved by the board of directors of such corporation and authorized at a meeting of stockholders (and not by written consent) by the affirmative vote of at least 66 2/3% of the outstanding voting stock of such corporation not owned by the interested stockholder.

Our amended and restated certificate of incorporation and our amended and restated bylaws will provide that we must indemnify our directors and officers to the fullest extent authorized by the DGCL. We are expressly authorized to, and do, carry directors' and officers' insurance providing coverage for our directors, officers and certain employees for some liabilities. We believe that these indemnification provisions and insurance are useful to attract and retain qualified directors and executive officers.

The limitation on liability and indemnification provisions in our certificate of incorporation and bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duty. These provisions may also have the effect of reducing the likelihood of derivative litigation against directors and officers, even though such an action, if successful, might otherwise benefit us and our stockholders. In addition, each investor's investment may be adversely affected to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

Listing

We have applied to list our common stock on the Nasdaq Stock Market under the symbol "TNYA."

Transfer Agent and Registrar

Upon completion of this offering, the transfer agent and registrar for our common stock will be Computershare Trust Company, N.A. The transfer agent and registrar's address is 150 Royall Street, Canton, Massachusetts 02021.

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for our common stock, and although we expect that our common stock will be approved for listing on the Nasdaq Stock Market, we cannot assure investors that there will be an active public market for our common stock following this offering. We cannot predict what effect, if any, sales of our shares in the public market or the availability of shares for sale will have on the market price of our common stock. Future sales of substantial amounts of common stock in the public market, including shares issued upon exercise of outstanding options, or the perception that such sales may occur, however, could adversely affect the market price of our common stock and also could adversely affect our future ability to raise capital through the sale of our common stock or other equity-related securities of ours at times and prices we believe appropriate.

Upon completion of this offering, based on our shares outstanding as of March 31, 2021, and after giving effect to the conversion of all outstanding shares of our convertible preferred stock, shares of our common stock will be outstanding, or shares of common stock if the underwriters exercise their option to purchase additional shares in full. All of the 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 that term is defined in Rule 144 under the Securities Act. The remaining outstanding shares of our common stock will be deemed "restricted securities" as that term is defined under Rule 144. Restricted securities may be sold in the public market only if their offer and sale is registered under the Securities Act or if the offer and sale of those securities qualify for an exemption from registration, including exemptions provided by Rules 144 and 701 under the Securities Act, which are summarized below.

As a result of the lock-up agreements and market stand-off provisions described below and the provisions of Rules 144 or 701, the shares of our common stock that will be deemed "restricted securities" will be available for sale in the public market following the completion of this offering as follows:

- no shares will be eligible for sale on the date of this prospectus; and
- 163,948,679 shares will be eligible for sale upon expiration of the lock-up agreements and market stand-off provisions described below, following the date that is 180 days after the date of this prospectus.

Lock-up Agreements and Market Stand-Off Agreements

Our officers, directors and substantially all of our securityholders have entered into market stand-off agreements with us and have entered into or will enter into lock-up agreements with the underwriters, subject to certain exceptions, 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, Cowen and Company LLC, and Piper Sandler & Co. See the section titled "Underwriters" for additional information.

Rule 144

Rule 144, as currently in effect, generally provides that, once we have been subject to the public company reporting requirements of Section 13 or Section 15(d) of the Exchange Act for at least 90 days, a stockholder who is not deemed to have been one of our affiliates at any time during the preceding 90 days and who has beneficially owned the shares of our capital stock proposed to be sold for at least six months is entitled to sell such shares in reliance upon Rule 144 without complying with the volume limitation, manner of sale or notice conditions of Rule 144. If such stockholder has beneficially owned the shares of our capital stock proposed to be sold for at least one year, then such person is entitled to sell such shares in reliance upon Rule 144 without complying with any of the other conditions of Rule 144. Rule 144 also provides that a stockholder who is deemed to have been one of our affiliates at any time during the preceding 90 days and who has beneficially owned the

shares of our common stock proposed to be sold for at least six months is entitled to sell such shares in reliance upon Rule 144 within any three month period beginning 90 days after the date of this prospectus a number of such shares that does not exceed the greater of the following:

- 1% of the number of shares of our capital stock then outstanding, which will equal shares immediately after the completion of this offering, assuming no exercise by the underwriters of their option to purchase additional shares; or
- the average weekly trading volume of our common stock during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Sales of our capital stock made in reliance upon Rule 144 by a stockholder who is deemed to have been one of our affiliates at any time during the preceding 90 days are also subject to the current public information, manner of sale and notice conditions of Rule 144.

Rule 701

Rule 701 generally provides that, once we have been subject to the public company reporting requirements of Section 13 or Section 15(d) of the Exchange Act for at least 90 days, a stockholder who purchased shares of our common stock pursuant to a written compensatory benefit plan or contract and who is not deemed to have been one of our affiliates at any time during the preceding 90 days may sell such shares in reliance upon Rule 144 without complying with the current public information or holding period conditions of Rule 144. Rule 701 also provides that a stockholder who purchased shares of our common stock pursuant to a written compensatory benefit plan or contract and who is deemed to have been one of our affiliates during the preceding 90 days may sell such shares under Rule 144 without complying with the holding period condition of Rule 144. However, all stockholders who purchased shares of our common stock pursuant to a written compensatory benefit plan or contract are required to wait until 90 days after the date of this prospectus before selling such shares pursuant to Rule 701.

Registration Rights

After the completion of this offering, the holders of up to 156,613,818 shares of our common stock will be entitled to certain rights with respect to the registration of such shares under the Securities Act. The registration of these shares of our common stock under the Securities Act would result in these shares becoming eligible for sale in the public market without restriction under the Securities Act immediately upon the effectiveness of such registration. See the section titled “Description of Capital Stock-Registration Rights” for a description of these registration rights.

Registration Statement

After the completion of this offering, we intend to file a registration statement on Form S-8 under the Securities Act to register all of the shares of our common stock subject to equity awards outstanding or reserved for issuance under our equity compensation plans. The shares of our common stock covered by such registration statement will be eligible for sale in the public market without restriction under the Securities Act immediately upon the effectiveness of such registration statement, subject to vesting restrictions, the conditions of Rule 144 applicable to affiliates, and any applicable market stand-off agreements and lock-up agreements. See the section titled “Executive Compensation-Employee Benefit and Stock Plans” for a description of our equity compensation plans.

MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS FOR NON-U.S. HOLDERS

The following is a summary of the material U.S. federal income tax considerations of the ownership and disposition of our common stock acquired in this offering by a "non-U.S. holder" (as defined below), but does not purport to be a complete analysis of all the potential tax considerations relating thereto. This summary is based upon the provisions of the Internal Revenue Code of 1986, as amended (the Code), Treasury Regulations promulgated thereunder, administrative rulings and judicial decisions, all as of the date hereof. These authorities may be changed, possibly retroactively, so as to result in U.S. federal income tax consequences different from those set forth below. We have not sought, and do not intend to seek, any ruling from the Internal Revenue Service (IRS), with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS or a court will agree with such statements and conclusions.

This summary also does not address the tax considerations arising under the laws of any non-U.S., state or local jurisdiction or under U.S. federal gift and estate tax rules, and does not address tax considerations applicable to an investor's particular circumstances or to investors that may be subject to special tax rules, including, without limitation:

- banks, insurance companies, regulated investment companies, real estate investment trusts or other financial institutions;
- tax-exempt organizations;
- pension plans and tax-qualified retirement plans;
- controlled foreign corporations, passive foreign investment companies and corporations that accumulate earnings to avoid U.S. federal income tax;
- brokers or dealers in securities or currencies;
- traders in securities that elect to use a mark-to-market method of accounting for their securities holdings;
- persons that own, or are deemed to own, more than 5% of our capital stock (except to the extent specifically set forth below);
- certain former citizens or long-term residents of the United States;
- partnerships (or entities or arrangements classified as such for U.S. federal income tax purposes), other pass-through entities, and investors therein;
- persons who hold our common stock as a position in a hedging transaction, "straddle," "conversion transaction" or other risk reduction transaction;
- persons who hold or receive our common stock pursuant to the exercise of any option or otherwise as compensation;
- persons subject to special tax accounting rules as a result of any item of gross income with respect to our common stock being taken into account in an "applicable financial statement" as defined in Section 451(b) of the Code;
- persons who do not hold our common stock as a capital asset within the meaning of Section 1221 of the Code (generally, property held for investment); or
- persons deemed to sell our common stock under the constructive sale provisions of the Code.

In addition, if a partnership (or an entity or arrangement classified as a partnership for U.S. federal income tax purposes) holds our common stock, the tax treatment of a partner in such partnership or other entity generally will depend on the status of the partner and upon the activities of the partnership or other entity. A partner in a partnership or other such entity that will hold our common stock should consult his, her or its own tax advisor regarding the tax consequences of the ownership and disposition of our common stock through a partnership or other such entity, as applicable.

You are urged to consult your tax advisor with respect to the application of the U.S. federal income tax laws to your particular situation, as well as any tax consequences of the purchase, ownership and disposition of our common stock arising under the U.S. federal gift or estate tax rules or under the laws of any state or local, non-U.S. or other taxing jurisdiction or under any applicable tax treaty.

Non-U.S. Holder Defined

For purposes of this discussion, you are a "non-U.S. holder" if you are a beneficial owner of our common stock that, for U.S. federal income tax purposes, is not a partnership (including any entity or arrangement treated as a partnership and the equity holders therein) or:

- an individual who is a citizen or resident of the United States;
- a corporation or other entity taxable as a corporation created or organized in the United States or under the laws of the United States or any political subdivision thereof, or otherwise treated as such for U.S. federal income tax purposes;
- an estate whose income is subject to U.S. federal income tax regardless of its source; or
- a trust (i) whose administration is subject to the primary supervision of a U.S. court and that has one or more U.S. persons who have the authority to control all substantial decisions of the trust or (ii) that has made a valid election under applicable Treasury Regulations to be treated as a U.S. person.

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 on our common stock, those payments 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. To the extent those distributions exceed both our current and our accumulated earnings and profits, the excess will constitute a return of capital and will first reduce your basis in our common stock, but not below zero, and then will be treated as gain from the sale of stock.

Subject to the discussions below on effectively connected income and in the subsections titled "-Backup Withholding and Information Reporting" and "-Foreign Account Tax Compliance Act (FATCA)," any dividend paid to you generally will be subject to U.S. federal withholding tax either at a rate of 30% of the gross amount of the dividend or such lower rate as may be specified by an applicable income tax treaty between the United States and your country of residence. In order to receive a reduced treaty rate, you must provide us with a properly executed IRS Form W-8BEN or W-8BEN-E or other appropriate version of IRS Form W-8 certifying qualification for the reduced rate. If you are eligible for a reduced rate of U.S. federal withholding tax pursuant to an income tax treaty, you may obtain a refund of any excess amounts withheld by filing an appropriate claim for refund with the IRS. If you hold our common stock through a financial institution or other agent acting on your behalf, you will be required to provide appropriate documentation to the agent, which then will be required to provide certification to us or our paying agent, either directly or through other intermediaries.

Dividends received by you that are treated as effectively connected with your conduct of a U.S. trade or business (and, if required by an applicable income tax treaty, are attributable to a permanent establishment or fixed base maintained by you in the United States) are generally exempt from the 30% U.S. federal withholding tax, subject to the discussion below in the subsections titled "-Backup Withholding and Information Reporting" and "-Foreign Account Tax Compliance Act (FATCA)." In order to obtain this exemption, you must provide us with a properly executed IRS Form W-8ECI or applicable successor form properly certifying such exemption. Such effectively connected dividends, although not subject to U.S. federal withholding tax, are taxed at the same rates applicable to U.S. persons, net of certain deductions and credits, subject to an applicable income tax treaty

providing otherwise. In addition, if you are a corporate non-U.S. holder, dividends you receive that are effectively connected with your conduct of a U.S. trade or business may also be subject to a branch profits tax at a rate of 30% or such lower rate as may be specified by an applicable income tax treaty between the United States and your country of residence. You should consult your tax advisor regarding the tax consequences of the ownership and disposition of our common stock, including any applicable tax treaties that may provide for different rules.

Gain on Disposition of Common Stock

Subject to the discussion in the subsections titled "-Backup Withholding and Information Reporting," and "-Foreign Account Tax Compliance Act (FATCA)," you generally will not be required to pay U.S. federal income tax on any gain realized upon the sale or other disposition of our common stock unless:

- the gain is effectively connected with your conduct of a U.S. trade or business (and, if an applicable income tax treaty so provides, the gain is attributable to a permanent establishment or fixed base maintained by you in the United States);
- you are an individual who is present in the United States for a period or periods aggregating 183 days or more during the calendar year in which the sale or disposition occurs and certain other conditions are met; or
- our common stock constitutes a U.S. real property interest by reason of our status as a "U.S. real property holding corporation" (USRPHC), for U.S. federal income tax purposes at any time within the shorter of the five-year period preceding your disposition of, or your holding period for, our common stock, unless our common stock is regularly traded on an established securities market and you hold no more than 5% of our outstanding common stock, directly, indirectly and constructively, at all times, during the shorter of the five-year period ending on the date of the taxable disposition or your holding period for our common stock.

We believe that we are not currently and will not become a USRPHC for U.S. federal income tax purposes, and the remainder of this discussion so assumes. However, because the determination of whether we are a USRPHC depends on the fair market value of our U.S. real property interests relative to the fair market value of our U.S. and worldwide real property interests plus our other assets used or held for use in a trade or business, there can be no assurance that we will not become a USRPHC in the future. If we are a USRPHC and either our common stock is not regularly traded on an established securities market or you hold, or are treated as holding, more than 5% of our outstanding common stock, directly or indirectly, during the applicable testing period, you will generally be taxed on any gain in the same manner as gain that is effectively connected with the conduct of a U.S. trade or business, except that the branch profits tax generally will not apply. If we are a USRPHC and our common stock is not regularly traded on an established securities market, your proceeds received on the disposition of shares will also generally be subject to withholding at a rate of 15%. You are encouraged to consult your own tax advisors regarding the possible consequences to you if we are, or were to become, a USRPHC.

If you are a non-U.S. holder described in the first bullet above, you will be required to pay tax on the gain derived from the sale (net of certain deductions and credits) under the same U.S. federal income tax rates applicable to U.S. persons, and a corporate non-U.S. holder described in the first bullet above also may be subject to the branch profits tax at a 30% rate, or such lower rate as may be specified by an applicable income tax treaty. If you are an individual non-U.S. holder described in the second bullet above, you will be subject to tax on such gain at 30% (or such lower rate specified by an applicable income tax treaty) on the gain derived from the sale, which gain may be offset by U.S. source capital losses for the year, provided you have timely filed U.S. federal income tax returns with respect to such losses. You should consult your tax advisor regarding any applicable income tax treaties or other agreements that may provide for different rules.

Backup Withholding and Information Reporting

Generally, we must report annually to the IRS the amount of dividends paid to you, your name and address and the amount of tax withheld, if any. A similar report will be sent to you. Pursuant to applicable income tax treaties or other agreements, the IRS may make these reports available to tax authorities in your country of residence.

Payments of dividends on or of proceeds from the disposition of our common stock made to you may also be subject to backup withholding at a current rate of 24% unless you establish an exemption, for example, by properly certifying your non-U.S. status on a properly completed IRS Form W-8BEN or W-8BEN-E or another appropriate version of IRS Form W-8. Notwithstanding the foregoing, backup withholding may apply if either we or our paying agent has actual knowledge, or reason to know, that you are a U.S. person.

Backup withholding is not an additional tax; rather, the U.S. federal income tax liability of persons subject to backup withholding will be reduced by the amount of tax withheld. If withholding results in an overpayment of taxes, a refund or credit may generally be obtained from the IRS, provided that the required information is furnished to the IRS in a timely manner.

Foreign Account Tax Compliance Act (FATCA)

The Foreign Account Tax Compliance Act, Treasury Regulations issued thereunder and official IRS guidance (collectively FATCA), generally impose a U.S. federal withholding tax of 30% on dividends on, and, subject to the discussion of certain proposed Treasury Regulations below, the gross proceeds from a sale or other disposition of our common stock, paid to a "foreign financial institution" (as specially defined under these rules), unless such institution enters into an agreement with the U.S. government to, among other things, withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding the U.S. account holders of such institution (which includes certain equity and debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners) or otherwise establishes an exemption. FATCA also generally imposes a U.S. federal withholding tax of 30% on dividends on and, subject to the discussion of certain proposed Treasury Regulations below, the gross proceeds from a sale or other disposition of our common stock paid to a "non-financial foreign entity" (as specially defined under these rules) unless such entity provides the withholding agent with a certification identifying the substantial direct and indirect U.S. owners of the entity, certifies that it does not have any substantial U.S. owners, or otherwise establishes an exemption. The withholding tax will apply regardless of whether the payment otherwise would be exempt from withholding tax, including under the exemptions described above. Under certain circumstances, you might be eligible for refunds or credits of such taxes. An intergovernmental agreement between the United States and your country of residence may modify the requirements described in this section. Prospective investors should consult with their own tax advisors regarding the application of FATCA withholding to their investment in, and ownership and disposition of, our common stock.

The Treasury Secretary has issued proposed Treasury Regulations, which, if finalized in their present form, would eliminate withholding under FATCA with respect to payment of gross proceeds from a sale or other disposition of our common stock. In its preamble to such proposed Treasury Regulations, the U.S. Treasury stated that taxpayers may generally rely on the proposed Treasury Regulations until final regulations are issued.

The preceding discussion of U.S. federal tax considerations is for general information only. It is not tax advice to investors in their particular circumstances. Each prospective investor should consult its own tax advisor regarding the particular U.S. federal, state and local and non-U.S. tax consequences of purchasing, holding and disposing of our common stock, including the consequences of any proposed change in applicable laws.

UNDERWRITERS

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, Cowen and Company, LLC and Piper Sandler & Co. 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	
Cowen and Company, LLC	
Piper Sandler & Co.	
Chardan Capital Markets LLC	
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 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. The offering of the shares by the underwriters is subject to the receipt and acceptance and subject to the underwriters' right to reject any order in whole or in part.

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 common stock.

	Per Share	Total	
		No Exercise	Full Exercise
Public offering price	$	$	$
Underwriting discounts and commissions			
Proceeds, before expenses, to us	$	$	$

The estimated offering expenses payable by us, exclusive of the underwriting discounts and commissions, are approximately $. We have agreed to reimburse the underwriters for expense relating to clearance of this offering with the Financial Industry Regulatory Authority, Inc. (FINRA) 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 have applied to list our common stock on the Nasdaq Stock Market under the trading symbol “TNYA”.

In connection with this offering, we and all of our directors and officers and substantially all of our securityholders have agreed that, without the prior written consent of Morgan Stanley & Co. LLC, Cowen and Company, LLC and Piper Sandler & Co. on behalf of the underwriters, we and they will not, and will not publicly disclose an intention to, during the period from the date of this prospectus continuing through the date 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;
- file any registration statement with the Securities and Exchange Commission 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 agrees that, without the prior written consent of Morgan Stanley & Co. LLC, Cowen and Company, LLC and Piper Sandler & Co. 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; or
- engage in any hedging or other transaction designed or intended, or which could reasonably be expected to lead to or result in, a sale or disposition of any shares of common stock, or any securities convertible into or exercisable or exchangeable for common stock.

The restrictions described in the immediately preceding paragraph are subject to specified exceptions, including, without limitation:

- transactions related to shares of our common stock or other securities acquired in this offering or in open market transactions after the completion of this offering, provided that no filing under Section 16 of the Exchange Act is required or voluntarily made in connection with subsequent sales of the common stock or other securities acquired in such open market transactions;
- transfers of shares of our common stock or any security convertible into or exercisable or exchangeable for common stock as a bona fide gift or charitable contribution, by will, to an immediate family member or to certain trusts, provided that no filing under Section 16 of the Exchange Act shall be required or voluntarily made;
- transfers or distributions of shares of common stock or any other securities by a stockholder that is a trust to a trustor or beneficiary of the trust or to the estate of a beneficiary of such trust provided that no filing under Section 16 of the Exchange Act shall be required or voluntarily made;
- distributions of our common stock or any security convertible into or exercisable or exchangeable for common stock to limited partners, members, stockholders or holders of similar equity interests, or transfers of shares of common stock or any security convertible into or exercisable or exchangeable for common stock to another corporation, partnership, limited liability company, trust or other business entity that is an affiliate, or to any investment fund or other entity controlled or managed by an affiliate, provided that no filing under Section 16 of the Exchange Act shall be required or voluntarily made;

- transfers of our common stock or any security convertible into or exercisable or exchangeable for common stock pursuant to a domestic order or divorce, provided that any filing required by Section 16 of the Exchange Act shall clearly indicate in the footnotes thereto that such transfer is being made pursuant to these circumstances and that no other public announcement or filing shall be required or shall be voluntarily made;
- the exercise, vesting or settlement of options, restricted stock units or other equity awards granted under a stock incentive plan or other equity award plan as described in the prospectus, or transfers or disposition of shares of our common stock or any security convertible into or exercisable or exchangeable for common stock to us upon a vesting or settlement event of our restricted stock units or other securities or the exercise of warrants or options to purchase our securities on a "cashless" or "net exercise" basis to cover estimated taxes, withholding tax and remittance obligations in connection with such vesting, settlement or exercise, insofar as such vesting, settlement or exercise is effected solely by the surrender of outstanding options (or the common stock issuable upon the exercise thereof) or shares of common stock to the Company and our cancellation of all or a portion thereof, provided that no filing under Section 16 of the Exchange Act shall be required or voluntarily made within 90 days after the date of the prospectus and after such 90 days and during the Restricted Period any filing under Section 16 of the Exchange Act will include a statement that such transaction reflects these circumstances;
- transfers or dispositions of shares of common stock or any security convertible into or exercisable or exchangeable for common stock pursuant to any contractual arrangement in effect on the date of the underwriting agreement and disclosed to the underwriters in writing that provides for the repurchase by us of common stock or any security convertible into or exercisable or exchangeable for common stock pursuant to a repurchase right arising in connection with the termination of employment with or service to the Company; provided that any filing under Section 16 of the Exchange Act reporting a reduction in beneficial ownership of common stock indicates by footnote disclosure or otherwise the nature of the transfer or disposition pursuant to these circumstances and that no other public announcement or filing shall be required or shall be voluntarily made;
- transfers of our common stock or any security convertible into or exercisable or exchangeable for common stock in connection with a bona fide third-party tender offer, merger, consolidation or other similar transaction made to all holders of our common stock involving a change of control of our Company that has been approved by our board of directors and is open to all holders of our common stock, provided that in the event that such tender offer, merger, consolidation or other such transaction is not completed, the securities shall continue to be subject to the restrictions on transfer set forth in the lock-up agreement, and provided that no filing under Section 16 of the Exchange Act shall be required or voluntarily made;
- facilitating the establishment of a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of common stock, provided that (i) such plan does not provide for the transfer of common stock during the Restricted Period and (ii) to the extent a public announcement or filing under the Exchange Act, if any, is required of or voluntarily made by the Company regarding the establishment of such plan during the Restricted Period, such announcement or filing shall include a statement to the effect that no transfer of common stock may be made under such plan during the Restricted Period; and
- the conversion of outstanding preferred stock into shares of common stock in connection with the consummation of the offering or any conversion or reclassification of common stock as described in the prospectus, provided that such shares of common stock received upon conversion remain subject to the terms of the lock-up agreement and provided that any filing required by Section 16 of the Exchange Act related to any conversion or reclassification of common stock clearly indicate in the footnotes thereto the nature and conditions of such conversion or reclassification.

Certain of the exceptions described above are subject to a requirement that the donee, trustee, transferee or distributee enter into a lock-up agreement with the underwriters containing similar restrictions. Certain of the exceptions described above are subject to a requirement that the transfer or distribution does not involve a disposition for value.

Morgan Stanley & Co. LLC, Cowen and Company, LLC and Piper Sandler & Co. 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.

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 will be determined by negotiations between us and the representatives. Among the factors to be considered in determining the initial public offering price will be 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 of our common stock 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 of our common stock 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 restrictions 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 and United Kingdom

In relation to each Member State of the European Economic Area and the United Kingdom, each a Relevant State, no shares 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 shares 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 shares may be made to the public in that Relevant State at any time under the following exemptions under the Prospectus Regulation:

(a) to any legal entity which is a qualified investor as defined under the Prospectus Regulation;

(b) 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 underwriters; or

(c) 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 underwriter to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation and each person who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with each of the underwriters and us that it is a "qualified investor" within the meaning of Article 2(e) of the Prospectus Regulation.

In the case of any shares being offered to a financial intermediary as that term is used in the Prospectus Regulation, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public other than their offer or resale in a Relevant State to qualified investors as so defined or in circumstances in which the prior consent of the underwriters have been obtained to each such proposed offer or resale.

For the purposes of this provision, the expression an "offer to the public" in relation to 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 or subscribe for any shares, and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129 (as amended).

United Kingdom

In relation to the United Kingdom, no shares of common stock have been offered or will be offered pursuant to this offering to the public in the United Kingdom prior to the publication of a prospectus in relation to the shares that either (i) has been approved by the Financial Conduct Authority, or (ii) is to be treated as if it had been approved by the Financial Conduct Authority in accordance with the transitional provision in Regulation 74 of the Prospectus (Amendment etc.) (EU Exit) Regulations 2019, except that offers of shares may be made to the public in the United Kingdom at any time under the following exemptions under the UK Prospectus Regulation:

- to any legal entity which is a qualified investor as defined in Article 2 of the UK Prospectus Regulation;
- to fewer than 150 natural or legal persons (other than qualified investors as defined in Article 2 of the UK Prospectus Regulation); or
- in any other circumstances falling within section 86 of the Financial Services and Markets Act 2000 (FSMA),

provided that no such offer of shares shall require the us or any of the representatives to publish a prospectus pursuant to section 85 of the FSMA or supplement a prospectus pursuant to Article 23 of the UK 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 or subscribe for any shares, and the expression "UK Prospectus Regulation" means Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018.

We have not authorized and do not authorize the making of any offer of shares through any financial intermediary on their behalf, other than offers made by the underwriters with a view to the final placement of the shares as contemplated in this prospectus. Accordingly, no purchaser of the shares, other than the underwriters, is authorized to make any further offer of the shares on behalf of us or the underwriters.

In addition, in the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are "qualified investors" (as defined in the Prospectus Regulation) (i) who have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended, or the Order, and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as relevant persons) or otherwise in circumstances which have not resulted and will not result in an offer to the public of the shares in the United Kingdom within the meaning of the Financial Services and Markets Act 2000.

Any person in the United Kingdom that is not a relevant person should not act or rely on the information included in this document or use it as basis for taking any action. In the United Kingdom, any investment or investment activity that this document relates to may be made or taken exclusively by relevant persons.

Switzerland

The shares of common stock 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, us, 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, or FINMA, and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or 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 Center

This prospectus relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority, or 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, or ASIC, in relation to the offering. This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001, or the 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, or the 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 twelve 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 into account 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 for their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Hong Kong

The shares of common stock have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (b) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to the shares of common stock has been or may be issued or has been or may be in the possession of any person for the purposes of issuance, 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 of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares of common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

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), or 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, or 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 the shares of common stock may not be circulated or distributed, nor may the shares of 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, or the SFA, (ii) to a relevant person pursuant to Section 275(1), 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 the shares of common stock are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

(a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) 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

(b) a trust (where the trustee is not an accredited investor) the sole purpose of which is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares of common stock pursuant to an offer made under Section 275 of the SFA except:

(a) to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;

(b) where no consideration is or will be given for the transfer;

(c) where the transfer is by operation of law;

(d) as specified in Section 276(7) of the SFA; or

(e) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

United Arab Emirates

The shares have not been, and are not being, publicly offered, sold, promoted or advertised in the United Arab Emirates (including the Dubai International Financial Centre) other than in compliance with the laws of the United Arab Emirates (and the Dubai International Financial Centre) governing the issue, offering and sale of securities. Further, this prospectus does not constitute a public offer of securities in the United Arab Emirates (including the Dubai International Financial Centre) and is not intended to be a public offer. This prospectus has not been approved by or filed with the Central Bank of the United Arab Emirates, the Securities and Commodities Authority or the Dubai Financial Services Authority.

China

This prospectus does not constitute a public offer of shares, whether by sale or subscription, in the People's Republic of China, or the PRC. The shares are not being offered or sold directly or indirectly in the PRC to or for the benefit of, legal or natural persons of the PRC.

Further, no legal or natural persons of the PRC may directly or indirectly purchase any of the shares or any beneficial interest therein without obtaining all prior PRC's governmental approvals that are required, whether statutorily or otherwise. Persons who come into possession of this document are required by the issuer and its representatives to observe these restrictions.

Korea

The shares have not been and will not be registered under the Financial Investments Services and Capital Markets Act of Korea and the decrees and regulations thereunder, or the FSCMA, and the shares have been and will be offered in Korea as a private placement under the FSCMA. None of the shares may be offered, sold or delivered directly or indirectly, or offered or sold to any person for re-offering or resale, directly or indirectly, in Korea or to any resident of Korea except pursuant to the applicable laws and regulations of Korea, including the FSCMA and the Foreign Exchange Transaction Law of Korea and the decrees and regulations thereunder, or the FETL. Furthermore, the purchaser of the shares shall comply with all applicable regulatory requirements (including but not limited to requirements under the FETL) in connection with the purchase of the shares. By the purchase of the shares, the relevant holder thereof will be deemed to represent and warrant that if it is in Korea or is a resident of Korea, it purchased the shares pursuant to the applicable laws and regulations of Korea.

Taiwan

The shares have not been and will not be registered with the Financial Supervisory Commission of Taiwan pursuant to relevant securities laws and regulations and may not be sold, issued or offered within Taiwan through a public offering or in circumstances which constitutes an offer within the meaning of the Securities and Exchange Act of Taiwan that requires a registration or approval of the Financial Supervisory Commission of Taiwan. No person or entity in Taiwan has been authorized to offer, sell, give advice regarding or otherwise intermediate the offering and sale of the shares in Taiwan.

South Africa

Due to restrictions under the securities laws of South Africa, the shares are not offered, and the offer shall not be transferred, sold, renounced or delivered, in South Africa or to a person with an address in South Africa, unless one or other of the following exemptions applies:

i. the offer, transfer, sale, renunciation or delivery is to:

(a) persons whose ordinary business is to deal in securities, as principal or agent;

(b) the South African Public Investment Corporation;

(c) persons or entities regulated by the Reserve Bank of South Africa;

(d) authorized financial service providers under South African law;

(e) financial institutions recognized as such under South African law;

(f) a wholly-owned subsidiary of any person or entity contemplated in (c), (d) or (e), acting as agent in the capacity of an authorized portfolio manager for a pension fund or collective investment scheme (in each case duly registered as such under South African law); or

(g) any combination of the person in (a) to (f); or

ii. the total contemplated acquisition cost of the securities, for any single addressee acting as principal is equal to or greater than ZAR1,000,000.

No “offer to the public” (as such term is defined in the South African Companies Act, No. 71 of 2008 (as amended or re-enacted), or the South African Companies Act) in South Africa is being made in connection with the issue of the shares. Accordingly, this document does not, nor is it intended to, constitute a “registered prospectus” (as that term is defined in the South African Companies Act) prepared and registered under the South African Companies Act and has not been approved by, and/or filed with, the South African Companies and Intellectual Property Commission or any other regulatory authority in South Africa. Any issue or offering of the shares in South Africa constitutes an offer of the shares in South Africa for subscription or sale in South Africa only to persons who fall within the exemption from “offers to the public” set out in section 96(1)(a) of the South African Companies Act. Accordingly, this document must not be acted on or relied on by persons in South Africa who do not fall within section 96(1)(a) of the South African Companies Act (such persons being referred to as SA Relevant Persons). Any investment or investment activity to which this document relates is available in South Africa only to SA Relevant Persons and will be engaged in South Africa only with SA Relevant Persons.

Israel

This document does not constitute a prospectus under the Israeli Securities Law, 5728-1968, (Israeli Securities Law), and has not been filed with or approved by the Israel Securities Authority. In Israel, this prospectus is being distributed only to, and is directed only at, and any offer of the shares of common stock is directed only at, (i) a limited number of persons in accordance with the Israeli Securities Law and (ii) investors listed in the first addendum (the Addendum), to the Israeli Securities Law, consisting primarily of joint investment in trust funds, provident funds, insurance companies, banks, portfolio managers, investment advisors, members of the Tel Aviv Stock Exchange, underwriters, venture capital funds, entities with equity in excess of NIS 50 million and “qualified individuals,” each as defined in the Addendum (as it may be amended from time to time), collectively referred to as qualified investors (in each case, purchasing for their own account or, where permitted under the Addendum, for the accounts of their clients who are investors listed in the Addendum). Qualified investors are required to submit written confirmation that they fall within the scope of the Addendum, are aware of the meaning of same and agree to it.

LEGAL MATTERS

The validity of the issuance of our common stock offered in this prospectus will be passed upon for us by Wilson Sonsini Goodrich & Rosati, Professional Corporation, Palo Alto, California. Davis Polk & Wardwell LLP, Menlo Park, California, is acting as counsel for the underwriters.

EXPERTS

The financial statements as of December 31, 2019 and 2020, and for each of the two years in the period ended December 31, 2020, included in this prospectus have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report appearing herein. Such financial statements have been so included in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of our common stock offered by this prospectus. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement, as permitted by the rules and regulations of the SEC. For further information with respect to us and our common stock, we refer you to the registration statement, including the exhibits filed as a part of the registration statement. Statements contained in this prospectus concerning the contents of any contract or any other document is not necessarily complete. If a contract or document has been filed as an exhibit to the registration statement, please see the copy of the contract or document that has been filed. Each statement in this prospectus relating to a contract or document filed as an exhibit is qualified in all respects by the filed exhibit. The SEC also maintains an Internet website that contains the registration statement of which this prospectus forms a part, as well as the exhibits thereto. These documents, along with future reports, proxy statements and other information about us, are available at the SEC's website, www.sec.gov.

As a result of this offering, we will become subject to the information and reporting requirements of the Exchange Act and, in accordance with this law, will file periodic reports, proxy statements and other information with the SEC. These periodic reports, proxy statements and other information will be available for inspection and copying at the SEC's public reference facilities and the website of the SEC referred to above. We also maintain a website at www. tenayatherapeutics.com where these materials are available. Upon the completion of 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. Information contained on, or that can be accessible through, our website is not a part of this prospectus and the inclusion of our website address in this prospectus is an inactive textual reference only.

TENAYA THERAPEUTICS, INC.

INDEX TO FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors of Tenaya Therapeutics, Inc.

Opinion on the Financial Statements

We have audited the accompanying balance sheets of Tenaya Therapeutics, Inc. (the Company) as of December 31, 2019 and 2020, the related statements of operations and comprehensive loss, convertible preferred stock and stockholders' deficit, and cash flows, for each of the two years in the period ended December 31, 2020, and the related notes (collectively referred to as the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2020, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2020, in conformity with accounting principles generally accepted in the United States of America.

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 a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB 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. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

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/ Deloitte & Touche LLP

San Francisco, California
May 7, 2021

We have served as the Company's auditor since 2019.

TENAYA THERAPEUTICS, INC.

Balance Sheets
(in thousands, except share and per share data)

	December 31, 2019	December 31, 2020
ASSETS		
Current assets:		
Cash and cash equivalents	$ 23,872	$ 128,535
Investments in marketable securities	2,753	—
Prepaid expenses and other current assets	1,117	1,429
Total current assets	27,742	129,964
Property and equipment, net	9,575	17,185
Restricted cash, non-current	399	547
Other non-current assets	285	465
Total assets	$ 38,001	$ 148,161
LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	$ 600	$ 1,017
Accrued expenses and other current liabilities	1,959	3,161
Convertible preferred stock tranche liability	786	—
Deferred rent and other lease liabilities, current	775	863
Total current liabilities	4,120	5,041
Deferred rent and other lease liabilities, non-current	4,525	3,662
Other non-current liabilities	53	19
Total liabilities	8,698	8,722
Commitments and contingencies (Note 6)		
Convertible preferred stock, $0.0001 par value; 106,900,000 and 156,613,818 shares authorized as of December 31, 2019 and 2020; 68,418,509 and 146,961,309 shares issued and outstanding as of December 31, 2019 and 2020; aggregate liquidation preference of $227,900 as of December 31, 2020	73,042	220,754
Stockholders' deficit:		
Common stock, $0.0001 par value; 128,448,000 and 181,980,000 shares authorized as of December 31, 2019 and 2020; 7,161,040 and 7,261,976 shares issued and outstanding as of December 31, 2019 and 2020	1	1
Additional paid-in capital	763	1,583
Notes receivable from stockholders	(86)	(87)
Accumulated deficit	(44,417)	(82,812)
Total stockholders' deficit	(43,739)	(81,315)
Total liabilities, convertible preferred stock and stockholders' deficit	$ 38,001	$ 148,161

The accompanying notes are an integral part of these financial statements.

TENAYA THERAPEUTICS, INC.

Statements of Operations and Comprehensive Loss
(in thousands, except share and per share data)

	Year Ended December 31,	
	2019	2020
Operating expenses:		
Research and development	$ 23,148	$ 31,099
General and administrative	4,564	7,813
Total operating expenses	27,712	38,912
Loss from operations	(27,712)	(38,912)
Other income (expense), net:		
Interest income	453	87
Change in fair value of convertible preferred stock tranche liability	11	75
Other income (expense), net	1,017	355
Total other income (expense), net	1,481	517
Loss before income tax expense	(26,231)	(38,395)
Income tax expense	—	—
Net loss and comprehensive loss	$ (26,231)	$ (38,395)
Net loss per share, basic and diluted	$ (5.78)	$ (6.58)
Weighted-average shares used in computing net loss per share, basic and diluted	4,534,692	5,832,594

The accompanying notes are an integral part of these financial statements.

TENAYA THERAPEUTICS, INC.

Statements of Convertible Preferred Stock and Stockholders' Deficit
(in thousands, except share data)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Notes Receivable from Stockholders	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount				
Balance as of January 1, 2019	49,900,000	$ 43,393	6,559,040	$ 1	$ 229	$ (84)	$ (18,186)	$ (18,040)
Issuance of Series B convertible preferred stock, net of issuance costs of $221 and recognition of convertible preferred stock liability upon issuance of Series B convertible preferred stock of $797	18,518,509	29,649	—	—	—	—	—	—
Issuance of common stock to a related party for the grant of rights and licenses	—	—	100,000	—	75	—	—	75
Issuance of common stock upon exercise of stock options	—	—	538,500	—	5	—	—	5
Repurchase of common stock related to early exercise of options	—	—	(36,500)	—	—	—	—	—
Vesting of early exercised stock options	—	—	—	—	40	—	—	40
Notes receivable from stockholders	—	—	—	—	—	(2)	—	(2)
Stock-based compensation	—	—	—	—	414	—	—	414
Net loss and other comprehensive loss	—	—	—	—	—	—	(26,231)	(26,231)
Balance as of December 31, 2019	68,418,509	73,042	7,161,040	1	763	(86)	(44,417)	(43,739)
Issuance of Series B convertible preferred stock, net of issuance costs of $49 and settlement of convertible preferred stock tranche liability of $711	37,037,018	61,995	—	—	—	—	—	—
Issuance of Series C convertible preferred stock, net of issuance costs of $283	41,505,782	85,717	—	—	—	—	—	—
Issuance of common stock upon exercise of stock options	—	—	107,103	—	34	—	—	34
Repurchase of common stock related to early exercise of options	—	—	(6,167)	—	—	—	—	—
Vesting of early exercised stock options	—	—	—	—	45	—	—	45
Notes receivable from stockholders	—	—	—	—	—	(1)	—	(1)
Stock-based compensation	—	—	—	—	741	—	—	741
Net loss and other comprehensive loss	—	—	—	—	—	—	(38,395)	(38,395)
Balance as of December 31, 2020	146,961,309	$ 220,754	7,261,976	$ 1	$ 1,583	$ (87)	$ (82,812)	$ (81,315)

The accompanying notes are an integral part of these financial statements.

TENAYA THERAPEUTICS, INC.

Statements of Cash Flows
(in thousands)

	Year Ended December 31, 2019	2020
Cash flows from operating activities:		
Net loss	$ (26,231)	$ (38,395)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	1,989	2,483
Stock-based compensation	414	741
Accretion of discount on marketable securities	(96)	—
Loss on disposal of property and equipment	14	33
Non-cash stock expense related to the grant of rights and licenses from a related party	75	—
Change in fair value of convertible preferred stock tranche liability	(11)	(75)
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(378)	(312)
Other non-current assets	(15)	(180)
Accounts payable	397	142
Accrued expenses and other current liabilities	514	925
Deferred rent and other lease liabilities	(691)	(775)
Other non-current liabilities	(77)	(34)
Net cash used in operating activities	(24,096)	(35,447)
Cash flows from investing activities:		
Purchases of property and equipment	(2,926)	(9,763)
Purchases of marketable securities	(12,657)	—
Proceeds from maturities of marketable securities	10,000	2,753
Net cash used in investing activities	(5,583)	(7,010)
Cash flows from financing activities:		
Proceeds from issuance of Series B convertible preferred stock, net of issuance costs	30,446	61,284
Proceeds from issuance of Series C convertible preferred stock, net of issuance costs	—	85,951
Proceeds from exercise of stock options	68	34
Repurchases of common stock	(3)	(1)
Net cash provided by financing activities	30,511	147,268
Net increase in cash, cash equivalents and restricted cash	832	104,811
Cash, cash equivalents and restricted cash at beginning of period	23,439	24,271
Cash, cash equivalents and restricted cash at end of period	$ 24,271	$ 129,082
Components of cash, cash equivalents and restricted cash:		
Cash and cash equivalents	$ 23,872	$ 128,535
Restricted cash, non-current	399	547
Cash, cash equivalents and restricted cash	$ 24,271	$ 129,082
Supplemental disclosure of non-cash investing and financing activities:		
Property and equipment included in accounts payable and accrued expenses and other current liabilities	$ 110	$ 364
Settlement of convertible preferred stock tranche liability in connection with the issuance of Series B convertible preferred stock	$ —	$ 711
Deferred offering costs related to Series C convertible preferred stock included in accounts payable and accrued expenses and other current liabilities	$ —	$ 234

The accompanying notes are an integral part of these financial statements.

1. Organization and Description of Business

Description of the Business

Tenaya Therapeutics, Inc. (the Company) was incorporated in the state of Delaware in August 2016 and is headquartered in South San Francisco, California. The Company is a preclinical stage biotechnology company focused on discovering, developing and delivering curative therapies that address the underlying drivers of heart disease. The Company is advancing product candidates from three distinct but interrelated product platforms: gene therapy, cellular regeneration and precision medicine.

Liquidity

The Company has incurred net losses since inception and expects such losses to continue in the future as it conducts research and development activities. As of December 31, 2020, the Company had an accumulated deficit of $82.8 million. The Company incurred a net loss of $26.2 million and $38.4 million during the years ended December 31, 2019 and 2020. The Company had $128.5 million of cash and cash equivalents as of December 31, 2020. In addition, in January 2021, the Company raised $20.0 million in gross proceeds from the issuance and sale of shares of its Series C convertible preferred stock (see Note 13).

Management recognizes the need to raise capital to fully implement its business plan. The Company has historically financed its operations primarily with proceeds from the issuance of its convertible preferred stock and may seek to raise capital through equity financings, debt financings, license agreements, collaborative agreements or other sources of financing. Management believes that its existing cash and cash equivalents as of December 31, 2020, together with the funds raised in January 2021 from the sale of Series C convertible preferred stock, are sufficient to fund the Company's operations for at least the next twelve months following the issuance date of these financial statements.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP).

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. Significant estimates and assumptions made in the accompanying financial statements include, but are not limited to, the fair value of common stock, the valuation of equity-based awards, the useful lives of property and equipment, the fair value of the convertible preferred stock tranche liability, accrued expenses related to research and development activities and the valuation allowance for deferred tax assets. Management bases its estimates on historical experience, the current economic environment, and on various other assumptions that are believed to be reasonable under the circumstances. Actual results may differ from those estimates or assumptions.

Fair Value Measurements

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability, or an exit price, in the principal or most advantageous market for that asset or liability in an orderly transaction between market participants on the measurement date. Fair value measurement establishes a three-level fair value hierarchy that requires an entity to maximize the use of observable inputs, where available, and minimize the use of unobservable inputs when measuring fair value. The three-level hierarchy of inputs is as follows:

Level 1—Observable inputs such as unadjusted quoted prices in active markets for identical assets or liabilities as of the measurement date;

Level 2—Inputs (other than quoted prices included within Level 1) that are directly observable for the asset or liability or indirectly observable for similar assets or liabilities;

Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to determining the fair value of the assets or liabilities.

To the extent that the valuation 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. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

The Company's cash and cash equivalents, prepaid expenses and other current assets, accounts payable and accrued expenses and other current liabilities approximate their fair value due to their short-term nature.

Concentrations of Credit Risk

Financial instruments, which potentially subject the Company to concentration of risk, consist principally of cash, cash equivalents and marketable securities. All of the Company's cash, cash equivalents and marketable securities are invested through banks and other accredited financial institutions in the United States. Such amounts may exceed federally insured limits. The Company has not experienced any losses on its deposits of cash and cash equivalents.

Risks and Uncertainties

The Company is subject to certain risks similar to that of other early-stage biopharmaceutical companies, including, but not limited to, the ability to obtain future financing, possible failure of future clinical trials, the need to obtain regulatory approvals for its product candidates, the need to successfully commercialize and gain market acceptance of the Company's product candidates, competitive developments, protection of the proprietary technology, the ability to make milestone, royalty or other payments due under licensing agreements, and the Company's ability to attract and retain employees necessary to support its growth.

The ongoing COVID-19 pandemic has disrupted and may continue to disrupt the Company's business and delay its programs and timelines. The Company does not yet know the full extent of potential delays to its preclinical trials, which could prevent or delay the Company from initiating clinical trials and obtaining approval for its product candidates. The extent to which the COVID-19 pandemic may impact the Company's future operating results and financial condition is uncertain.

Segment Information and Geographical Information

The Company has one operating segment and one reportable segment, which is the business of developing treatments that address heart failure. The Company's chief operating decision maker, its Chief Executive Officer, reviews financial information on an aggregate basis for the purpose of allocating resources and evaluating financial performance. All of the Company's assets are located in the United States.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with an original maturity of three months or less on the date of purchase to be cash equivalents. Cash equivalents primarily consist of money market funds, commercial paper and U.S. government agencies bonds that are stated at fair value.

Restricted Cash

As of December 31, 2019 and 2020, the Company's restricted cash of $0.4 million and $0.5 million represent security deposits for the Company's operating leases in South San Francisco, California. The security deposits are in the form of a letter of credit secured by restricted cash.

Marketable Securities

The Company invests in marketable securities, primarily securities issued by the U.S. government and its agencies as well as commercial paper. All marketable securities have been classified as available-for-sale and are carried at estimated fair value as determined based upon quoted market prices or pricing models for similar securities. Management determines the appropriate classification of its marketable debt securities at the time of purchase and reevaluates such designation at each balance sheet date. Unrealized gains and losses are excluded from earnings and are reported as a component of other comprehensive loss. Realized gains and losses and declines in fair value judged to be other than temporary, if any, on available-for-sale securities are included in other income (expense), net. There are no material realized gains or losses on marketable securities for all periods presented. The cost of securities sold is based on the specific-identification method. Interest earned on marketable securities is included in interest income.

Property and Equipment, Net

Property and equipment are stated at cost, less accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the assets, generally three to five years. Leasehold improvements are amortized over the shorter of the assets' expected lives or the remaining lease term. Costs for capital assets not yet placed into service are capitalized as construction in progress and are not depreciated until the asset is placed in service.

Upon retirement or sale, the cost of disposed assets and their related accumulated depreciation are removed from the balance sheets. Any resulting gains or losses on dispositions of property and equipment are included as a component of other income (expense), net, within the Company's statements of operations and comprehensive loss. Repair and maintenance costs, which are not considered improvements and do not extend the useful life of property and equipment, are expensed as incurred.

Impairment for Long-Lived Assets

Long-lived assets, including construction in progress, are reviewed for impairment annually or whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by comparing the carrying amount of an asset to the estimated undiscounted future net cash flows expected to be generated by the asset. If the carrying amount of the asset exceeds its estimated future cash flows, an impairment charge is recognized in the amount by which the carrying amount of the asset exceeds the fair value of the asset. Fair value is determined through various valuation techniques including discounted cash flow models, quoted market values and third-party independent appraisals, as considered necessary. There was no impairment of long-lived assets for any of the periods presented.

Convertible Preferred Stock Tranche Liability

The obligation to issue additional shares of the Company's Series B convertible preferred stock at a fixed price on future dates was determined to be a freestanding financial instrument that is accounted for as a liability. On issuance, the Company recorded the convertible preferred stock tranche liability on the balance sheet at its estimated fair value. The liability is subject to remeasurement at each balance sheet date, with changes in fair value recognized as a gain or loss on remeasurement as a component of other income (expense), net in the

statements of operations and comprehensive loss until settlement or extinguishment. The convertible preferred stock tranche liability was settled upon the second and third closings of the Company's Series B convertible preferred stock in March and August 2020, respectively.

Leases

The Company records rent expense on a straight-line basis over the life of the lease from the date that it obtains the legal right to use and control the leased space. In cases where there is a free rent period or future fixed rent escalations, the Company records a deferred rent liability. Deferred rent consists of the difference between cash payments and the rent expense recognized.

As part of its lease agreements, the Company receives tenant improvement allowances from landlords. The Company recognizes these allowances as a leasehold incentive obligation, included in deferred rent and other lease liabilities, and amortizes allowances on a straight-line basis over the life of the lease. Allowances which contractually are not required to be paid back to the landlord, are amortized as a reduction to rent expense. Allowances which contractually are required to be paid back to the landlord are amortized over the life of the lease with a portion of the payment decreasing the allowance balance and recorded as an increase to rent expense.

Research and Development Expenses

Research and development (R&D) costs are expensed as incurred. Research and development costs include, among others, consulting fees, salaries, benefits, travel, stock-based compensation, laboratory supplies and other non-capital equipment utilized for in-house research, allocated facilities and overhead costs, amounts owed under licensing agreements, amounts paid to contract research organizations (CRO) that conduct research and development activities on the Company's behalf and costs related to compliance with regulatory requirements.

Goods or services incurred for research and development activities that have not yet been invoiced are recorded as liabilities within accrued expenses and other current liabilities on the Company's balance sheets. Amounts recorded for unbilled services often represent estimates, which are typically based on contracted amounts for the proportion of work performed and determined through analysis with internal personnel and external service providers as to the progress or stage of completion of the associated services. The Company makes judgments and estimates in determining the accrued and other current liabilities balance. If the actual timing of the performance of services or the level of effort varies from the estimate, the Company adjusts accrued expenses or prepaid expenses accordingly, which impact research and development expenses. The Company has not experienced any material differences between accrued costs and actual costs incurred. Changes in these estimates that result in material changes to the Company's accrued costs could materially affect the Company's results of operations.

The Company has and may continue to acquire the rights to licensed technology that represents in-process research and development to use and develop in the commercialization of new product candidates. The upfront payments made to acquire licenses, product or rights, or payments made related to future milestone payments are recognized as research and development expenses provided that there is no alternative future use of the rights in other research and development projects, up to the point of regulatory approval. Milestone payments are expensed when the specific milestone has been achieved.

Non-refundable advance payments for goods or services to be rendered as part of future research and development activities are capitalized on the Company's balance sheets until the goods or services are received.

Classification between prepaid expenses and other current assets and other non-current assets is based on an evaluation of when the goods will be delivered and/or services will be performed, with such amounts subsequently amortized to expense once incurred.

Stock-Based Compensation

The Company measures and records expense related to all equity awards granted to employees and non-employees in the statements of operations and comprehensive loss based on their grant date fair values, including stock options and restricted stock awards. For stock-based awards that vest subject to the satisfaction of a service requirement, the expense is recognized using the straight-line method over the requisite service period, which is generally the vesting period. Forfeitures are recognized as they occur.

For purposes of determining the estimated fair value of options granted to employees and nonemployees, the Company uses the Black-Scholes option pricing model.

The fair value of restricted stock awards is determined on the date of grant based on the estimated fair value of the Company's common stock on that date.

Income Taxes

The Company accounts for income taxes using the asset and liability method. The Company recognizes deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements or tax returns. Deferred tax assets and liabilities are determined based on the difference between the financial statement and tax basis 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 for deferred tax assets if it is more likely than not that some portion or all of the deferred tax assets will not be realized. In evaluating the ability to recover its deferred income tax assets, the Company considers all available positive and negative evidence, including its operating results, ongoing tax planning and forecasts of future taxable income on a jurisdiction-by-jurisdiction basis. In the event the Company determines that it would be able to realize its deferred income tax assets in the future in excess of their net recorded amount, it would make an adjustment to the valuation allowance that would reduce the provision for income taxes. Conversely, in the event that all or part of the net deferred tax assets are determined not to be realizable in the future, an adjustment to the valuation allowance would be charged to earnings in the period when such determination is made. As of December 31, 2019 and 2020, the Company has recorded a full valuation allowance on its net deferred tax assets.

Tax benefits related to uncertain tax positions are recognized when it is more likely than not that a tax position will be sustained during an audit. Interest and penalties, if any, related to unrecognized tax benefits are included within the provision for income tax.

Net Loss Per Share

Basic net loss per share is calculated by dividing the net loss by the weighted-average number of shares of the Company's common stock outstanding for the period, without consideration for potential dilutive shares of common stock. As the Company is in a loss position for the periods presented, diluted net loss per share is the same as basic net loss per share, since the effects of potentially dilutive securities are antidilutive. Shares related to early exercised stock options and restricted stock that are subject to repurchase are excluded from the basic and diluted net loss per share calculation until the Company's repurchase right lapses.

Comprehensive Loss

Comprehensive loss includes net loss and certain changes in stockholders' deficit that are excluded from net loss. The Company's comprehensive loss is comprised of unrealized gains and losses on the Company's marketable securities, which were immaterial for all periods presented. Accordingly, comprehensive loss is the same as net loss.

Emerging Growth Company Status

The Company is an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012 (JOBS Act). 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. The Company has elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date that it (a) is no longer an emerging growth company or (b) affirmatively and irrevocably opts out of the extended transition period provided in the JOBS Act. 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.

Recently Adopted Accounting Standards

On January 1, 2019, the Company adopted Financial Accounting Standards Board (FASB) Accounting Standards Update (ASU) No. 2016-18, *Statement of Cash Flows* (Topic 230)—Restricted Cash (ASU 2016-18). This standard requires amounts generally described as restricted cash and restricted cash equivalents to be included with cash and cash equivalents when reconciling beginning-of-period and end-of-period total amounts shown on the statements of cash flows. The provisions of ASU 2016-18 are applied retrospectively. The adoption of this standard did not have a material impact on the Company's financial statements.

On January 1, 2019, the Company early adopted FASB ASU No. 2018-07, *Compensation-Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting*. This standard simplifies several aspects of the accounting for nonemployee share-based payment transactions resulting from expanding the scope of Topic 718 to include share-based payment transactions for acquiring goods and services from nonemployees. The adoption of this standard did not have a material impact on the Company's financial statements.

On January 1, 2020, the Company adopted FASB ASU No. 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement*. This standard eliminates, modifies and adds disclosure requirements for fair value measurements. The Company adopted the removed and modified disclosures on a retrospective basis and the new disclosures on a prospective basis. The adoption of this standard did not have a material impact on the Company's financial statements.

Recently Issued Accounting Pronouncements Not Yet Adopted

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*, as amended, which requires lessees to recognize operating and financing lease liabilities and corresponding right-of-use assets on the balance sheet for all leases with lease terms of more than twelve months. In July 2018, the FASB issued ASU No. 2018-11, *Leases, Targeted Improvements (Topic 842)*, an update which provides an alternative transition method, in addition to the existing modified retrospective transition method, by allowing entities to initially apply the new lease standard at the adoption date and recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. As an emerging growth company, these new lease standards are effective for the Company for fiscal year beginning January 1, 2022, with early adoption permitted. The Company is evaluating the impact of this standard on its financial statements.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* (ASU 2016-13), which replaces the existing incurred loss impairment model with an expected credit loss model. This standard will require companies to recognize an allowance for credit losses on available-for-sale debt securities rather than the current approach of recording a reduction to the carrying value of the asset. As an emerging growth company, ASU 2016-13 is effective for the Company for fiscal year beginning January 1, 2023. The Company is evaluating the impact of this standard on its financial statements.

In December 2019, the FASB issued ASU No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes* (ASU 2019-12), which is intended to simplify the accounting for income taxes. This standard eliminates certain exceptions to the approach for intra period tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. As an emerging growth company, ASU 2019-12 is effective for the Company for fiscal year beginning January 1, 2022. The Company is evaluating the impact of this standard on its financial statements.

3. Fair Value Measurements

Financial assets and liabilities are recognized at fair value on a recurring basis. The following table summarize the Company's financial assets and liabilities measured at fair value on a recurring basis by level within the fair value hierarchy:

		December 31, 2019			
	Valuation Hierarchy	Amortized Cost	Unrealized Gain	Unrealized Loss	Fair Value
		(in thousands)			
Assets:					
Cash equivalents:					
Money market funds	Level 1	$ 19,373	$ —	$ —	$ 19,373
Commercial paper	Level 2	2,499	—	—	2,499
Government agencies bonds	Level 2	1,001	—	—	1,001
Marketable securities:					
U.S. treasuries	Level 1	2,753	—	—	2,753
Total financial assets		$ 25,626	$ —	$ —	$ 25,626
Liabilities:					
Convertible preferred stock tranche liability	Level 3	$ 786	$ —	$ —	$ 786
Total financial liabilities		$ 786	$ —	$ —	$ 786

		December 31, 2020			
	Valuation Hierarchy	Amortized Cost	Unrealized Gain	Unrealized Loss	Fair Value
		(in thousands)			
Assets:					
Cash equivalents:					
Money market funds	Level 1	$ 127,535	$ —	$ —	$ 127,535
Total financial assets		$ 127,535	$ —	$ —	$ 127,535

Money market funds and U.S. treasuries are classified as Level 1 because they are valued using quoted market prices in active markets for identical assets. Financial instruments classified within Level 2 of the fair value hierarchy are valued based on the observable inputs or can be derived from non-binding quotes from its investment managers, which are based on proprietary valuation models of independent pricing services. These models generally use inputs such as observable market data, quoted market prices for similar instruments, or historical pricing trends of a security relative to its peers.

There were no unrealized losses as of December 31, 2019 and 2020. All available-for-sale marketable securities held as of December 31, 2019 had contractual maturities of less than one year. There were no available-for-sale marketable securities as of December 31, 2020.

Convertible Preferred Stock Tranche Liability

The Company's convertible preferred stock tranche liability (see Note 7) was determined based on significant inputs not observable in the market, which represents a Level 3 measurement within the fair value hierarchy. Fair value was calculated using an option pricing model that required significant unobservable inputs supported by little or no market activity. The convertible preferred stock tranche liability is considered a non-contingent forward and the standard forward pricing (SFP) model was used with the following key assumptions: (a) calculation of an expected term and (b) a risk-free interest rate. On the second and third closings of the Company's Series B convertible preferred stock financings in March and August 2020, the convertible preferred stock tranche liability was settled and reclassified to Series B convertible preferred stock. Accordingly, there is no convertible preferred stock tranche liability as of December 31, 2020.

The following table summarizes the significant unobservable assumptions used to value the convertible preferred stock tranche liability as of December 31, 2019 and August 24, 2020, the date immediately before the settlement of the tranche liability:

	December 31, 2019	August 24, 2020
Term to Valuation Date (in years)	0.25 – 0.75	0.00
Discount Rate	5.00%	5.00%

The following table summarizes the changes in the estimated fair value of the Company's convertible preferred stock tranche liability measured on a recurring basis using significant Level 3 inputs:

	December 31,	
	2019	2020
	(in thousands)	
Beginning balance	$ —	$ 786
Recognition of convertible preferred stock tranche liability upon the issuance of Series B convertible preferred stock	797	—
Change in fair value upon remeasurement	(11)	(75)
Settlement of convertible preferred stock tranche liability on second and third closings of the Series B convertible preferred stock	—	(711)
Ending balance	$ 786	$ —

4. Balance Sheet Components

Property and Equipment, Net

Property and equipment, net, consists of the following:

	December 31,	
	2019	2020
	(in thousands)	
Leasehold improvements	$ 7,206	$ 7,237
Laboratory equipment	5,846	8,182
Furniture and fixtures	519	534
Computer equipment and software	237	257
Construction in progress	—	7,678
Total property and equipment	13,808	23,888
Less: accumulated depreciation and amortization	(4,233)	(6,703)
Total property and equipment, net	$ 9,575	$ 17,185

Depreciation and amortization expense for the years ended December 31, 2019 and 2020 was approximately $2.0 million and $2.5 million. Construction in progress relates to the Company's manufacturing and office space located in Union City, California (see Note 13), and consists primarily of capitalized machinery and equipment as the Company builds-out its manufacturing facility.

Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consist of the following:

	December 31,	
	2019	2020
	(in thousands)	
Accrued compensation and related expenses	$ 1,121	$ 2,090
Accrued research and development expenses	296	391
Accrued professional services	168	328
Accrued property and equipment	59	231
Other current liabilities	315	121
Total accrued liabilities	$ 1,959	$ 3,161

5. Collaboration and License Agreements

Gladstone Master Collaboration Agreement

In October 2016, the Company entered into a Master Collaboration Agreement (MCA) with a related party, Gladstone Institutes (Gladstone), to collaborate on discovering therapies for the treatment of congestive heart failure and other diseases and conditions as mutually agreed. Under the MCA, the Company was required to provide minimum collaboration funding of $3.6 million during the first two years. During the year ended December 31, 2019, Gladstone completed the collaboration under the MCA and the Company satisfied the minimum collaboration funding requirement of $3.6 million. In addition, on the third-year anniversary of the MCA's effective date in October 2019, pursuant to the MCA, the Company issued 100,000 shares of the Company's common stock to Gladstone in consideration for certain patent rights and technology created in the course of performance of the collaboration being licensed to the Company under the Gladstone License Agreement (as defined below). The related cost was recognized as research and development expenses since the technology acquired had no alternative future use.

During the year ended December 31, 2019, the Company recorded research and development expenses of $0.4 million pursuant to the MCA. There was no expense recognized during the year ended December 31, 2020 pursuant to the MCA.

Gladstone License Agreement

In connection and concurrent with the execution of the MCA, the Company entered into a license agreement with Gladstone (Gladstone License Agreement), pursuant to which Gladstone granted the Company a worldwide, royalty-bearing exclusive patent license and a non-exclusive technology license to develop and commercialize certain products for certain diseases. Upon the execution of the Gladstone License Agreement, the Company paid a non-refundable upfront license fee of $0.1 million and issued 750,000 shares of the Company's common stock to Gladstone. Pursuant to the Gladstone License Agreement, the Company is obligated, among other things, to pay Gladstone (i) annual license maintenance fees ranging from $25,000 up to $0.1 million per year, which will be creditable against royalties paid in the following twelve month period, (ii) milestone payments up to $4.1 million for royalty-bearing products directed to a particular target, which are contingent upon achieving specific clinical and commercialization milestone events, and (iii) tiered low-single digit royalties on future net sales of each royalty-bearing product. Under the agreement, the Company is subject to diligence requirements to

develop and commercialize at least one royalty-bearing product. The Company may pay $50,000 to $100,000 to extend the deadline for its diligence milestone obligations for up to four additional one-year terms. As of December 31, 2020, the Company has not recognized any milestone and royalty payments under the Gladstone License Agreement.

During the years ended December 31, 2019 and 2020, the amounts recorded as research and development expenses related to annual license fees payable pursuant to the Gladstone License Agreement were not material.

University of Texas Southwestern License Agreement

In January 2020, the Company entered into a license agreement with the University of Texas Southwestern (UTSW License), pursuant to which UTSW granted the Company a royalty-bearing exclusive and sublicensable patent license and a non-exclusive, non-sublicensable license for mutually agreed upon development activities. Under the UTSW License, the Company is obligated to pay UTSW (i) a non-refundable upfront license fee of $0.1 million, (ii) milestone payments up to a total of $14.8 million in aggregate, which are contingent upon achieving specific development and commercialization milestone events, and (iii) royalties on future net sales of each royalty-bearing product ranging in the low-single digits. As of December 31, 2020, the Company has not recognized any milestone and royalty payments under the UTSW License.

During the year ended December 31, 2020, the Company recorded research and development expenses of $0.1 million related to the upfront license fee payable pursuant to the UTSW License.

Other License Agreements

In addition to the agreements described above, the Company has also entered into other license agreements with various institutions and business entities, none of which are material individually or in the aggregate.

6. Commitments and Contingencies

Facility Leases

In December 2016, the Company entered into a lease agreement (Lease Agreement or Lease) for office and laboratory space in South San Francisco, California. The Lease expires in May 2025 and the Company may renew the lease term for two additional five-year periods. In connection with the execution of the Lease, the Company provided the landlord with a security deposit of $0.4 million in the form of a letter of credit, which is collateralized by a restricted cash deposit and recorded as restricted cash, non-current on the balance sheets as of December 31, 2019 and 2020.

Pursuant to the Lease Agreement, the Company received a tenant improvement allowance (TIA) of $5.8 million in aggregate for leasehold improvements to the facility. As of December 31, 2020, the remaining balance of the TIA that is recorded as a component of deferred rent on the balance sheet is $3.2 million.

In December 2020, the Company entered into a sublease agreement for additional office and laboratory space in South San Francisco, California with a lease term that expires on November 30, 2021. The Company provided the landlord a security deposit of $0.1 million in the form of a letter of credit, which is collateralized by a restricted cash deposit and recorded as restricted cash, non-current on the balance sheet as of December 31, 2020.

During the years ended December 31, 2019 and 2020, the Company recognized rent expense of $2.1 million and $2.4 million.

The following table summarizes the future minimum lease payments for the Company's office space and laboratory facilities as of December 31, 2020:

	Amount
Year ending December 31,	
2021	$ 3,752
2022	2,206
2023	2,283
2024	2,363
2025	999
Total future minimum lease payments	$ 11,603

The Company has previously entered into agreements to sublease portions of the Company's facilities in South San Francisco to two different subtenants, both of which have expired as of December 31, 2020. Pursuant to the sublease agreements, the Company received sublease income of $1.0 million and $0.4 million during the years ended December 31, 2019 and 2020, which are recognized as a component of other income (expense), net within the Company's statements of operations and comprehensive loss.

Purchase Commitments

The Company also entered into contractual agreements with various suppliers in the normal course of its business, including vendors that provide machinery and equipment. All contracts are terminable, with varying provisions regarding termination. If a contract with a specific vendor were to be terminated, the Company would only be obligated for the products or services that the Company had received through the time of termination.

Indemnification

In the normal course of business, the Company enters into agreements that may include indemnification provisions. Pursuant to such agreements, the Company may indemnify, hold harmless and defend an indemnified party for losses suffered or incurred by the indemnified party. In some cases, the indemnification will continue after the termination of the agreement. The maximum potential amounts of future payments the Company could be required to make under these provisions is not determinable. In addition, the Company has entered into indemnification agreements with its directors and certain officers that may require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors or officers. As of December 31, 2019 and 2020, the Company does not have any material indemnification claims that were probable or reasonably possible and, consequently, has not recorded any related liabilities.

7. Convertible Preferred Stock

Series B Convertible Preferred Stock Financing

In August 2019, the Company entered into a Series B preferred stock purchase agreement (Series B SPA) for the issuance of up to 55,555,527 shares of the Company's Series B convertible preferred stock at a purchase price of $1.656 per share in multiple closings. The Company completed the initial closing in August 2019, whereby 18,518,509 shares of Series B convertible preferred stock were issued for gross proceeds of $30.7 million. Pursuant to the Series B SPA, the Company was permitted to sell additional shares in subsequent closings contingent upon the approval of the Company's board of directors.

On issuance, the Company determined that its obligation to issue additional shares of Series B convertible preferred stock in future closings was a freestanding instrument that should be classified as a liability on the Company's balance sheets. The freestanding financial instrument, or convertible preferred stock tranche liability, was recorded at fair value on issuance of $0.8 million with the remaining proceeds being allocated to the Series B

convertible preferred stock. Any changes in fair value of convertible preferred stock tranche liability in subsequent reporting periods are recognized as a component of other income (expense), net in the statements of operations and comprehensive loss (see Note 3).

In March 2020, the Company completed its second closing of Series B convertible preferred stock financing and issued 18,518,509 shares of Series B convertible preferred stock at the fixed purchase price of $1.656 per share for gross proceeds of $30.7 million, thereby settling a portion of the convertible preferred stock tranche liability. Immediately prior to the second closing, the Company measured the convertible preferred stock tranche liability to its then fair value. Upon the closing of the second tranche, the convertible preferred stock tranche liability was partially settled and the related balance of the liability of $27,000 was reclassified to Series B convertible preferred stock.

In August 2020, the Company completed its third closing of Series B convertible preferred stock financing and issued 18,518,509 shares of Series B convertible preferred stock at the purchase price of $1.656 per share for gross proceeds of $30.7 million, thereby settling the remainder of the convertible preferred stock tranche liability. Immediately prior to the third closing, the Company measured the convertible preferred stock tranche liability to its then fair value. Upon the closing of the third tranche, the remaining convertible preferred stock tranche liability was settled and the balance of the liability of $0.7 million was reclassified to Series B convertible preferred stock.

Series C Convertible Preferred Stock Financing

In December 2020, the Company entered into a Series C preferred stock purchase agreement (Series C SPA) for the issuance of up to 51,158,291 shares of the Company's Series C convertible preferred stock at a purchase price of $2.072 per share in two closings. The Company completed the initial closing in December 2020, whereby 41,505,782 shares of Series C convertible preferred stock were issued for gross proceeds of $86.0 million.

The Company's convertible preferred stock consists of the following:

	December 31, 2019			
	Shares Authorized	Shares Issued and Outstanding	Net Carrying Value	Liquidation Preference
	(in thousands, except shares and original issue price)			
Convertible Preferred Stock				
Series A	49,900,000	49,900,000	$ 43,393	$ 49,900
Series B	57,000,000	18,518,509	29,649	30,667
Total	106,900,000	68,418,509	$ 73,042	$ 80,567

	December 31, 2020			
	Shares Authorized	Shares Issued and Outstanding	Net Carrying Value	Liquidation Preference
	(in thousands, except shares and original issue price)			
Convertible Preferred Stock				
Series A	49,900,000	49,900,000	$ 43,393	$ 49,900
Series B	55,555,527	55,555,527	91,644	92,000
Series C	51,158,291	41,505,782	85,717	86,000
Total	156,613,818	146,961,309	$ 220,754	$ 227,900

The Company classifies its convertible preferred stock outside of total stockholders' deficit because, in the event of certain change of control events that are not solely within the control of the Company (including liquidation, sale or transfer of the Company), the shares would become redeemable at the option of the holders.

As a result, the Company has classified its convertible preferred stock as mezzanine equity on the balance sheets as the preferred stock is contingently redeemable. The Company did not adjust the carrying values of the convertible preferred stock to the deemed liquidation values of such shares since a liquidation event was not probable as of each reporting date. Subsequent adjustments to increase or decrease the carrying values to the ultimate liquidation values will be made only if and when it becomes probable that such liquidation event will occur.

The holders of the Company's Series A, Series B and Series C convertible preferred stock (together, convertible preferred stock) have various rights, preferences and privileges as follows:

Voting Rights

Each holder of shares of convertible preferred stock is entitled to the number of votes equal to the number of shares of common stock into which such shares of convertible preferred stock could be converted. The holders of convertible preferred stock vote together with the holders of common stock as a single class on an as-converted basis on all matters as to which holders of common stock have the right to vote.

The holders of convertible preferred stock, voting as a separate class, are entitled to elect three members of the Company's board of directors. The holders of common stock, voting as a separate class, are entitled to elect one member of the Company's board of directors. Any additional members of the Company's board of directors are elected by the holders of common stock and convertible preferred stock, voting together as a single class on an as-converted basis.

Dividends

Each holder of convertible preferred stock is entitled to receive dividends when and if declared by the board of directors at an annual rate of $0.08 per share for the Series A preferred stock, $0.132 per share for the Series B preferred stock, and $0.166 per share for the Series C preferred stock. Dividends are noncumulative. No dividends have been declared or paid as of December 31, 2020.

Conversion

Each share of convertible preferred stock is convertible, at the option of the holder any time after the issuance date, into shares of common stock determined by dividing the original issue price by the conversion price in effect on the date of conversion. The conversion price of each series of convertible preferred stock is $1.00 for Series A convertible preferred stock, $1.656 for Series B convertible preferred stock, and $2.072 for Series C convertible preferred stock, subject to adjustment for anti-dilution provisions and stock dividend, stock split, combination of shares, reorganization, recapitalization, reclassification or other similar event.

Each share of convertible preferred stock is automatically convertible into common stock immediately upon the earlier of (i) the closing of a firm commitment underwritten initial public offering pursuant to an effective registration statement filed under the Securities Act of 1933, as amended, resulting in aggregate gross proceeds not less than $75.0 million (a "Qualified IPO") or (ii) the Company's receipt of a written request for such conversion from a majority of the holders of convertible preferred stock then outstanding, voting together as a single class on an as-converted basis. With respect to a Qualified IPO at which the price per share is less than $2.59 (subject to adjustment for stock dividend, stock split, combination of shares, reorganization, recapitalization, reclassification or other similar event), each share of convertible preferred stock is convertible into common stock with the written consent of a majority of the holders of the Series C convertible preferred stock then outstanding, voting as a separate class.

Liquidation Preference

In the event of any liquidation, dissolution or winding up of the Company, either voluntary or involuntary, the holders of the preferred stock shall be entitled to receive, prior and in preference to any distribution of any of the assets of the Company to the holders of common stock, an amount per share equal to $1.00 per share for Series A convertible preferred stock, $1.656 per share for Series B convertible preferred stock and $2.072 per share for Series C convertible preferred stock (subject to adjustment for stock dividend, stock split, combination of shares, reorganization, recapitalization, reclassification or other similar event) plus all declared but unpaid dividends. After the distributions described above have been paid in full, the remaining assets of the Company shall be distributed among the holders of common stock in proportion to the numbers of shares of common stock. If the assets of the Company are insufficient to permit the payments to holders of convertible preferred stock of the full amount described above, all assets and funds legally available shall be distributed ratably among holders of convertible preferred stock.

8. Common Stock

The holders of the common stock are entitled to one vote per share on all matters to be voted on by the stockholders of the Company and are entitled to dividends, if and when declared by the board of directors, subject to the prior rights of the preferred stockholders. Common stock issued and outstanding on the balance sheets and statements of convertible preferred stock and stockholders' deficit includes shares related to early exercised options and restricted stock that are subject to repurchase. Common stock issued and outstanding is reduced for any repurchases of early exercised stock options and restricted stock.

The Company has reserved the following shares of common stock for issuance, on an as-if converted basis:

	December 31, 2020
Conversion of outstanding shares of convertible preferred stock	146,961,309
Options outstanding under the 2016 Plan	6,965,000
Options available for future grant	2,473,024
Total	156,399,333

9. Stock-Based Compensation

Amended and Restated 2016 Equity Incentive Plan

In October 2016, the Company adopted the 2016 Equity Incentive Plan, which was later amended and restated (the 2016 Plan), which provides for the granting of incentive and non-statutory stock options, stock appreciation rights, restricted stock and restricted stock units and other forms of stock awards to its employees, directors and non-employee service providers.

Under the 2016 Plan, the Company's board of directors has the authority to select the service provider to whom options will be granted and the type of award that will be granted, to determine when awards are to be granted, the number of shares, the term, and the exercise price. Options have a term of ten years and generally vest over a four-year period. As of December 31, 2020, 2,473,024 shares of common stock were authorized and available for grant under the 2016 Plan.

Stock Option Activity

The following table summarizes stock option activity under the 2016 Plan:

	Number of Options Outstanding	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Life (years)	Aggregate Intrinsic Value (in thousands)
Outstanding as of December 31, 2019	5,285,000	$ 0.19	9.05	$ 2,952
Options granted	1,876,250	0.57		
Options exercised	(107,103)	0.31		
Options cancelled	(89,147)	0.40		
Outstanding as of December 31, 2020	6,965,000	$ 0.29	8.40	$ 6,060
Exercisable as of December 31, 2020	2,641,917	$ 0.19	8.05	$ 2,298

The total intrinsic value of options exercised during the years ended December 31, 2019 and 2020 was approximately $0.3 million and $37,000. The aggregate intrinsic is the difference between the fair value of the Company's common stock, as approved by the Company's board of directors, and exercise price of the option.

The weighted average grant-date fair value of options granted during the years ended December 31, 2019 and 2020 was $0.57 and $0.83 per share.

Stock-Based Compensation

The following table summarizes stock-based compensation recognized in the Company's statements of operations and comprehensive loss:

	Year Ended December 31,	
	2019	2020
	(in thousands)	
Research and development	$ 118	$ 378
General and administrative	296	363
Total stock-based compensation	$ 414	$ 741

As of December 31, 2020, there was approximately $2.3 million of unrecognized stock-based compensation, which the Company expects to recognize over a weighted-average period of 3.0 years.

Stock Option Valuation

The fair value of the Company's stock option awards is estimated on the date of grant using the Black-Scholes option pricing model using the following assumptions:

	Year Ended December 31,	
	2019	2020
Expected term (in years)	5.0 – 6.1	5.9 – 6.1
Expected volatility	105% – 192%	178% – 183%
Risk-free interest rate	1.7% – 2.5%	0.4% – 1.5%
Expected dividend yield	—%	—%

The assumptions used to determine the fair value of options granted were as follows. Each of these inputs is subjective and generally requires significant judgement.

Expected Term—The Company determines the expected term, which represents the period that stock-based awards are expected to be outstanding, in accordance with the simplified method due to its limited operating history, which is presumed to be the mid-point between the contractual term and the vesting period.

Expected Volatility—As there is no trading history for the Company's common stock, the Company determines its computation of expected volatility on the historical volatility of a representative group of public companies with similar characteristics to the Company, including stage of product development and life science industry focus. The historical volatility is calculated based on a period of time commensurate with the expected term assumption.

Risk-Free Interest Rate—The Company bases the risk-free interest rate on U.S. Treasury zero coupon issues in effect at the time of grant for periods corresponding with the expected term assumption.

Expected Dividend Yield—The expected dividend yield is assumed to be zero as the Company has never paid and has no plans to pay any dividends on its common stock.

Restricted Stock

The 2016 Plan allows the Company to grant stock options that may be exercised by option holders prior to vesting, subject to certain limitations. The Company has also issued restricted stock awards to certain employees and non-employee founders under its 2016 Plan. The shares related to early exercised stock options and restricted stock are subject to the Company's lapsing repurchase right upon termination at the original purchase price. In order to vest, the holders are required to provide continued service to the Company.

The proceeds from early exercises are initially recorded in accrued expenses and other current liabilities and other non-current liabilities and are reclassified to common stock and additional paid-in capital the vesting conditions are met and the repurchase right lapses. As of December 31, 2019 and 2020, $0.1 million and $53,000 was recorded as liabilities on the balance sheets.

A summary of restricted stock activity is as follows:

	Number of Shares	Weighted Average Fair Value at Date of Grant per Share
Unvested as of December 31, 2019	1,986,608	$ 0.12
Vested	(1,151,616)	0.10
Repurchased	(6,167)	0.08
Unvested as of December 31, 2020	828,825	$ 0.15

Employee Recourse Notes

In 2017 and 2018, the Company entered into full recourse notes with certain employees, including one of its officers, upon the exercise of stock options that are treated as substantive exercises for accounting purposes. The Company has the right to repurchase unvested shares up to ninety days after employment is terminated. As of December 31, 2020, the principal and accrued interest amount of the notes was $87,000. The notes are presented in the statements of convertible preferred stock and stockholders' deficit.

10. Income Taxes

No provision for, or benefit from, income taxes was recorded during the years ended December 31, 2019 and 2020. The Company has established a full valuation allowance against its net deferred tax assets due to the uncertainty regarding the realization of such assets. All losses to date have been incurred in the United States. Deferred income taxes reflect the net tax effects of (a) temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes, and (b) operating losses and tax credit carryforwards.

Effective Tax Rate Reconciliation

The effective tax rate of the Company's provision for income taxes differs from the federal statutory rate and the effective tax rate reconciliation is as follows:

	December 31,	
	2019	2020
U.S. federal taxes at statutory rate	21.0%	21.0%
State taxes (net of federal benefit)	9.3	8.1
Credits	0.7	3.6
Stock-based compensation	(0.2)	(0.3)
Section 382 limitation on tax attribute carryforwards	—	(9.0)
Change in valuation allowance	(30.7)	(23.1)
Other	(0.1)	(0.3)
Total	0.0%	0.0%

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	December 31,	
	2019	2020
	(in thousands)	
Balance at beginning of year	$ —	$ 744
Additions based on tax positions related to current year	473	293
Additions based on tax positions related to prior years	271	—
Reductions for tax positions related to prior years	—	(466)
Balance at end of year	$ 744	$ 571

The Company does not expect that its uncertain tax positions will materially change in the next twelve months. The reversal of the uncertain tax benefits would not impact the Company's effective tax rate as the Company continues to maintain a full valuation allowance against its deferred tax assets.

The Company files tax returns in U.S. federal and state with varying statutes of limitations. Due to net operating loss and credit carryforwards, all of the tax years since inception through the 2020 tax year remain subject to examination by the U.S. federal and state authorities. The Company is currently not subject to any income tax audits by federal or state taxing authorities.

Deferred Income Taxes

The tax effects of significant items comprising the Company's deferred income taxes are as follows**:**

	December 31,	
	2019	2020
	(in thousands)	
Deferred tax assets:		
Net operating losses	$ 11,820	$ 20,917
Tax credits	1,684	1,346
Accrued expenses and other	696	918
Tenant improvements	1,085	896
Property and equipment	93	120
Stock-based compensation	39	79
Other	1	11
Total deferred tax assets	15,418	24,287
Valuation allowance	(15,418)	(24,287)
Net deferred tax assets	$ —	$ —

The tax benefit of net operating losses, temporary differences and credit carryforwards are recorded as an asset to the extent that the Company assesses that realization is more likely than not. Realization of the future tax benefits is dependent on the Company's ability to generate sufficient taxable income within the carryforward period. As a result of the Company's recent history of operating losses, the Company believes that recognition of deferred tax assets arising from the above-mentioned future tax benefits is currently not likely to be realized and, accordingly, has provided a full valuation allowance. The valuation allowance increased by $7.4 million and $8.9 million during the years ended December 31, 2019 and 2020. The increase in the valuation allowance during the year ended December 31, 2020 would have been larger but for the reduction in net operating loss and tax credit carryforwards limited under Section 382. The impact of the Section 382 limitation resulted in the reduction of deferred tax assets for federal research credits and state net operating loss carryforwards, with an offsetting reduction of the valuation allowance.

Net Operating Loss and Tax Credit Carryforwards

As of December 31, 2020, the Company's net operating loss and tax carryforwards are summarized as follows:

	Amount	Expiration in years
Net operating losses, federal (post-December 31, 2017)	$ 75,431	Do Not Expire
Net operating losses, federal (pre-January 1, 2018)	3,093	Begins to Expire 2036
Net operating losses, state	62,508	Begins to Expire 2036
Tax credits, federal	244	Begins to Expire 2036
Tax credits, state	2,068	Do Not Expire

Under Section 382 of the Internal Revenue Code of 1986, as amended, the ability to utilize net operating loss carryforwards or other tax attributes, such as research tax credits, in any taxable year may be limited if the Company has experienced an "ownership change". This annual limitation may result in the expiration of net operating losses and credits before utilization. As of December 31, 2020, a formal study was conducted and concluded that the Company has experienced an ownership change in 2020. As a result, the Company has removed $3.1 million of deferred tax assets related to net operating loss carryforwards and research tax credit carryforwards due to Section 382 limitations. The Company's ability to use its remaining net operating loss carryforwards may be further limited if the Company experiences a Section 382 ownership change as a result of future changes in its stock ownership.

The Company recognizes interest and penalties related to taxes and uncertain tax positions as a component of income tax expense. During the years ended December 31, 2019 and 2020, no interest and penalties were accrued by the Company.

11. Net Loss Per Share

The following potentially dilutive securities were not included in the calculation of diluted net loss per share for the periods presented because the effect would have been anti-dilutive:

	Year Ended December 31,	
	2019	2020
Convertible preferred stock	68,418,509	146,961,309
Outstanding stock options	5,285,000	6,965,000
Restricted stock subject to future vesting	1,986,608	828,825
Total	75,690,117	154,755,134

12. Related Party Transactions

Gladstone Institutes

Under the MCA, Gladstone performed specific research activities for the Company in accordance with the mutually agreed-upon annual project plans (see Note 5). During the year ended December 31, 2019, the Company recognized $0.4 million in research and development expenses in relation to the services provided by Gladstone. No such research services were provided during the year ended December 31, 2020. In addition, during the year ended December 31, 2019, the Company recognized $0.2 million in aggregate lab, license and patent fees and $75,000 in stock. During the year ended December 31, 2020, the Company recognized $0.1 million in aggregate lab, license and patent fees. As of December 31, 2019 and 2020, the related party balance included within accounts payable and accrued expenses was $10,000 and $nil.

Scientific Founders

During the years ended December 31, 2019 and 2020, the Company recognized a total of $0.2 million in each period in consulting expense paid to five of its scientific founders.

13. Subsequent Events

The Company evaluated subsequent events from December 31, 2020, the date of these financial statements, through May 7, 2021, the date the financial statements were available for issuance, for events requiring recognition or disclosure in the financial statements for the year ended December 31, 2020.

Series C Convertible Preferred Stock Issuance

In January 2021, the Company sold an additional 9,652,509 shares of Series C convertible preferred stock at the price of $2.072 per share for aggregate gross proceeds of $20.0 million.

Manufacturing and Office Space Lease Agreement

In February 2021, the Company entered into a lease agreement for manufacturing and office space located in Union City, California. The lease has a ten-year term with one five-year renewal option. Upon the execution of the lease agreement, the Company provided the landlord with a security deposit of $3.3 million. Total lease payments during the lease term are expected to be $13.9 million.

2021 Stock Options Grants

In January 2021, the Company granted 778,250 options to employees, each with an exercise price of $0.94 per share and a four-year vesting schedule. In February 2021, the Company granted 2,500,000 options to its chief executive officer, with an exercise price of $0.94 per share and a four-year vesting schedule.

TENAYA THERAPEUTICS, INC.

Condensed Balance Sheets
(in thousands, except share and per share data)
(unaudited)

	December 31, 2020	March 31, 2021
ASSETS		
Current assets:		
Cash and cash equivalents	$ 128,535	$ 128,439
Prepaid expenses and other current assets	1,429	1,311
Total current assets	129,964	129,750
Property and equipment, net	17,185	21,267
Operating lease right-of-use asset	—	4,415
Restricted cash, non-current	547	547
Other non-current assets	465	3,778
Total assets	$ 148,161	$ 159,757
LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	$ 1,017	$ 2,092
Accrued expenses and other current liabilities	3,161	2,128
Deferred rent and other lease liabilities, current	863	—
Operating lease liabilities, current	—	1,690
Total current liabilities	5,041	5,910
Deferred rent and other lease liabilities, non-current	3,662	—
Operating lease liabilities, non-current	—	7,036
Other non-current liabilities	19	19
Total liabilities	8,722	12,965
Commitments and contingencies (Note 6)		
Convertible preferred stock, $0.0001 par value; 156,613,818 shares authorized as of December 31, 2020 and March 31, 2021; 146,961,309 and 156,613,818 shares issued and outstanding as of December 31, 2020 and March 31, 2021; aggregate liquidation preference of $247,900 as of March 31, 2021	220,754	240,735
Stockholders' deficit:		
Common stock, $0.0001 par value; 181,980,000 shares authorized as of December 31, 2020 and March 31, 2021; 7,261,976 and 7,334,861 shares issued and outstanding as of December 31, 2020 and March 31, 2021	1	1
Additional paid-in capital	1,583	2,053
Notes receivable from stockholders	(87)	(87)
Accumulated deficit	(82,812)	(95,910)
Total stockholders' deficit	(81,315)	(93,943)
Total liabilities, convertible preferred stock and stockholders' deficit	$ 148,161	$ 159,757

The accompanying notes are an integral part of these unaudited condensed financial statements.

TENAYA THERAPEUTICS, INC.

Condensed Statements of Operations and Comprehensive Loss
(in thousands, except share and per share data)
(unaudited)

	Three Months Ended March 31,	
	2020	2021
Operating expenses:		
Research and development	$ 7,297	$ 9,590
General and administrative	1,969	3,515
Total operating expenses	9,266	13,105
Loss from operations	(9,266)	(13,105)
Other income (expense), net:		
Interest income	57	9
Change in fair value of convertible preferred stock tranche liability	(19)	—
Other income (expense), net	177	(2)
Total other income (expense), net	215	7
Loss before income tax expense	(9,051)	(13,098)
Income tax expense	—	—
Net loss and comprehensive loss	$ (9,051)	$ (13,098)
Net loss per share, basic and diluted	$ (1.69)	$ (1.99)
Weighted-average shares used in computing net loss per share, basic and diluted	5,351,978	6,586,917

The accompanying notes are an integral part of these unaudited condensed financial statements.

TENAYA THERAPEUTICS, INC.

Condensed Statements of Convertible Preferred Stock and Stockholders' Deficit
(in thousands, except share data)
(unaudited)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Notes Receivable from Stockholders	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount				
Balance as of December 31, 2019	68,418,509	$ 73,042	7,161,040	$ 1	$ 763	$ (86)	$ (44,417)	$ (43,739)
Issuance of Series B convertible preferred stock, net of issuance costs of $23 and partial settlement of convertible preferred stock tranche liability of $27	18,518,509	30,671	—	—	—	—	—	—
Issuance of common stock upon exercise of stock options	—	—	20,000	—	3	—	—	3
Repurchase of common stock related to early exercise of options	—	—	(3,667)	—	—	—	—	—
Vesting of early exercised stock options	—	—	—	—	11	—	—	11
Notes receivable from stockholders	—	—	—	—	—	1	—	1
Stock-based compensation	—	—	—	—	154	—	—	154
Net loss and other comprehensive loss	—	—	—	—	—	—	(9,051)	(9,051)
Balance as of March 31, 2020	86,937,018	$103,713	7,177,373	$ 1	$ 931	$ (85)	$ (53,468)	$ (52,621)

The accompanying notes are an integral part of these unaudited condensed financial statements.

TENAYA THERAPEUTICS, INC.

Condensed Statements of Convertible Preferred Stock and Stockholders' Deficit
(in thousands, except share data)
(unaudited)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Notes Receivable from Stockholders	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount				
Balance as of December 31, 2020	146,961,309	$220,754	7,261,976	$ 1	$ 1,583	$ (87)	$ (82,812)	$ (81,315)
Issuance of Series C convertible preferred stock, net of issuance costs of $20	9,652,509	19,981	—	—	—	—	—	—
Issuance of common stock upon exercise of stock options	—	—	75,073	—	29	—	—	29
Repurchase of common stock related to early exercise of options	—	—	(2,188)	—	—	—	—	—
Vesting of early exercised stock options	—	—	—	—	9	—	—	9
Stock-based compensation	—	—	—	—	432	—	—	432
Net loss and other comprehensive loss	—	—	—	—	—	—	(13,098)	(13,098)
Balance as of March 31, 2021	156,613,818	$240,735	7,334,861	$ 1	$ 2,053	$ (87)	$ (95,910)	$ (93,943)

The accompanying notes are an integral part of these unaudited condensed financial statements.

TENAYA THERAPEUTICS, INC.

Condensed Statements of Cash Flows
(in thousands)
(unaudited)

	Three Months Ended March 31,	
	2020	2021
Cash flows from operating activities:		
Net loss	$ (9,051)	$ (13,098)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	584	689
Stock-based compensation	154	432
Loss on disposal of property and equipment	35	—
Non-cash operating lease expense	—	171
Change in fair value of convertible preferred stock tranche liability	19	—
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	158	118
Other non-current assets	(169)	(3,313)
Accounts payable	674	618
Accrued expenses and other current liabilities	(452)	(1,022)
Deferred rent and other lease liabilities	(182)	—
Operating lease liabilities	—	(384)
Other non-current liabilities	(8)	—
Net cash used in operating activities	(8,238)	(15,789)
Cash flows from investing activities:		
Purchases of property and equipment	(435)	(4,323)
Proceeds from maturities of marketable securities	2,753	—
Net cash provided by (used in) investing activities	2,318	(4,323)
Cash flows from financing activities:		
Proceeds from issuance of Series B convertible preferred stock, net of issuance costs	30,667	—
Proceeds from issuance of Series C convertible preferred stock, net of issuance costs	—	19,986
Proceeds from exercise of stock options	3	29
Net cash provided by financing activities	30,670	20,015
Net increase (decrease) in cash, cash equivalents and restricted cash	24,750	(97)
Cash, cash equivalents and restricted cash at beginning of period	24,271	129,083
Cash, cash equivalents and restricted cash at end of period	$ 49,021	$ 128,986
Components of cash, cash equivalents and restricted cash:		
Cash and cash equivalents	$ 48,622	$ 128,439
Restricted cash, non-current	399	547
Cash, cash equivalents and restricted cash	$ 49,021	$ 128,986
Supplemental disclosure of cash operating activities:		
Cash paid for leases that were included in operating cash outflows	$ —	$ 1,389
Supplemental disclosure of non-cash operating activities:		
Lease liability obtained in exchange for right-of-use asset	$ —	$ 213
Supplemental disclosure of non-cash investing and financing activities:		
Deferred offering costs related to initial public offering included in accounts payable	$ —	$ 74
Property and equipment included in accounts payable and accrued expenses and other current liabilities	$ 162	$ 452
Partial settlement of convertible preferred stock tranche liability in connection with the issuance of Series B convertible preferred stock	$ 27	$ —
Offering costs related to Series B convertible preferred stock included in accounts payable and accrued expenses and other current liabilities	$ 23	$ —
Offering costs related to Series C convertible preferred stock included in accounts payable	$ —	$ 5

The accompanying notes are an integral part of these unaudited condensed financial statements.

1. Organization and Description of the Business

Description of the Business

Tenaya Therapeutics, Inc. (the Company) was incorporated in the state of Delaware in August 2016 and is headquartered in South San Francisco, California. The Company is a preclinical stage biotechnology company focused on discovering, developing and delivering curative therapies that address the underlying drivers of heart disease. The Company is advancing product candidates from three distinct but interrelated product platforms: gene therapy, cellular regeneration and precision medicine.

Liquidity

The Company has incurred net losses since inception and expects such losses to continue in the future as it conducts research and development activities. As of March 31, 2021, the Company had an accumulated deficit of $95.9 million. The Company incurred a net loss of $9.1 million and $13.1 million during the three months ended March 31, 2020 and 2021. The Company had $128.4 million of cash and cash equivalents as of March 31, 2021.

Management recognizes the need to raise capital to fully implement its business plan. The Company has historically financed its operations primarily with proceeds from the issuance of its convertible preferred stock and may seek to raise capital through equity financings, debt financings, license agreements, collaborative agreements or other sources of financing. Management believes that its existing cash and cash equivalents as of March 31, 2021 are sufficient to fund the Company's operations for at least the next twelve months following the filing date of these condensed financial statements.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying condensed financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) and follow the requirements of the Securities and Exchange Commission (SEC) for interim reporting. As permitted under those rules, certain footnotes or other financial information that are normally required by GAAP can be condensed or omitted.

Use of Estimates

The preparation of condensed financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, and the disclosure of contingent assets and liabilities at the date of the condensed financial statements and the reported amounts of expenses during the reporting period. Significant estimates and assumptions made in the accompanying condensed financial statements include, but are not limited to, the fair value of common stock, the valuation of equity-based awards, the useful lives of property and equipment, the fair value of the convertible preferred stock tranche liability, accrued expenses related to research and development activities and the valuation allowance for deferred tax assets. Management bases its estimates on historical experience, the current economic environment, and on various other assumptions that are believed to be reasonable under the circumstances. Actual results may differ from those estimates or assumptions.

Unaudited Interim Condensed Financial Statements

The interim condensed balance sheet as of March 31, 2021, and the interim condensed statements of operations and comprehensive loss, convertible preferred stock and stockholders' deficit and cash flows for the three months ended March 31, 2020 and 2021 are unaudited. These unaudited interim condensed financial statements have been prepared on the same basis as the Company's annual financial statements and, in the opinion of management, reflect all adjustments (consisting only of normal recurring adjustments) that are

necessary for the fair statement of the Company's financial position, results of operations and cash flows for the interim periods presented. The condensed results of operations for the three months ended March 31, 2021 are not necessarily indicative of the results to be expected for the full year or for any other future annual or interim period. The condensed balance sheet as of December 31, 2020 included herein was derived from the audited financial statements as of that date. These interim condensed financial statements should be read in conjunction with the Company's audited financial statements included elsewhere in this prospectus.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with an original maturity of three months or less on the date of purchase to be cash equivalents. Cash equivalents primarily consist of money market funds that are stated at fair value.

Leases

The Company adopted Accounting Standards Codification (ASC) Topic 842, *Leases* (ASC 842) on January 1, 2021, as discussed below in the section titled "Recently Adopted Accounting Standards". Under ASC 842, the Company determines if an arrangement is a lease at inception.

Operating lease right-of-use (ROU) assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized based on the present value of lease payments over the lease term at the commencement date of the lease. ROU assets also include any initial direct costs incurred and any lease payments made at or before the lease commencement date, less any lease incentive received. The Company uses the rate implicit in the lease in determining the present value of lease payments and, if that rate is not readily determinable, the Company uses its incremental borrowing rate based on the information available at the date of lease commencement. The incremental borrowing rate reflects the rate of interest that a lessee would have to pay to borrow, on a collateralized basis over a similar term, an amount equal to the lease payments in a similar economic environment. The Company's lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Lease expense for lease payments is recognized on a straight-line basis over the lease term.

The Company's non-lease components are primarily related to property taxes, insurance, and common area maintenance, which vary based on future outcomes, and are recognized as rent expense when incurred.

Deferred Offering Costs

Deferred offering costs, consisting of legal, accounting, audit and filing fees relating to the Company's initial public offering, are capitalized. 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 December 31, 2020, the Company did not incur any deferred offering costs. As of March 31, 2021, $0.1 million of deferred offering costs were capitalized, which are included in other non-current assets in the accompanying condensed balance sheet.

Net Loss Per Share

Basic net loss per share is calculated by dividing the net loss by the weighted-average number of shares of the Company's common stock outstanding for the period, without consideration for potential dilutive shares of common stock. As the Company is in a loss position for the periods presented, diluted net loss per share is the same as basic net loss per share, since the effects of potentially dilutive securities are antidilutive. Shares related to early exercised stock options and restricted stock that are subject to repurchase are excluded from the basic and diluted net loss per share calculation until the Company's repurchase right lapses.

Recently Adopted Accounting Standards

On January 1, 2020, the Company adopted Financial Accounting Standards Board (FASB) Accounting Standard Update (ASU) No. 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement*. This standard eliminates, modifies and adds disclosure requirements for fair value measurements. The Company adopted the removed and modified disclosures on a retrospective basis and the new disclosures on a prospective basis. The adoption of this standard did not have a material impact on the Company's financial statements.

On January 1, 2021, the Company adopted ASC 842 using the modified retrospective transition method and elected the practical expedients to not reassess whether any expired or existing contracts are or contain leases, carry forward its historical lease classification and not reassess initial direct costs for existing leases. The Company elected to not separate non-lease components from the associated lease components and to not recognize ROU assets and lease liabilities for leases with a term of 12 months or less. Upon adoption of ASC 842, the Company recorded an operating right-of-use asset of $4.6 million, operating lease liabilities of $9.1 million and derecognized deferred rent and other lease liabilities of $4.5 million. Results for the three months ended March 31, 2021 are presented under ASC 842. Prior period amounts before January 1, 2021 have not been adjusted and continue to be reported in accordance with the Company's historical accounting under previous lease guidance, ASC 840: *Leases (Topic 840)*.

Recently Issued Accounting Pronouncements Not Yet Adopted

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* (ASU 2016-13), which replaces the existing incurred loss impairment model with an expected credit loss model. This standard will require companies to recognize an allowance for credit losses on available-for-sale debt securities rather than the current approach of recording a reduction to the carrying value of the asset. As an emerging growth company, ASU 2016-13 is effective for the Company for fiscal year beginning January 1, 2023. The Company is evaluating the impact of this standard on its financial statements.

In December 2019, the FASB issued ASU No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes* (ASU 2019-12), which is intended to simplify the accounting for income taxes. This standard eliminates certain exceptions to the approach for intra period tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. As an emerging growth company, ASU 2019-12 is effective for the Company for fiscal year beginning January 1, 2022. The Company is evaluating the impact of this standard on its financial statements.

3. Fair Value Measurements

Financial assets and liabilities are recognized at fair value on a recurring basis. The following tables summarize the Company's financial assets measured at fair value on a recurring basis by level within the fair value hierarchy:

		December 31, 2020			
	Valuation Hierarchy	Amortized Cost	Unrealized Gain	Unrealized Loss	Fair Value
		(in thousands)			
Assets:					
Cash equivalents:					
Money market funds	Level 1	$ 127,535	$ —	$ —	$ 127,535
Total financial assets		$ 127,535	$ —	$ —	$ 127,535

	Valuation Hierarchy	March 31, 2021 Amortized Cost	Unrealized Gain	Unrealized Loss	Fair Value
		(in thousands)			
Assets:					
Cash equivalents:					
Money market funds	Level 1	$ 127,433	$ —	$ —	$ 127,433
Total financial assets		$ 127,433	$ —	$ —	$ 127,433

Money market funds are classified as Level 1 because they are valued using quoted market prices in active markets for identical assets.

There were no unrealized losses as of December 31, 2020 and March 31, 2021.

Convertible Preferred Stock Tranche Liability

The Company's convertible preferred stock tranche liability (see Note 7) was determined based on significant inputs not observable in the market, which represents a Level 3 measurement within the fair value hierarchy. Fair value was calculated using an option pricing model that required significant unobservable inputs supported by little or no market activity. The convertible preferred stock tranche liability is considered a non-contingent forward and the standard forward pricing model was used with the following key assumptions: (a) calculation of an expected term and (b) a risk-free interest rate. On the second and third closings of the Company's Series B convertible preferred stock financings in March and August 2020, the convertible preferred stock tranche liability was settled and reclassified to Series B convertible preferred stock. Accordingly, there is no convertible preferred stock tranche liability as of December 31, 2020 and March 31, 2021.

The following table summarizes the significant unobservable assumptions used to value the convertible preferred stock tranche liability as of March 31, 2020:

	March 31, 2020
Term to valuation date (in years)	0.5
Discount rate	5.0%

The following table summarizes the changes in the estimated fair value of the Company's convertible preferred stock tranche liability measured on a recurring basis using significant Level 3 inputs:

	March 31, 2020
	(in thousands)
Beginning balance	$ 786
Partial settlement upon second closing of Series B convertible preferred stock	(27)
Change in fair value upon remeasurement	19
Ending balance	$ 778

4. Balance Sheet Components

Property and Equipment, Net

Property and equipment, net consists of the following:

	December 31, 2020	March 31, 2021
	(in thousands)	
Laboratory equipment	$ 8,182	$ 8,676
Construction in progress	7,678	11,937
Leasehold improvements	7,237	7,237
Furniture and fixtures	534	534
Computer equipment and software	257	272
Total property and equipment	23,888	28,656
Less: accumulated depreciation and amortization	(6,703)	(7,389)
Total property and equipment, net	$ 17,185	$ 21,267

Depreciation and amortization expense for the three months ended March 31, 2020 and 2021 was $0.6 million and $0.7 million. Construction in progress consists primarily of capitalized machinery and equipment that is expected to be placed in service in the Company's manufacturing and office space located in Union City, California after the lease commencement date in May 2021.

Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consist of the following:

	December 31, 2020	March 31, 2021
	(in thousands)	
Accrued compensation and related expenses	$ 2,090	$ 1,122
Accrued research and development expenses	391	134
Accrued professional services	328	631
Accrued property and equipment	231	100
Other current liabilities	121	141
Total accrued expenses and other current liabilities	$ 3,161	$ 2,128

5. Collaboration and License Agreements

Gladstone License Agreement

In October 2016, the Company entered into a license agreement with Gladstone Institutes (Gladstone), pursuant to which Gladstone granted the Company a worldwide, royalty-bearing exclusive patent license and a non-exclusive technology license to develop and commercialize certain products for certain diseases (Gladstone License Agreement). Pursuant to the Gladstone License Agreement, the Company is obligated, among other things, to pay Gladstone (i) annual license maintenance fees ranging from $25,000 up to $0.1 million per year, which will be creditable against royalties paid in the following twelve month period, (ii) milestone payments up to $4.1 million for royalty-bearing products directed to a particular target, which are contingent upon achieving specific clinical and commercialization milestone events, and (iii) tiered low-single digit royalties on future net sales of each royalty-bearing product. Under the agreement, the Company is subject to diligence requirements to develop and commercialize at least one royalty-bearing product. The Company may pay $50,000 to $100,000 to extend the deadline for its diligence milestone obligations for up to four additional one-year terms. As of March 31, 2021, the Company has not recognized any milestone and royalty payments under the Gladstone License Agreement.

During the three months ended March 31, 2020 and 2021, there were no amounts recorded related to annual license fees payable pursuant to the Gladstone License Agreement.

University of Texas Southwestern License Agreement

In January 2020, the Company entered into a license agreement with the University of Texas Southwestern (UTSW License), pursuant to which UTSW granted the Company a royalty-bearing exclusive and sublicensable patent license and a non-exclusive, non-sublicensable license for mutually agreed upon development activities. Under the UTSW License, the Company is obligated to pay UTSW (i) a non-refundable upfront license fee of $0.1 million, (ii) milestone payments up to a total of $14.8 million in aggregate, which are contingent upon achieving specific development and commercialization milestone events, and (iii) royalties on future net sales of each royalty-bearing product ranging in the low-single digits. As of March 31, 2021, the Company has not recognized any milestone and royalty payments under the UTSW License.

During the three months ended March 31, 2020, the Company recorded research and development expenses of $0.1 million related to the upfront license fee payable pursuant to the UTSW License.

Other License Agreements

In addition to the agreements described above, the Company has also entered into other license agreements with various institutions and business entities, none of which are material individually or in the aggregate.

6. Commitments and Contingencies

Facility Leases

In December 2016, the Company entered into a lease agreement for office and laboratory space in South San Francisco, California. The lease expires in May 2025 and the Company may renew the lease term for two additional five-year periods. Pursuant to the lease agreement, the Company received a tenant improvement allowance of $5.8 million in aggregate for leasehold improvements to the facility.

In December 2020, the Company entered into a short-term sublease agreement for additional office and laboratory space in South San Francisco, California with a lease term that expires on November 30, 2021.

On January 1, 2021, the Company adopted ASC 842 (see Note 2) and the following disclosures as of and for the three months ended March 31, 2021 are presented under ASC 842. As of March 31, 2021, the remaining lease term was 4.4 years and the incremental borrowing rate used to determine the operating lease liability was 9.0%.

For the three months ended March 31, 2021, the Company incurred $1.2 million in rent expense, of which $0.6 million is related to the Company's short-term lease. Variable lease payments were $0.4 million for the three months ended March 31, 2021. For the three months ended March 31, 2020, the Company incurred $0.6 million in rent expense.

As of March 31, 2021 the undiscounted future minimum lease payments due under the Company's non-cancelable operating lease are as follows:

	Amount (in thousands)
2021 (remaining 9 months)	$ 1,788
2022	2,446
2023	2,523
2024	2,603
2025	1,099
Total undiscounted future minimum lease payments	10,459
Present value adjustment for minimum lease commitments	(1,733)
Total operating lease liabilities	$ 8,726

As of December 31, 2020, undiscounted future minimum lease payments due under the Company's non-cancelable operating lease are as follows:

	Amount (in thousands)
2021	$ 3,752
2022	2,206
2023	2,283
2024	2,363
2025	999
Total future minimum lease payments	$ 11,603

In February 2021, the Company entered into a lease agreement for manufacturing and office space located in Union City, California. The lease commenced in May 2021 and has a ten-year term with one five-year renewal option. Upon the execution of the lease agreement, the Company provided the landlord with a refundable security deposit of $3.3 million, which is included in other non-current assets on the condensed balance sheets. The total undiscounted future minimum lease payments associated with this operating lease are $13.9 million and are not included in the table above.

The Company has previously entered into agreements to sublease portions of the Company's facilities in South San Francisco to two different subtenants, both of which expired as of December 31, 2020. Pursuant to the sublease agreements, the Company received sublease income of $0.2 million during the three months ended March 31, 2020, which is included in other income (expense), net on the condensed statements of operations and comprehensive loss.

Purchase Commitments

The Company enters into contractual agreements with various suppliers in the normal course of its business, including vendors that provide machinery and equipment. All contracts are terminable, with varying provisions regarding termination. If a contract with a specific vendor were to be terminated, the Company would only be obligated for the products or services that the Company had received through the time of termination.

Indemnification

In the normal course of business, the Company enters into agreements that may include indemnification provisions. Pursuant to such agreements, the Company may indemnify, hold harmless and defend an indemnified party for losses suffered or incurred by the indemnified party. In some cases, the indemnification will continue after the termination of the agreement. The maximum potential amounts of future payments the Company could be required to make under these provisions is not determinable. In addition, the Company has entered into indemnification agreements with its directors and certain officers that may require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors or officers. As of December 31, 2020 and March 31, 2021, the Company does not have any material indemnification claims that were probable or reasonably possible and, consequently, has not recorded any related liabilities.

7. Convertible Preferred Stock

Series B Convertible Preferred Stock Financing

In August 2019, the Company entered into a Series B preferred stock purchase agreement (Series B SPA) for the issuance of up to 55,555,527 shares of the Company's Series B convertible preferred stock at a purchase price of $1.656 per share in multiple closings. The Company completed the initial closing in August 2019,

whereby 18,518,509 shares of Series B convertible preferred stock were issued for gross proceeds of $30.7 million. Pursuant to the Series B SPA, the Company was permitted to sell additional shares in subsequent closings contingent upon the approval of the Company's board of directors.

On issuance, the Company determined that its obligation to issue additional shares of Series B convertible preferred stock in future closings was a freestanding instrument that should be classified as a liability on the Company's balance sheets. The freestanding financial instrument, or convertible preferred stock tranche liability, was recorded at fair value on issuance of $0.8 million with the remaining proceeds being allocated to the Series B convertible preferred stock. Any changes in fair value of the convertible preferred stock tranche liability in subsequent reporting periods are recognized as a component of other income (expense), net in the statements of operations and comprehensive loss (see Note 3).

In March 2020, the Company completed its second closing of Series B convertible preferred stock financing and issued 18,518,509 shares of Series B convertible preferred stock at the fixed purchase price of $1.656 per share for gross proceeds of $30.7 million, thereby settling a portion of the convertible preferred stock tranche liability. Immediately prior to the second closing, the Company measured the convertible preferred stock tranche liability to its then fair value. Upon the closing of the second tranche, the convertible preferred stock tranche liability was partially settled and the related balance of the liability of $27,000 was reclassified to Series B convertible preferred stock.

In August 2020, the Company completed its third closing of Series B convertible preferred stock financing and issued 18,518,509 shares of Series B convertible preferred stock at the purchase price of $1.656 per share for gross proceeds of $30.7 million, thereby settling the remainder of the convertible preferred stock tranche liability. Immediately prior to the third closing, the Company measured the convertible preferred stock tranche liability to its then fair value. Upon the closing of the third tranche, the remaining convertible preferred stock tranche liability was settled and the balance of the liability of $0.7 million was reclassified to Series B convertible preferred stock.

Series C Convertible Preferred Stock Financing

In December 2020, the Company entered into a Series C preferred stock purchase agreement (Series C SPA) for the issuance of up to 51,158,291 shares of the Company's Series C convertible preferred stock at a purchase price of $2.072 per share in two closings. The Company completed the initial closing in December 2020, whereby 41,505,782 shares of Series C convertible preferred stock were issued for gross proceeds of $86.0 million.

In January 2021, the Company sold an additional 9,652,509 shares of Series C convertible preferred stock at a purchase price of $2.072 per share for gross proceeds of $20.0 million.

The Company's convertible preferred stock consists of the following:

	December 31, 2020			
	Shares Authorized	Shares Issued and Outstanding	Net Carrying Value	Liquidation Preference
	(in thousands, except shares)			
Convertible Preferred Stock				
Series A	49,900,000	49,900,000	$ 43,393	$ 49,900
Series B	55,555,527	55,555,527	91,644	92,000
Series C	51,158,291	41,505,782	85,717	86,000
Total	156,613,818	146,961,309	$ 220,754	$ 227,900

	March 31, 2021			
	Shares Authorized	Shares Issued and Outstanding	Net Carrying Value	Liquidation Preference
	(in thousands, except shares)			
Convertible Preferred Stock				
Series A	49,900,000	49,900,000	$ 43,393	$ 49,900
Series B	55,555,527	55,555,527	91,644	92,000
Series C	51,158,291	51,158,291	105,698	106,000
Total	156,613,818	156,613,818	$ 240,735	$ 247,900

The Company classifies its convertible preferred stock outside of total stockholders' deficit because, in the event of certain change of control events that are not solely within the control of the Company (including liquidation, sale or transfer of the Company), the shares would become redeemable at the option of the holders. As a result, the Company has classified its convertible preferred stock as mezzanine equity on the balance sheets as the preferred stock is contingently redeemable. The Company did not adjust the carrying values of the convertible preferred stock to the deemed liquidation values of such shares since a liquidation event was not probable as of each reporting date. Subsequent adjustments to increase or decrease the carrying values to the ultimate liquidation values will be made only if and when it becomes probable that such liquidation event will occur.

8. Common Stock

The holders of the common stock are entitled to one vote per share on all matters to be voted on by the stockholders of the Company and are entitled to dividends, if and when declared by the board of directors, subject to the prior rights of the preferred stockholders. Common stock issued and outstanding on the condensed balance sheets and condensed statements of convertible preferred stock and stockholders' deficit includes shares related to early exercised options and restricted stock that are subject to repurchase. Common stock issued and outstanding is reduced for any repurchases of early exercised stock options and restricted stock.

The Company has reserved the following shares of common stock for issuance, on an as-if converted basis as follows:

	December 31, 2020	March 31, 2021
Conversion of outstanding shares of convertible preferred stock	146,961,309	156,613,818
Options outstanding under the 2016 Plan	6,965,000	10,368,032
Options available for future grant	2,473,024	2,275,357
Total	156,399,333	169,257,207

9. Stock-Based Compensation

2016 Equity Incentive Plan

In October 2016, the Company adopted the 2016 Equity Incentive Plan (the 2016 Plan), which provides for the granting of incentive and non-statutory stock options, stock appreciation rights, restricted stock and restricted stock units and other forms of stock awards to its employees, directors and non-employee service providers.

Total shares reserved and available for grant under the 2016 Plan as of March 31, 2021 are 2,275,357.

Stock Option Activity

The following table summarizes stock option activity under the 2016 Plan:

	Number of Options Outstanding	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Life (years)	Aggregate Intrinsic Value (in thousands)
Outstanding as of December 31, 2020	6,965,000	$ 0.29	8.40	$ 6,060
Options granted	3,581,200	0.94		
Options exercised	(75,073)	0.41		
Options cancelled	(103,095)	0.52		
Outstanding as of March 31, 2021	10,368,032	$ 0.51	8.74	$ 10,178
Exercisable as of March 31, 2021	3,120,909	$ 0.23	7.93	$ 3,935

The total intrinsic value of options exercised during the three months ended March 31, 2020 and 2021 was $6,000 and $70,000. The aggregate intrinsic value is the difference between the fair value of the Company's common stock, as approved by the Company's board of directors, and exercise price of the option.

The weighted average grant-date fair value of options granted during the three months ended March 31, 2020 and 2021 was $0.79 and $1.29 per share.

Stock-Based Compensation

The following table summarizes stock-based compensation recognized in the Company's condensed statements of operations and comprehensive loss:

	Three Months Ended March 31,	
	2020	2021
	(in thousands)	
Research and development	$ 82	$ 154
General and administrative	72	278
Total stock-based compensation	$ 154	$ 432

As of March 31, 2021, there was $6.4 million of unrecognized stock-based compensation, which the Company expects to recognize over a weighted-average period of 3.5 years.

Stock Option Valuation

The fair value of the Company's stock option awards is estimated on the date of grant using the Black-Scholes option pricing model using the following assumptions:

	Three Months Ended March 31,	
	2020	2021
Expected term (in years)	6.0	6.0 – 6.1
Expected volatility	178%	183%
Risk-free interest rate	0.7% – 1.5%	0.6% – 1.0%
Expected dividend yield	—%	—%

Restricted Stock

Shares related to early exercised stock options and restricted stock are subject to the Company's lapsing repurchase right upon termination at the original purchase price. In order to vest, the holders are required to provide continued service to the Company.

A summary of restricted stock activity is as follows:

	Number of Shares	Weighted Average Fair Value at Date of Grant per Share
Unvested as of December 31, 2020	828,825	$ 0.15
Granted	2,657	0.18
Vested	(219,695)	0.09
Repurchased	(2,188)	0.25
Unvested as of March 31, 2021	609,599	$ 0.16

Employee Recourse Notes

In 2017 and 2018, the Company entered into full recourse notes with certain employees, including one of its officers, upon the exercise of stock options that are treated as substantive exercises for accounting purposes. The Company has the right to repurchase unvested shares up to ninety days after employment is terminated. As of March 31, 2021, the principal and accrued interest amount of the notes was $87,000. The notes are presented in the condensed statements of convertible preferred stock and stockholders' deficit.

10. Income Taxes

For the three months ended March 31, 2020 and 2021, the Company did not record any income tax expense. The Company has recorded a full valuation allowance against its U.S. federal and state deferred tax assets as the Company believes it is not more likely than not that the benefit will be realized.

11. Net Loss Per Share

The following potentially dilutive securities were not included in the calculation of diluted net loss per share for the periods presented because the effect would have been anti-dilutive:

	Three Months Ended March 31,	
	2020	2021
Convertible preferred stock	86,937,018	156,613,818
Series B convertible preferred stock issuable in a future closing	18,518,509	—
Outstanding stock options	6,259,625	10,368,032
Restricted stock subject to future vesting	1,672,830	609,599
Total	113,387,982	167,591,449

12. Related Party Transactions

Scientific Founders

During the three months ended March 31, 2020 and 2021, the Company recognized a total of $62,000 in each period in consulting expense paid to five of its scientific founders.

13. Subsequent Events

The Company evaluated subsequent events through June 15, 2021, the date the condensed financial statements were available to be filed, for events requiring recognition or disclosure in the condensed financial statements as of and for the three months ended March 31, 2021.

Shares

Common Stock

PROSPECTUS

Morgan Stanley *Cowen* *Piper Sandler*

Chardan

, 2021

PART II

INFORMATION NOT REQUIRED IN THE PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth the expenses to be incurred in connection with the offering described in this Registration Statement, other than underwriting discounts and commissions, all of which will be paid by us. All amounts are estimates except the Securities and Exchange Commission (SEC) registration fee, the Financial Industry Regulatory Authority, Inc. (FINRA) filing fee and the Nasdaq Stock Market listing fee.

	Amount Paid or to Be Paid
SEC registration fee	$ *
FINRA filing fee	*
Exchange listing fee	*
Printing and engraving expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Transfer agent and registrar fees	*
Miscellaneous expenses	*
Total	$ *

* To be provided by amendment.

Item 14. Indemnification of Directors and Officers

Section 145 of the Delaware General Corporation Law empowers a corporation to indemnify its directors and officers and to purchase insurance with respect to liability arising out of their capacity or status as directors and officers, provided that the person acted in good faith and in a manner the person reasonably believed to be in our best interests, and, with respect to any criminal action, had no reasonable cause to believe the person's actions were unlawful. The Delaware General Corporation Law further provides that the indemnification permitted thereunder shall not be deemed exclusive of any other rights to which the directors and officers may be entitled under the corporation's bylaws, any agreement, a vote of stockholders or otherwise. The certificate of incorporation of the registrant to be in effect upon the completion of this offering provides for the indemnification of the registrant's directors and officers to the fullest extent permitted under the Delaware General Corporation Law. In addition, the bylaws of the registrant to be in effect upon the completion of this offering require the registrant to fully 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) by reason of the fact that such person is or was a director or officer of the registrant, or is or was a director or officer of the registrant serving at the registrant's request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorney's fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, to the fullest extent permitted by applicable law.

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 (1) for any breach of the director's duty of loyalty to the corporation or its stockholders, (2) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (3) for payments of unlawful dividends or unlawful stock repurchases or redemptions or (4) for any transaction from which the director derived an improper personal benefit. The registrant's certificate of incorporation to be in effect upon the completion of this offering

provides that the registrant's directors shall not be personally liable to it or its stockholders for monetary damages for breach of fiduciary duty as a director and that if the Delaware General Corporation Law is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of the registrant's directors shall be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law, as so amended.

Section 174 of the Delaware General Corporation Law provides, among other things, that a director who willfully or negligently approves of an unlawful payment of dividends or an unlawful stock purchase or redemption may be held liable for such actions. A director who was either absent when the unlawful actions were approved, or dissented at the time, may avoid liability by causing his or her dissent to such actions to be entered in the books containing minutes of the meetings of the board of directors at the time such action occurred or immediately after such absent director receives notice of the unlawful acts.

As permitted by the Delaware General Corporation Law, the registrant has entered into separate indemnification agreements with each of the registrant's directors and executive officers which would require the registrant, among other things, to indemnify them against certain liabilities which may arise by reason of their status as directors or executive officers.

The registrant expects to obtain and maintain insurance policies under which its directors and officers are insured, within the limits and subject to the limitations of those policies, against certain expenses in connection with the defense of, and certain liabilities which might be imposed as a result of, actions, suits or proceedings to which they are parties by reason of being or having been directors or officers. The coverage provided by these policies may apply whether or not the registrant would have the power to indemnify such person against such liability under the provisions of the Delaware General Corporation Law.

These indemnification provisions and the indemnification agreements entered into between the registrant and the registrant's officers and directors may be sufficiently broad to permit indemnification of the registrant's officers and directors for liabilities (including reimbursement of expenses incurred) arising under the Securities Act of 1933, as amended.

The underwriting agreement between the registrant and the underwriters filed as Exhibit 1.1 to this registration statement provides for the indemnification by the underwriters of the registrant's directors and officers and certain controlling persons against specified liabilities, including liabilities under the Securities Act with respect to information provided by the underwriters specifically for inclusion in the registration statement. The investors' rights agreement with certain holders of our capital stock also provides for cross-indemnification in connection with the registration of the registrant's common stock on behalf of such holders.

Item 15. Recent Sales of Unregistered Securities

The following list sets forth information regarding all unregistered securities sold by us since January 1, 2018. No underwriters were involved in the sales and the certificates representing the securities sold and issued contain legends restricting transfer of the securities without registration under the Securities Act or an applicable exemption from registration.

(a) In December 2018, we issued and sold an aggregate of 19,900,000 shares of our Series A convertible preferred stock at a purchase price of $1.00 per share for an aggregate purchase price of $19.9 million.

(b) In August 2019, March 2019 and August 2020, we issued and sold 55,555,527 shares of our Series B convertible preferred stock at a purchase price of $1.656 per share for an aggregate purchase price of $92.0 million.

(c) In December 2020 and January 2021, we issued and sold an aggregate of 51,158,291 shares of our Series C convertible preferred stock at a purchase price of $2.072 per share for an aggregate purchase price of $106.0 million.

(d) From January 2018 through May 5, 2021, we granted stock options to purchase an aggregate of 11,298,200 shares of common stock upon the exercise of options under our 2016 Plan at exercise prices per share ranging from $0.11 to $0.94, for an aggregate exercise price of approximately $5.52 million.

(e) From January 2018 through May 5, 2021, we issued and sold to certain service providers of ours an aggregate of 789,175 shares of common stock upon the exercise of options under our 2016 Plan at exercise prices per share ranging from $0.11 to $0.94, for an aggregate exercise price of approximately $144,921.

The offers, sales and issuances of the securities described in Items 15(a) , 15(b) and 15(c) were exempt from registration under the Securities Act under Section 4(a)(2) of the Securities Act or Regulation D promulgated thereunder as transactions by an issuer not involving a public offering. The recipients of securities in each of these transactions acquired the securities for investment only and not with a view to or for sale in connection with any distribution thereof and appropriate legends were affixed to the securities issued in these transactions. Each of the recipients of securities in these transactions was an accredited person and had adequate access, through employment, business or other relationships, to information about the registrant.

The offers, sales and issuances of the securities described in Items 15(d) and 15(e) were exempt from registration under the Securities Act under either (1) Rule 701 in that the transactions were under compensatory benefit plans and contracts relating to compensation as provided under Rule 701 or (2) Section 4(a)(2) of the Securities Act as transactions by an issuer not involving any public offering. The recipients of such securities were the registrant's employees, consultants or directors and received the securities under our 2016 Plan. The recipients of securities in each of these transactions represented their intention to acquire the securities for investment only and not with view to or for sale in connection with any distribution thereof and appropriate legends were affixed to the securities issued in these transactions.

Item 16. Exhibit and Financial Statement Schedules

(a) Exhibits.

See the Exhibit Index immediately preceding the signature page hereto for a list of exhibits filed as part of this registration statement on Form S-1, which Exhibit Index is incorporated herein by reference.

(b) Financial Statement Schedules.

Schedules 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

The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreements, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

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, 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 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.

The undersigned hereby undertakes that:

(1) 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 of 1933 shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) 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	Description
1.1*	Form of Underwriting Agreement.
3.1**	Amended and Restated Certificate of Incorporation of the Registrant, as currently in effect.
3.2*	Form of Amended and Restated Certificate of Incorporation of the Registrant, to be in effect upon the completion of this offering.
3.3**	Bylaws of the Registrant, as currently in effect.
3.4*	Form of Amended and Restated Bylaws of the Registrant, to be in effect upon the completion of this offering.
4.1**	Amended and Restated Investors' Rights Agreement by and among the Registrant and certain of its stockholders, dated December 17, 2020.
4.2*	Specimen common stock certificate of the Registrant.
5.1*	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation.
10.1+*	Form of Indemnification Agreement between the Registrant and each of its directors and executive officers.
10.2+	Amended and Restated 2016 Equity Incentive Plan and forms of agreement thereunder.
10.3+*	2021 Equity Incentive Plan and forms of agreements thereunder, to be in effect upon the completion of this offering.
10.4+*	2021 Employee Stock Purchase Plan and forms of agreements thereunder, to be in effect upon the completion of this offering.
10.4+*	Employment Letter between the Registrant and Faraz Ali.
10.5+*	Employment Letter between the Registrant and Timothy Charles Hoey, Ph.D.
10.6+*	Employment Letter between the Registrant and Whittemore (Whit) Tingley, M.D., Ph.D.
10.7+*	Executive Incentive Compensation Plan.
10.8+*	Outside Director Compensation Policy.
10.9#**	License Agreement between the Registrant and the Board of Regents of the University of Texas System, dated as of January 10, 2020.
10.10	Lease between HCP Oyster Point III LLC and Tenaya Therapeutics, Inc. dated as of September 6, 2016.
10.11	Lease between Terreno Park Union City LLC and Tenaya Therapeutics, Inc. dated as of February 12, 2021.
10.12+*	Executive Change in Control and Severance Plan.
23.1*	Consent of Deloitte & Touche LLP, Independent Registered Public Accounting Firm.
23.2*	Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (included in Exhibit 5.1).
24.1*	Power of Attorney (see page II-6 to this Form S-1).

* To be filed by amendment.
** Previously filed.
\+ Indicated management contract or compensatory plan.
\# Portions of this exhibit (indicated by asterisks) have been omitted as the registrant has determined that (1) the omitted information is not material and (2) the omitted information would likely cause competitive harm to the registrant if publicly disclosed.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of South San Francisco, California, on , 2021.

TENAYA THERAPEUTICS, INC.

By: _____
Faraz Ali
Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Faraz Ali as his or her true and lawful attorney-in-fact and agent, with full power of substitution, for him or her and in his or her name, place and stead, in any and all capacities to sign any or 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, as amended, and to file the same, with all exhibits thereto, and all other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent or his or her substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
_____ Faraz Ali	Chief Executive Officer and Director (*Principal Executive Officer*)	, 2021
_____	*Principal Financial and Accounting Officer*	, 2021
_____ Timothy Charles Hoey, Ph.D.	Chief Scientific Officer	, 2021
_____ Whittemore (Whit) Tingley, M.D., Ph.D.	Chief Medical Officer	, 2021
_____ Eli Casdin	Director	, 2021
_____ Jin-Long Chen, Ph.D.	Director	, 2021
_____ David Goeddel, Ph.D.	Director	, 2021

Signature	Title	Date
_____ JeenJoo (JJ) Kang, Ph.D.	Director	, 2021
_____ Deepak Srivastava, M.D.	Director	, 2021
_____ Catherine Stehman-Breen, M.D.	Director	, 2021
_____ Jeffrey T. Walsh	Director	, 2021
_____ R. Sanders (Sandy) Williams, M.D.	Director	, 2021

TENAYA THERAPEUTICS, INC.

AMENDED AND RESTATED 2016 EQUITY INCENTIVE PLAN

ORIGINAL PLAN ADOPTED BY THE BOARD OF DIRECTORS: OCTOBER 2, 2016
ORIGINAL PLAN APPROVED BY THE STOCKHOLDERS: OCTOBER 12, 2016
AMENDED AND RESTATED PLAN ADOPTED BY THE BOARD OF DIRECTORS: AUGUST 28, 2019
AMENDED AND RESTATED PLAN ADOPTED BY THE STOCKHOLDERS: AUGUST 28, 2019
AMENDED AND RESTATED PLAN ADOPTED BY THE BOARD OF DIRECTORS: DECEMBER 15, 2020
AMENDED AND RESTATED PLAN ADOPTED BY THE STOCKHOLDERS: DECEMBER 15, 2020
AMENDED AND RESTATED PLAN ADOPTED BY THE BOARD OF DIRECTORS: FEBRUARY 27. 2021

1. Purposes of the Plan. The purposes of this Plan are:

- to attract and retain the best available personnel for positions of substantial responsibility,
- to provide additional incentive to Employees, Directors and Consultants, and
- to promote the success of the Company's business.

The Plan permits the grant of Incentive Stock Options, Nonstatutory Stock Options, Stock Appreciation Rights, Restricted Stock and Restricted Stock Units.

2. Definitions. As used herein, the following definitions will apply:

(a) "Administrator" means the Board or any of its Committees as will be administering the Plan, in accordance with Section 4 of the Plan.

(b) "Applicable Laws" means the requirements relating to the administration of equity-based awards under U.S. state corporate laws, U.S. federal and state securities laws, the Code, any stock exchange or quotation system on which the Common Stock is listed or quoted and the applicable laws of any foreign country or jurisdiction where Awards are, or will be, granted under the Plan.

(c) "Award" means, individually or collectively, a grant under the Plan of Options, Stock Appreciation Rights, Restricted Stock, or Restricted Stock Units.

(d) "Award Agreement" means the written or electronic agreement setting forth the terms and provisions applicable to each Award granted under the Plan. The Award Agreement is subject to the terms and conditions of the Plan.

(e) "Board" means the Board of Directors of the Company.

(f) "Change in Control" means the occurrence of any of the following events:

(i) Change in Ownership of the Company. A change in the ownership of

the Company which occurs on the date that any one person, or more than one person acting as a group ("Person"), acquires ownership of the stock of the Company that, together with the stock held by such Person, constitutes more than 50% of the total voting power of the stock of the Company, except that any change in the ownership of the stock of the Company as a result of a private financing of the Company that is approved by the Board will not be considered a Change in Control; or

(ii) Change in Effective Control of the Company. If the Company has a class of securities registered pursuant to Section 12 of the Exchange Act, a change in the effective control of the Company which occurs on the date that a majority of members of the Board is replaced during any twelve (12) month period by Directors whose appointment or election is not endorsed by a majority of the members of the Board prior to the date of the appointment or election. For purposes of this clause (ii), if any Person is considered to be in effective control of the Company, the acquisition of additional control of the Company by the same Person will not be considered a Change in Control; or

(iii) Change in Ownership of a Substantial Portion of the Company's Assets. A change in the ownership of a substantial portion of the Company's assets which occurs on the date that any Person acquires (or has acquired during the twelve (12) month period ending on the date of the most recent acquisition by such person or persons) assets from the Company that have a total gross fair market value equal to or more than 50% of the total gross fair market value of all of the assets of the Company immediately prior to such acquisition or acquisitions. For purposes of this subsection (iii), gross fair market value means the value of the assets of the Company, or the value of the assets being disposed of, determined without regard to any liabilities associated with such assets.

For purposes of this Section 2(f), persons will be considered to be acting as a group if they are owners of a corporation that enters into a merger, consolidation, purchase or acquisition of stock, or similar business transaction with the Company.

Notwithstanding the foregoing, a transaction will not be deemed a Change in Control unless the transaction qualifies as a change in control event within the meaning of Code Section 409A, as it has been and may be amended from time to time, and any proposed or final Treasury Regulations and Internal Revenue Service guidance that has been promulgated or may be promulgated thereunder from time to time.

Further and for the avoidance of doubt, a transaction will not constitute a Change in Control if: (i) its sole purpose is to change the jurisdiction of the Company's incorporation, or (ii) its sole purpose is to create a holding company that will be owned in substantially the same proportions by the persons who held the Company's securities immediately before such transaction.

(g) "Code" means the Internal Revenue Code of 1986, as amended. Any reference to a section of the Code herein will be a reference to any successor or amended section of the Code.

(h) "Committee" means a committee of Directors or of other individuals satisfying Applicable Laws appointed by the Board, or by the compensation committee of the Board, in accordance with Section 4 hereof.

(i) "Common Stock" means the common stock of the Company.

(j) "Company" means Tenaya Therapeutics, Inc., a Delaware corporation, or any successor thereto.

(k) "Consultant" means any natural person, including an advisor, engaged by the Company or a Parent or Subsidiary to render bona fide services to such entity, provided the services (i) are not in connection with the offer or sale of securities in a capital-raising transaction, and (ii) do not directly promote or maintain a market for the Company's securities.

(l) "Director" means a member of the Board.

(m) "Disability" means total and permanent disability as defined in Code Section 22(e)(3), provided that in the case of Awards other than Incentive Stock Options, the Administrator in its discretion may determine whether a permanent and total disability exists in accordance with uniform and non-discriminatory standards adopted by the Administrator from time to time.

(n) "Employee" means any person, including officers and Directors, employed by the Company or any Parent or Subsidiary of the Company. Neither service as a Director nor payment of a director's fee by the Company will be sufficient to constitute "employment" by the Company.

(o) "Exchange Act" means the Securities Exchange Act of 1934, as amended.

(p) "Exchange Program" means a program under which (i) outstanding Awards are surrendered or cancelled in exchange for Awards of the same type (which may have higher or lower exercise prices and different terms), Awards of a different type, and/or cash, (ii) Participants would have the opportunity to transfer any outstanding Awards to a financial institution or other person or entity selected by the Administrator, and/or (iii) the exercise price of an outstanding Award is reduced or increased. The Administrator will determine the terms and conditions of any Exchange Program in its sole discretion.

(q) "Fair Market Value" means, as of any date, the value of Common Stock determined as follows:

(i) If the Common Stock is listed on any established stock exchange or a national market system, including without limitation the Nasdaq Global Select Market, the Nasdaq Global Market or the Nasdaq Capital Market of The Nasdaq Stock Market, its Fair Market Value will be the closing sales price for such stock (or the closing bid, if no sales were reported) as quoted on such exchange or system on the day of determination, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable;

(ii) If the Common Stock is regularly quoted by a recognized securities dealer but selling prices are not reported, the Fair Market Value of a Share will be the mean between the high bid and low asked prices for the Common Stock on the day of determination (or, if no bids and asks were reported on that date, as applicable, on the last trading date such bids and asks were 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 will be determined in good faith by the Administrator.

(r) "Incentive Stock Option" means an Option that by its terms qualifies and is otherwise intended to qualify as an incentive stock option within the meaning of Code Section 422 and the regulations promulgated thereunder.

(s) "Nonstatutory Stock Option" means an Option that by its terms does not qualify or is not intended to qualify as an Incentive Stock Option.

(t) "Option" means a stock option granted pursuant to the Plan.

(u) "Parent" means a "parent corporation," whether now or hereafter existing, as defined in Code Section 424(e).

(v) "Participant" means the holder of an outstanding Award.

(w) "Period of Restriction" means the period during which the transfer of Shares of Restricted Stock are subject to restrictions and therefore, the Shares are subject to a substantial risk of forfeiture. Such restrictions may be based on the passage of time, the achievement of target levels of performance, or the occurrence of other events as determined by the Administrator.

(x) "Plan" means this 2016 Equity Incentive Plan.

(y) "Restricted Stock" means Shares issued pursuant to an Award of Restricted Stock under Section 8 of the Plan, or issued pursuant to the early exercise of an Option.

(z) "Restricted Stock Unit" means a bookkeeping entry representing an amount equal to the Fair Market Value of one Share, granted pursuant to Section 9. Each Restricted Stock Unit represents an unfunded and unsecured obligation of the Company.

(aa) "Service Provider" means an Employee, Director or Consultant.

(bb) "Share" means a share of the Common Stock, as adjusted in accordance with Section 13 of the Plan.

(cc) "Stock Appreciation Right" means an Award, granted alone or in connection with an Option, that pursuant to Section 7 is designated as a Stock Appreciation Right.

(dd) "Subsidiary" means a "subsidiary corporation," whether now or hereafter existing, as defined in Code Section 424(f).

3. Stock Subject to the Plan.

(a) Stock Subject to the Plan. Subject to the provisions of Section 13 of the Plan, the maximum aggregate number of Shares that may be subject to Awards and sold under the Plan is 18,428,250 Shares. The Shares may be authorized but unissued, or reacquired Common Stock.

(b) Lapsed Awards. If an Award expires or becomes unexercisable without having been exercised in full, is surrendered pursuant to an Exchange Program, or, with respect to Restricted Stock or Restricted Stock Units, is forfeited to or repurchased by the Company due to the failure to vest, the unpurchased Shares (or for Awards other than Options or Stock Appreciation Rights the forfeited or repurchased Shares) which were subject thereto will become available for future grant or sale under the Plan (unless the Plan has terminated). With respect to Stock Appreciation Rights, only Shares actually issued pursuant to a Stock Appreciation Right will cease to be available under the Plan; all remaining Shares under Stock Appreciation Rights will remain available for future grant or sale under the Plan (unless the Plan has terminated). Shares that have actually been issued under the Plan under any Award will not be returned to the Plan and will not become available for future distribution under the Plan; provided, however, that if Shares issued pursuant to Awards of Restricted Stock or Restricted Stock Units are repurchased by the Company or are forfeited to the Company due to the failure to vest, such Shares will become available for future grant under the Plan. Shares used to pay the exercise price of an Award or to satisfy the tax withholding obligations related to an Award will become available for future grant or sale under the Plan. To the extent an Award under the Plan is paid out in cash rather than Shares, such cash payment will not result in reducing the number of Shares available for issuance under the Plan. Notwithstanding the foregoing and, subject to adjustment as provided in Section 13, the maximum number of Shares that may be issued upon the exercise of Incentive Stock Options will equal the aggregate Share number stated in Section 3(a), plus, to the extent allowable under Code Section 422 and the Treasury Regulations promulgated thereunder, any Shares that become available for issuance under the Plan pursuant to Section 3(b).

(c) Share Reserve. The Company, during the term of this Plan, will at all times reserve and keep available such number of Shares as will be sufficient to satisfy the requirements of the Plan.

4. Administration of the Plan.

(a) Procedure.

(i) Multiple Administrative Bodies. Different Committees with respect to different groups of Service Providers may administer the Plan.

(ii) Other Administration. Other than as provided above, the Plan will be administered by (A) the Board or (B) a Committee, which Committee will be constituted to satisfy Applicable Laws.

(b) Powers of the Administrator. Subject to the provisions of the Plan, and in the case of a Committee, subject to the specific duties delegated by the Board to such Committee, the Administrator will have the authority, in its discretion:

(i) to determine the Fair Market Value;

(ii) to select the Service Providers to whom Awards may be granted hereunder;

(iii) to determine the number of Shares to be covered by each Award granted hereunder;

(iv) to approve forms of Award Agreements for use under the Plan;

(v) to determine the terms and conditions, not inconsistent with the terms of the Plan, of any Award granted hereunder. Such terms and conditions include, but are not limited to, the exercise price, the time or times when Awards may be exercised (which may be based on performance criteria), any vesting acceleration or waiver of forfeiture restrictions, and any restriction or limitation regarding any Award or the Shares relating thereto, based in each case on such factors as the Administrator will determine;

(vi) to institute and determine the terms and conditions of an Exchange Program;

(vii) to construe and interpret the terms of the Plan and Awards granted pursuant to the Plan;

(viii) to prescribe, amend and rescind rules and regulations relating to the Plan, including rules and regulations relating to sub-plans established for the purpose of satisfying applicable foreign laws or for qualifying for favorable tax treatment under applicable foreign laws;

(ix) to modify or amend each Award (subject to Section 18(c) of the Plan), including but not limited to the discretionary authority to extend the post-termination exercisability period of Awards and to extend the maximum term of an Option (subject to Section 6(d));

(x) to allow Participants to satisfy withholding tax obligations in a manner prescribed in Section 14;

(xi) to authorize any person to execute on behalf of the Company any instrument required to effect the grant of an Award previously granted by the Administrator;

(xii) to allow a Participant to defer the receipt of the payment of cash or the delivery of Shares that otherwise would be due to such Participant under an Award; and

(xiii) to make all other determinations deemed necessary or advisable for administering the Plan.

(c) Effect of Administrator's Decision. The Administrator's decisions, determinations and interpretations will be final and binding on all Participants and any other holders of Awards.

5. Eligibility. Nonstatutory Stock Options, Stock Appreciation Rights, Restricted Stock, and Restricted Stock Units may be granted to Service Providers. Incentive Stock Options may be granted only to Employees.

6. Stock Options.

(a) Grant of Options. Subject to the terms and provisions of the Plan, the Administrator, at any time and from time to time, may grant Options in such amounts as the Administrator, in its sole discretion, will determine.

(b) Option Agreement. Each Award of an Option will be evidenced by an Award Agreement that will specify the exercise price, the term of the Option, the number of Shares subject to the Option, the exercise restrictions, if any, applicable to the Option, and such other terms and conditions as the Administrator, in its sole discretion, will determine.

(c) Limitations. Each Option will be designated in the Award Agreement as either an Incentive Stock Option or a Nonstatutory Stock Option. Notwithstanding such designation, however, to the extent that the aggregate Fair Market Value of the Shares with respect to which Incentive Stock Options are exercisable for the first time by the Participant during any calendar year (under all plans of the Company and any Parent or Subsidiary) exceeds one hundred thousand dollars ($100,000), such Options will be treated as Nonstatutory Stock Options. For purposes of this Section 6(c), Incentive Stock Options will be taken into account in the order in which they were granted, the Fair Market Value of the Shares will be determined as of the time the Option with respect to such Shares is granted, and calculation will be performed in accordance with Code Section 422 and Treasury Regulations promulgated thereunder.

(d) Term of Option. The term of each Option will be stated in the Award Agreement; provided, however, that the term will be no more than ten (10) years from the date of grant thereof. In the case of an Incentive Stock Option granted to a Participant who, at the time the Incentive Stock Option is granted, owns stock representing more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or any Parent or Subsidiary, the term of the Incentive Stock Option will be five (5) years from the date of grant or such shorter term as may be provided in the Award Agreement.

(e) Option Exercise Price and Consideration.

(i) Exercise Price. The per Share exercise price for the Shares to be issued pursuant to the exercise of an Option will be determined by the Administrator, but will be no less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant. In addition, in the case of an Incentive Stock Option granted to an Employee who owns stock representing more than ten percent (10%) of the voting power of all classes of stock of the Company or any Parent or Subsidiary, the per Share exercise price will be no less than one hundred ten percent (110%) of the Fair Market Value per Share on the date of grant. Notwithstanding the foregoing provisions of this Section 6(e)(i), Options may be granted with a per Share exercise price of less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant pursuant to a transaction described in, and in a manner consistent with, Code Section 424(a).

(ii) Waiting Period and Exercise Dates. At the time an Option is granted, the Administrator will fix the period within which the Option may be exercised and will determine any conditions that must be satisfied before the Option may be exercised.

(iii) Form of Consideration. The Administrator will determine the acceptable form of consideration for exercising an Option, including the method of payment. In the case of an Incentive Stock Option, the Administrator will determine the acceptable form of consideration at the time of grant. Such consideration may consist entirely of: (1) cash; (2) check; (3) promissory note, to the extent permitted by Applicable Laws, (4) other Shares, provided that such Shares have a Fair Market Value on the date of surrender equal to the aggregate exercise price of the Shares as to which such Option will be exercised and provided further that accepting such Shares will not result in any adverse accounting consequences to the Company, as the Administrator determines in its sole discretion; (5) consideration received by the Company under cashless exercise program (whether through a broker or otherwise) implemented by the Company in connection with the Plan; (6) by net exercise, (7) such other consideration and method of payment for the issuance of Shares to the extent permitted by Applicable Laws, or (8) any combination of the foregoing methods of payment. In making its determination as to the type of consideration to accept, the Administrator will consider if acceptance of such consideration may be reasonably expected to benefit the Company.

(f) Exercise of Option.

(i) Procedure for Exercise; Rights as a Stockholder. Any Option granted hereunder will be exercisable according to the terms of the Plan and at such times and under such conditions as determined by the Administrator and set forth in the Award Agreement. An Option may not be exercised for a fraction of a Share.

An Option will be deemed exercised when the Company receives: (i) notice of exercise (in such form as the Administrator may specify from time to time) from the person entitled to exercise the Option, and (ii) full payment for the Shares with respect to which the Option is exercised (together with applicable tax withholding). Full payment may consist of any consideration and method of payment authorized by the Administrator and permitted by the Award Agreement and the Plan. Shares issued upon exercise of an Option will be issued in the name of the Participant or, if requested by the Participant, in the name of the Participant and his or her spouse. Until the Shares are issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder will exist with respect to the Shares subject to an Option, notwithstanding the exercise of the Option. The Company will issue (or cause to be issued) such Shares promptly after the Option is exercised. No adjustment will be made for a dividend or other right for which the record date is prior to the date the Shares are issued, except as provided in Section 13 of the Plan.

Exercising an Option in any manner will decrease the number of Shares thereafter available, both for purposes of the Plan and for sale under the Option, by the number of Shares as to which the Option is exercised.

(ii) Termination of Relationship as a Service Provider. If a Participant ceases to be a Service Provider, other than upon the Participant's termination as the result of the Participant's death or Disability, the Participant may exercise his or her Option within thirty (30) days of termination, or such longer period of time as is specified in the Award Agreement (but in no event later than the expiration of the term of such Option as set forth in the Award Agreement) to the extent that the Option is vested on the date of termination. Unless otherwise provided by the Administrator, if on the date of termination the Participant is not vested as to his or her entire Option, the Shares covered by the unvested portion of the Option will revert to the Plan. If after termination the Participant does not exercise his or her Option within the time specified by the Administrator, the Option will terminate, and the Shares covered by such Option will revert to the Plan.

(iii) Disability of Participant. If a Participant ceases to be a Service Provider as a result of the Participant's Disability, the Participant may exercise his or her Option within six (6) months of termination, or such longer period of time as is specified in the Award Agreement (but in no event later than the expiration of the term of such Option as set forth in the Award Agreement) to the extent the Option is vested on the date of termination. Unless otherwise provided by the Administrator, if on the date of termination the Participant is not vested as to his or her entire Option, the Shares covered by the unvested portion of the Option will revert to the Plan. If after termination the Participant does not exercise his or her Option within the time specified herein, the Option will terminate, and the Shares covered by such Option will revert to the Plan.

(iv) Death of Participant. If a Participant dies while a Service Provider, the Option may be exercised within six (6) months following the Participant's death, or within such longer period of time as is specified in the Award Agreement (but in no event later than the expiration of the term of such Option as set forth in the Award Agreement) to the extent that the Option is vested on the date of death, by the Participant's designated beneficiary, provided such beneficiary has been designated prior to the Participant's death in a form acceptable to the Administrator. If no such beneficiary has been designated by the Participant, then such Option may be exercised by the personal representative of the Participant's estate or by the person(s) to whom the Option is transferred pursuant to the Participant's will or in accordance with the laws of descent and distribution. Unless otherwise provided by the Administrator, if at the time of death Participant is not vested as to his or her entire Option, the Shares covered by the unvested portion of the Option will immediately revert to the Plan. If the Option is not so exercised within the time specified herein, the Option will terminate, and the Shares covered by such Option will revert to the Plan.

7. Stock Appreciation Rights.

(a) Grant of Stock Appreciation Rights. Subject to the terms and conditions of the Plan, a Stock Appreciation Right may be granted to Service Providers at any time and from time to time as will be determined by the Administrator, in its sole discretion.

(b) Number of Shares. The Administrator will have complete discretion to determine the number of Shares subject to any Award of Stock Appreciation Rights.

(c) Exercise Price and Other Terms. The per Share exercise price for the Shares that will determine the amount of the payment to be received upon exercise of a Stock Appreciation Right as set forth in Section 7(f) will be determined by the Administrator and will be no less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant. Otherwise, the Administrator, subject to the provisions of the Plan, will have complete discretion to determine the terms and conditions of Stock Appreciation Rights granted under the Plan.

(d) Stock Appreciation Right Agreement. Each Stock Appreciation Right grant will be evidenced by an Award Agreement that will specify the exercise price, the term of the Stock Appreciation Right, the conditions of exercise, and such other terms and conditions as the Administrator, in its sole discretion, will determine.

(e) Expiration of Stock Appreciation Rights. A Stock Appreciation Right granted under the Plan will expire upon the date determined by the Administrator, in its sole discretion, and set forth in the Award Agreement. Notwithstanding the foregoing, the rules of Section 6(d) relating to the maximum term and Section 6(f) relating to exercise also will apply to Stock Appreciation Rights.

(f) Payment of Stock Appreciation Right Amount. Upon exercise of a Stock Appreciation Right, a Participant will be entitled to receive payment from the Company in an amount determined by multiplying:

(i) The difference between the Fair Market Value of a Share on the date of exercise over the exercise price; times

(ii) The number of Shares with respect to which the Stock Appreciation Right is exercised.

At the discretion of the Administrator, the payment upon Stock Appreciation Right exercise may be in cash, in Shares of equivalent value, or in some combination thereof.

8. Restricted Stock.

(a) Grant of Restricted Stock. Subject to the terms and provisions of the Plan, the Administrator, at any time and from time to time, may grant Shares of Restricted Stock to Service Providers in such amounts as the Administrator, in its sole discretion, will determine.

(b) Restricted Stock Agreement. Each Award of Restricted Stock will be evidenced by an Award Agreement that will specify the Period of Restriction, the number of Shares granted, and such other terms and conditions as the Administrator, in its sole discretion, will determine. Unless the Administrator determines otherwise, the Company as escrow agent will hold Shares of Restricted Stock until the restrictions on such Shares have lapsed.

(c) Transferability. Except as provided in this Section 8 or as the Administrator determines, Shares of Restricted Stock may not be sold, transferred, pledged, assigned, or otherwise alienated or hypothecated until the end of the applicable Period of Restriction.

(d) Other Restrictions. The Administrator, in its sole discretion, may impose such other restrictions on Shares of Restricted Stock as it may deem advisable or appropriate.

(e) Removal of Restrictions. Except as otherwise provided in this Section 8, Shares of Restricted Stock covered by each Restricted Stock grant made under the Plan will be released from escrow as soon as practicable after the last day of the Period of Restriction or at such other time as the Administrator may determine. The Administrator, in its discretion, may accelerate the time at which any restrictions will lapse or be removed.

(f) Voting Rights. During the Period of Restriction, Service Providers holding Shares of Restricted Stock granted hereunder may exercise full voting rights with respect to those Shares, unless the Administrator determines otherwise.

(g) Dividends and Other Distributions. During the Period of Restriction, Service Providers holding Shares of Restricted Stock will be entitled to receive all dividends and other distributions paid with respect to such Shares, unless the Administrator provides otherwise. If any such dividends or distributions are paid in Shares, the Shares will be subject to the same restrictions on transferability and forfeitability as the Shares of Restricted Stock with respect to which they were paid.

(h) Return of Restricted Stock to Company. On the date set forth in the Award Agreement, the Restricted Stock for which restrictions have not lapsed will revert to the Company and again will become available for grant under the Plan.

9. Restricted Stock Units.

(a) Grant. Restricted Stock Units may be granted at any time and from time to time as determined by the Administrator. After the Administrator determines that it will grant Restricted Stock Units, it will advise the Participant in an Award Agreement of the terms, conditions, and restrictions related to the grant, including the number of Restricted Stock Units.

(b) Vesting Criteria and Other Terms. The Administrator will set vesting criteria in its discretion, which, depending on the extent to which the criteria are met, will determine the number of Restricted Stock Units that will be paid out to the Participant. The Administrator may set vesting criteria based upon the achievement of Company-wide, business unit, or individual goals (including, but not limited to, continued employment or service), or any other basis determined by the Administrator in its discretion.

(c) Earning Restricted Stock Units. Upon meeting the applicable vesting criteria, the Participant will be entitled to receive a payout as determined by the Administrator. Notwithstanding the foregoing, at any time after the grant of Restricted Stock Units, the Administrator, in its sole discretion, may reduce or waive any vesting criteria that must be met to receive a payout.

(d) Form and Timing of Payment. Payment of earned Restricted Stock Units will be made as soon as practicable after the date(s) determined by the Administrator and set forth in the Award Agreement. The Administrator, in its sole discretion, may settle earned Restricted Stock Units in cash, Shares, or a combination of both.

(e) Cancellation. On the date set forth in the Award Agreement, all unearned Restricted Stock Units will be forfeited to the Company.

10. Compliance With Code Section 409A. Awards will be designed and operated in such a manner that they are either exempt from the application of, or comply with, the requirements of Code Section 409A, except as otherwise determined in the sole discretion of the Administrator. The Plan and each Award Agreement under the Plan is intended to meet the requirements of Code Section 409A and will be construed and interpreted in accordance with such intent, except as otherwise determined in the sole discretion of the Administrator. To the extent that an Award or payment, or the settlement or deferral thereof, is subject to Code Section 409A the Award will be granted, paid, settled or deferred in a manner that will meet the requirements of Code Section 409A, such that the grant, payment, settlement or deferral will not be subject to the additional tax or interest applicable under Code Section 409A.

11. Leaves of Absence/Transfer Between Locations. Unless the Administrator provides otherwise, vesting of Awards granted hereunder will be suspended during any unpaid leave of absence. A Participant will not cease to be an Employee in the case of (i) any leave of absence approved by the Company or (ii) transfers between locations of the Company or between the Company, its Parent, or any Subsidiary. For purposes of Incentive Stock Options, no such leave may exceed three (3) months, unless reemployment upon expiration of such leave is guaranteed by statute or contract. If reemployment upon expiration of a leave of absence approved by the Company is not so guaranteed, then six (6) months following the first (1st) day of such leave, any Incentive Stock Option held by the Participant will cease to be treated as an Incentive Stock Option and will be treated for tax purposes as a Nonstatutory Stock Option.

12. Limited Transferability of Awards.

(a) Unless determined otherwise by the Administrator, Awards may not be sold, pledged, assigned, hypothecated, or otherwise transferred in any manner other than by will or by the laws of descent and distribution, and may be exercised, during the lifetime of the Participant, only by the Participant. If the Administrator makes an Award transferable, such Award may only be transferred (i) by will, (ii) by the laws of descent and distribution, or (iii) as permitted by Rule 701 of the Securities Act of 1933, as amended (the "Securities Act").

(b) Further, until the Company becomes subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act, or after the Administrator determines that it is, will, or may no longer be relying upon the exemption from registration under the Exchange Act as set forth in Rule 12h-1(f) promulgated under the Exchange Act, an Option, or prior to exercise, the Shares subject to the Option, may not be pledged, hypothecated or otherwise transferred or disposed of, in any manner, including by entering into any short position, any "put equivalent position" or any "call equivalent position" (as defined in Rule 16a-1(h) and Rule 16a-1(b) of the Exchange Act, respectively), other than to (i) persons who are "family members" (as defined in Rule 701(c)(3) of the Securities Act) through gifts or domestic relations orders, or (ii) to an executor or guardian of the Participant upon the death or disability of the Participant. Notwithstanding the foregoing sentence, the Administrator, in its sole discretion, may determine to permit transfers to the Company or in connection with a Change in Control or other acquisition transactions involving the Company to the extent permitted by Rule 12h-1(f).

13. Adjustments; Dissolution or Liquidation; Merger or Change in Control.

(a) Adjustments. In the event that any dividend or other distribution (whether in the form of cash, Shares, other securities, or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase, or exchange of Shares or other securities of the Company, or other change in the corporate structure of the Company affecting the Shares occurs, the Administrator, in order to prevent diminution or enlargement of the benefits or potential benefits intended to be made available under the Plan, will adjust the number and class of shares of stock that may be delivered under the Plan and/or the number, class, and price of shares of stock covered by each outstanding Award; provided, however, that the Administrator will make such adjustments to an Award required by Section 25102(o) of the California Corporations Code to the extent the Company is relying upon the exemption afforded thereby with respect to the Award.

(b) Dissolution or Liquidation. In the event of the proposed dissolution or liquidation of the Company, the Administrator will notify each Participant as soon as practicable prior to the effective date of such proposed transaction. To the extent it has not been previously exercised, an Award will terminate immediately prior to the consummation of such proposed action.

(c) Merger or Change in Control. In the event of a merger of the Company with or into another corporation or other entity or a Change in Control, each outstanding Award will be treated as the Administrator determines (subject to the provisions of the following paragraph) without a Participant's consent, including, without limitation, that (i) Awards will be assumed, or substantially equivalent Awards will be substituted, by the acquiring or succeeding corporation (or an affiliate thereof) with appropriate adjustments as to the number and kind of shares and prices; (ii) upon written notice to a Participant, that the Participant's Awards will terminate upon or immediately prior to the consummation of such merger or Change in Control; (iii) outstanding Awards will vest and become exercisable, realizable, or payable, or restrictions applicable to an Award will lapse, in whole or in part prior to or upon consummation of such merger or Change in Control, and, to the extent the Administrator determines, terminate upon or immediately prior to the effectiveness of such merger or Change in Control; (iv) (A) the termination of an Award in exchange for an amount of cash and/or property, if any, equal to the amount that would have been attained upon the exercise of such Award or realization of the Participant's rights as of the date of the occurrence of the transaction (and, for the avoidance of doubt, if as of the date of the occurrence of the transaction the Administrator determines in good faith that no amount would have been attained upon the exercise of such Award or realization of the Participant's rights, then such Award may be terminated by the Company without payment), or (B) the replacement of such Award with other rights or property selected by the Administrator in its sole discretion; or (v) any combination of the foregoing. In taking any of the actions permitted under this subsection 13(c), the Administrator will not be obligated to treat all Awards, all Awards held by a Participant, or all Awards of the same type, similarly.

In the event that the successor corporation does not assume or substitute for the Award (or portion thereof), the Participant will fully vest in and have the right to exercise all of his or her outstanding Options and Stock Appreciation Rights, including Shares as to which such Awards would not otherwise be vested or exercisable, all restrictions on Restricted Stock and Restricted Stock Units will lapse, and, with respect to Awards with performance-based vesting, all

performance goals or other vesting criteria will be deemed achieved at one hundred percent (100%) of target levels and all other terms and conditions met. In addition, if an Option or Stock Appreciation Right is not assumed or substituted in the event of a merger or Change in Control, the Administrator will notify the Participant in writing or electronically that the Option or Stock Appreciation Right will be exercisable for a period of time determined by the Administrator in its sole discretion, and the Option or Stock Appreciation Right will terminate upon the expiration of such period.

For the purposes of this subsection 13(c), an Award will be considered assumed if, following the merger or Change in Control, the Award confers the right to purchase or receive, for each Share subject to the Award immediately prior to the merger or Change in Control, the consideration (whether stock, cash, or other securities or property) received in the merger or Change in Control by holders of Common Stock for each Share held on the effective date of the transaction (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding Shares); provided, however, that if such consideration received in the merger or Change in Control is not solely common stock of the successor corporation or its Parent, the Administrator may, with the consent of the successor corporation, provide for the consideration to be received upon the exercise of an Option or Stock Appreciation Right or upon the payout of a Restricted Stock Unit, for each Share subject to such Award, to be solely common stock of the successor corporation or its Parent equal in fair market value to the per share consideration received by holders of Common Stock in the merger or Change in Control.

Notwithstanding anything in this Section 13(c) to the contrary, an Award that vests, is earned or paid-out upon the satisfaction of one or more performance goals will not be considered assumed if the Company or its successor modifies any of such performance goals without the Participant's consent; provided, however, a modification to such performance goals only to reflect the successor corporation's post-Change in Control corporate structure will not be deemed to invalidate an otherwise valid Award assumption.

Notwithstanding anything in this Section 13(c) to the contrary, if a payment under an Award Agreement is subject to Code Section 409A and if the change in control definition contained in the Award Agreement does not comply with the definition of "change of control" for purposes of a distribution under Code Section 409A, then any payment of an amount that is otherwise accelerated under this Section will be delayed until the earliest time that such payment would be permissible under Code Section 409A without triggering any penalties applicable under Code Section 409A.

14. Tax Withholding.

(a) Withholding Requirements. Prior to the delivery of any Shares or cash pursuant to an Award (or exercise thereof), the Company will have the power and the right to deduct or withhold, or require a Participant to remit to the Company, an amount sufficient to satisfy federal, state, local, foreign or other taxes (including the Participant's FICA obligation) required to be withheld with respect to such Award (or exercise thereof).

(b) Withholding Arrangements. The Administrator, in its sole discretion and pursuant to such procedures as it may specify from time to time, may permit a Participant to satisfy such tax withholding obligation, in whole or in part by (without limitation) (i) paying cash, (ii) electing to have the Company withhold otherwise deliverable Shares having a Fair Market Value equal to the minimum statutory amount required to be withheld, (iii) delivering to the Company already-owned Shares having a Fair Market Value equal to the statutory amount required to be withheld, provided the delivery of such Shares will not result in any adverse accounting consequences, as the Administrator determines in its sole discretion, or (iv) selling a sufficient number of Shares otherwise deliverable to the Participant through such means as the Administrator may determine in its sole discretion (whether through a broker or otherwise) equal to the amount required to be withheld. The amount of the withholding requirement will be deemed to include any amount which the Administrator agrees may be withheld at the time the election is made, not to exceed the amount determined by using the maximum federal, state or local marginal income tax rates applicable to the Participant with respect to the Award on the date that the amount of tax to be withheld is to be determined. The Fair Market Value of the Shares to be withheld or delivered will be determined as of the date that the taxes are required to be withheld.

15. No Effect on Employment or Service. Neither the Plan nor any Award will confer upon a Participant any right with respect to continuing the Participant's relationship as a Service Provider with the Company, nor will they interfere in any way with the Participant's right or the Company's right to terminate such relationship at any time, with or without cause, to the extent permitted by Applicable Laws.

16. Date of Grant. The date of grant of an Award will be, for all purposes, the date on which the Administrator makes the determination granting such Award, or such other later date as is determined by the Administrator. Notice of the determination will be provided to each Participant within a reasonable time after the date of such grant.

17. Term of Plan. Subject to Section 21 of the Plan, the Plan will become effective upon its adoption by the Board. Unless sooner terminated under Section 18, it will continue in effect for a term of ten (10) years from the later of (a) the effective date of the Plan, or (b) the earlier of the most recent Board or stockholder approval of an increase in the number of Shares reserved for issuance under the Plan.

18. Amendment and Termination of the Plan.

(a) Amendment and Termination. The Board may at any time amend, alter, suspend or terminate the Plan.

(b) Stockholder Approval. The Company will obtain stockholder approval of any Plan amendment to the extent necessary and desirable to comply with Applicable Laws.

(c) Effect of Amendment or Termination. No amendment, alteration, suspension or termination of the Plan will impair the rights of any Participant, unless mutually agreed otherwise between the Participant and the Administrator, which agreement must be in writing and signed by the Participant and the Company. Termination of the Plan will not affect the Administrator's ability to exercise the powers granted to it hereunder with respect to Awards granted under the Plan prior to the date of such termination.

19. Conditions Upon Issuance of Shares.

(a) Legal Compliance. Shares will not be issued pursuant to the exercise of an Award unless the exercise of such Award and the issuance and delivery of such Shares will comply with Applicable Laws and will be further subject to the approval of counsel for the Company with respect to such compliance.

(b) Investment Representations. As a condition to the exercise of an Award, the Company may require the person exercising such Award to represent and warrant at the time of any such exercise that the Shares are being purchased only for investment and without any present intention to sell or distribute such Shares if, in the opinion of counsel for the Company, such a representation is required.

20. Inability to Obtain Authority. The inability of the Company to obtain authority from any regulatory body having jurisdiction, which authority is deemed by the Company's counsel to be necessary to the lawful issuance and sale of any Shares hereunder, will relieve the Company of any liability in respect of the failure to issue or sell such Shares as to which such requisite authority will not have been obtained.

21. Stockholder Approval. The Plan will be subject to approval by the stockholders of the Company within twelve (12) months after the date the Plan is adopted by the Board. Such stockholder approval will be obtained in the manner and to the degree required under Applicable Laws.

22. Information to Participants. Beginning on the earlier of (i) the date that the aggregate number of Participants under this Plan is five hundred (500) or more and the Company is relying on the exemption provided by Rule 12h-1(f)(1) under the Exchange Act and (ii) the date that the Company is required to deliver information to Participants pursuant to Rule 701 under the Securities Act, and until such time as the Company becomes subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act, is no longer relying on the exemption provided by Rule 12h-1(f)(1) under the Exchange Act or is no longer required to deliver information to Participants pursuant to Rule 701 under the Securities Act, the Company shall provide to each Participant the information described in paragraphs (e)(3), (4), and (5) of Rule 701 under the Securities Act not less frequently than every six (6) months with the financial statements being not more than 180 days old and with such information provided either by physical or electronic delivery to the Participants or by written notice to the Participants of the availability of the information on an Internet site that may be password-protected and of any password needed to access the information. The Company may request that Participants agree to keep the information to be provided pursuant to this section confidential. If a Participant does not agree to keep the information to be provided pursuant to this section confidential, then the Company will not be required to provide the information unless otherwise required pursuant to Rule 12h-1(f)(1) under the Exchange Act or Rule 701 of the Securities Act.

TENAYA THERAPEUTICS, INC.

2016 EQUITY INCENTIVE PLAN

STOCK OPTION AGREEMENT

Unless otherwise defined herein, the terms defined in the 2016 Equity Incentive Plan (the "Plan") shall have the same defined meanings in this Stock Option Agreement (the "Option Agreement").

Option Grant Number: _____

I. NOTICE OF STOCK OPTION GRANT

Name:

Address:

The undersigned Participant has been granted an Option to purchase Common Stock of the Company, subject to the terms and conditions of the Plan and this Option Agreement, as follows:

Date of Grant:	_____
Vesting Commencement Date:	_____
Exercise Price per Share:	$ _____
Total Number of Shares Granted:	_____
Total Exercise Price:	$ _____
Type of Option:	_____ Incentive Stock Option
	_____ Nonstatutory Stock Option
Term/Expiration Date:	_____

Vesting Schedule:

This Option shall be exercisable, in whole or in part, according to the following vesting schedule:

[See Carta]

Termination Period:

This Option shall be exercisable for [three (3) months] after Participant ceases to be a Service Provider, unless such termination is due to Participant's death or Disability, in which case this

Option shall be exercisable for [twelve (12) months] after Participant ceases to be a Service Provider. Notwithstanding the foregoing sentence, in no event may this Option be exercised after the Term/Expiration Date as provided above and this Option may be subject to earlier termination as provided in Section 13 of the Plan.

II. AGREEMENT

1. Grant of Option. The Administrator of the Company hereby grants to the Participant named in the Notice of Stock Option Grant in Part I of this Option Agreement ("Participant"), an option (the "Option") to purchase the number of Shares set forth in the Notice of Stock Option Grant, at the exercise price per Share set forth in the Notice of Stock Option Grant (the "Exercise Price"), and subject to the terms and conditions of the Plan, which is incorporated herein by reference. Subject to Section 18 of the Plan, in the event of a conflict between the terms and conditions of the Plan and this Option Agreement, the terms and conditions of the Plan shall prevail.

If designated in the Notice of Stock Option Grant as an Incentive Stock Option ("ISO"), this Option is intended to qualify as an Incentive Stock Option as defined in Section 422 of the Code. Nevertheless, to the extent that it exceeds the $100,000 rule of Code Section 422(d), this Option shall be treated as a Nonstatutory Stock Option ("NSO"). Further, if for any reason this Option (or portion thereof) shall not qualify as an ISO, then, to the extent of such nonqualification, such Option (or portion thereof) shall be regarded as a NSO granted under the Plan. In no event shall the Administrator, the Company or any Parent or Subsidiary or any of their respective employees or directors have any liability to Participant (or any other person) due to the failure of the Option to qualify for any reason as an ISO.

2. Exercise of Option

(a) Right to Exercise. This Option shall be exercisable during its term in accordance with the Vesting Schedule set out in the Notice of Stock Option Grant and with the applicable provisions of the Plan and this Option Agreement

(b) Method of Exercise. This Option shall be exercisable by delivery of an exercise notice in the form attached as Exhibit A (the "Exercise Notice") or in a manner and pursuant to such procedures as the Administrator may determine, which shall state the election to exercise the Option, the number of Shares with respect to which the Option is being exercised (the "Exercised Shares"), and such other representations and agreements as may be required by the Company. The Exercise Notice shall be accompanied by payment of the aggregate Exercise Price as to all Exercised Shares, together with any applicable tax withholding. This Option shall be deemed to be exercised upon receipt by the Company of such fully executed Exercise Notice accompanied by the aggregate Exercise Price, together with any applicable tax withholding.

No Shares shall be issued pursuant to the exercise of an Option unless such issuance and such exercise comply with Applicable Laws. Assuming such compliance, for income tax purposes the Shares shall be considered transferred to Participant on the date on which the Option is exercised with respect to such Shares.

3. Participant's Representations. In the event the Shares have not been registered under the Securities Act of 1933, as amended (the "Securities Act"), at the time this Option is exercised, Participant shall, if required by the Company, concurrently with the exercise of all or any portion of this Option, deliver to the Company his or her Investment Representation Statement in the form attached hereto as Exhibit B.

4. Lock-Up Period. Participant hereby agrees that 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 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 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 (10) 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 4 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 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 4.

5. Method of Payment. Payment of the aggregate Exercise Price shall be by any of the following, or a combination thereof, at the election of the Participant:

(a) cash;

(b) check;

(c) consideration received by the Company under a formal cashless exercise program adopted by the Company in connection with the Plan; or

(d) surrender of other Shares which (i) shall be valued at its Fair Market Value on the date of exercise, and (ii) must be owned free and clear of any liens, claims, encumbrances or security interests, if accepting such Shares, in the sole discretion of the Administrator, shall not result in any adverse accounting consequences to the Company.

6. Restrictions on Exercise. This Option may not be exercised until such time as the Plan has been approved by the stockholders of the Company, or if the issuance of such Shares upon such exercise or the method of payment of consideration for such shares would constitute a violation of any Applicable Law.

7. Non-Transferability of Option.

(a) This Option may not be transferred in any manner otherwise than by will or by the laws of descent or distribution and may be exercised during the lifetime of Participant only by Participant. The terms of the Plan and this Option Agreement shall be binding upon the executors, administrators, heirs, successors and assigns of Participant.

(b) Further, until the Company becomes subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act, or after the Administrator determines that it is, will, or may no longer be relying upon the exemption from registration of Options under the Exchange Act as set forth in Rule 12h-1(f) promulgated under the Exchange Act (the "Reliance End Date"), Participant shall not transfer this Option or, prior to exercise, the Shares subject to this Option, in any manner other than (i) to persons who are "family members" (as defined in Rule 701(c)(3) of the Securities Act) through gifts or domestic relations orders, or (ii) to an executor or guardian of Participant upon the death or disability of Participant. Until the Reliance End Date, the Options and, prior to exercise, the Shares subject to this Option, may not be pledged, hypothecated or otherwise transferred or disposed of, including by entering into any short position, any "put equivalent position" or any "call equivalent position" (as defined in Rule 16a-1(h) and Rule 16a-1(b) of the Exchange Act, respectively), other than as permitted in clauses (i) and (ii) of this paragraph.

8. Term of Option. This Option may be exercised only within the term set out in the Notice of Stock Option Grant, and may be exercised during such term only in accordance with the Plan and the terms of this Option Agreement.

9. Tax Obligations.

(a) Tax Withholding. Participant agrees to make appropriate arrangements with the Company (or the Parent or Subsidiary employing or retaining Participant) for the satisfaction of all Federal, state, local and foreign income and employment tax withholding requirements applicable to the Option exercise. Participant acknowledges and agrees that the Company may refuse to honor the exercise and refuse to deliver the Shares if such withholding amounts are not delivered at the time of exercise.

(b) Notice of Disqualifying Disposition of ISO Shares. If the Option granted to Participant herein is an ISO, and if Participant sells or otherwise disposes of any of the Shares acquired pursuant to the ISO on or before the later of (i) the date two (2) years after the Date of Grant, or (ii) the date one (1) year after the date of exercise, Participant shall immediately notify the Company in writing of such disposition. Participant agrees that Participant may be subject to income tax withholding by the Company on the compensation income recognized by Participant.

(c) Code Section 409A. Under Code Section 409A, an Option that vests after December 31, 2004 (or that vested on or prior to such date but which was materially modified after October 3, 2004) that was granted with a per Share exercise price that is determined by the Internal Revenue Service (the "IRS") to be less than the Fair Market Value of a Share on the date of grant (a "discount option") may be considered "deferred compensation." An Option that is a "discount option" may result in (i) income recognition by Participant prior to the exercise of the Option, (ii) an additional twenty percent (20%) federal income tax, and (iii) potential penalty and interest charges. The "discount option" may also result in additional state income, penalty and interest tax to the Participant. Participant acknowledges that the Company cannot and has not guaranteed that the IRS will agree that the per Share exercise price of this Option equals or exceeds the Fair Market Value of a Share on the date of grant in a later examination. Participant agrees that if the IRS determines that the Option was granted with a per Share exercise price that was less than the Fair Market Value of a Share on the date of grant, Participant shall be solely responsible for Participant's costs related to such a determination.

10. Entire Agreement; Governing Law. The Plan is incorporated herein by reference. The Plan and this Option Agreement constitute the entire agreement of the parties with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof, and may not be modified adversely to the Participant's interest except by means of a writing signed by the Company and Participant. This Option Agreement is governed by the internal substantive laws but not the choice of law rules of California.

11. No Guarantee of Continued Service. PARTICIPANT ACKNOWLEDGES AND AGREES THAT THE VESTING OF SHARES PURSUANT TO THE VESTING SCHEDULE HEREOF IS EARNED ONLY BY CONTINUING AS A SERVICE PROVIDER AT THE WILL OF THE COMPANY (OR THE PARENT OR SUBSIDIARY EMPLOYING OR RETAINING PARTICIPANT) AND NOT THROUGH THE ACT OF BEING HIRED, BEING GRANTED THIS OPTION OR ACQUIRING SHARES HEREUNDER. PARTICIPANT FURTHER ACKNOWLEDGES AND AGREES THAT THIS AGREEMENT, THE TRANSACTIONS CONTEMPLATED HEREUNDER AND THE VESTING SCHEDULE SET FORTH HEREIN DO NOT CONSTITUTE AN EXPRESS OR IMPLIED PROMISE OF CONTINUED ENGAGEMENT AS A SERVICE PROVIDER FOR THE VESTING PERIOD, FOR ANY PERIOD, OR AT ALL, AND SHALL NOT INTERFERE IN ANY WAY WITH PARTICIPANT'S RIGHT OR THE RIGHT OF THE COMPANY (OR THE PARENT OR SUBSIDIARY EMPLOYING OR RETAINING PARTICIPANT) TO TERMINATE PARTICIPANT'S RELATIONSHIP AS A SERVICE PROVIDER AT ANY TIME, WITH OR WITHOUT CAUSE.

Participant acknowledges receipt of a copy of the Plan and represents that he or she is familiar with the terms and provisions thereof, and hereby accepts this Option subject to all of the terms and provisions thereof. Participant has reviewed the Plan and this Option in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Option and fully understands all provisions of the Option. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan or this Option. Participant further agrees to notify the Company upon any change in the residence address indicated below.

PARTICIPANT	TENAYA THERAPEUTICS, INC.
Signature	By
Print Name	Print Name
	Title
Residence Address	

EXHIBIT A

2016 EQUITY INCENTIVE PLAN

EXERCISE NOTICE

Tenaya Therapeutics, Inc.
171 Oyster Point Boulevard, 5th Floor
South San Francisco, CA 94080

Attention: President

1. Exercise of Option. Effective as of today, _____, _____, the undersigned ("Participant") hereby elects to exercise Participant's option (the "Option") to purchase _____ shares of the Common Stock (the "Shares") of Tenaya Therapeutics, Inc. (the "Company") under and pursuant to the 2016 Equity Incentive Plan (the "Plan") and the Stock Option Agreement dated _____, _____ (the "Option Agreement").

2. Delivery of Payment. Participant herewith delivers to the Company the full purchase price of the Shares, as set forth in the Option Agreement, and any and all withholding taxes due in connection with the exercise of the Option.

3. Representations of Participant. Participant acknowledges that Participant has received, read and understood the Plan and the Option Agreement and agrees to abide by and be bound by their terms and conditions.

4. Rights as Stockholder. Until the issuance of the Shares (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder shall exist with respect to the Common Stock subject to an Award, notwithstanding the exercise of the Option. The Shares shall be issued to Participant as soon as practicable after the Option is exercised in accordance with the Option Agreement. No adjustment shall be made for a dividend or other right for which the record date is prior to the date of issuance except as provided in Section 13 of the Plan.

5. Company's Right of First Refusal. Before any Shares held by Participant or any transferee (either being sometimes referred to herein as the "Holder") may be sold or otherwise transferred (including transfer by gift or operation of law), the Company or its assignee(s) shall have a right of first refusal to purchase the Shares on the terms and conditions set forth in this Section 5 (the "Right of First Refusal").

(a) Notice of Proposed Transfer. The Holder of the Shares shall deliver to the Company a written notice (the "Notice") stating: (i) the Holder's bona fide intention to sell or otherwise transfer such Shares; (ii) the name of each proposed purchaser or other transferee ("Proposed Transferee"); (iii) the number of Shares to be transferred to each Proposed Transferee; and (iv) the bona fide cash price or other consideration for which the Holder proposes to transfer the Shares (the "Offered Price"), and the Holder shall offer the Shares at the Offered Price to the Company or its assignee(s).

(b) Exercise of Right of First Refusal. At any time within thirty (30) days after receipt of the Notice, the Company and/or its assignee(s) may, by giving written notice to the Holder, elect to purchase all, but not less than all, of the Shares proposed to be transferred to any one or more of the Proposed Transferees, at the purchase price determined in accordance with subsection (c) below.

(c) Purchase Price. The purchase price ("Purchase Price") for the Shares purchased by the Company or its assignee(s) under this Section 5 shall be the Offered Price. If the Offered Price includes consideration other than cash, the cash equivalent value of the non-cash consideration shall be determined by the Board of Directors of the Company in good faith.

(d) Payment. Payment of the Purchase Price shall be made, at the option of the Company or its assignee(s), in cash (by check), by cancellation of all or a portion of any outstanding indebtedness of the Holder to the Company (or, in the case of repurchase by an assignee, to the assignee), or by any combination thereof within thirty (30) days after receipt of the Notice or in the manner and at the times set forth in the Notice.

(e) Holder's Right to Transfer. If all of the Shares proposed in the Notice to be transferred to a given Proposed Transferee are not purchased by the Company and/or its assignee(s) as provided in this Section 5, then the Holder may sell or otherwise transfer such Shares to that Proposed Transferee at the Offered Price or at a higher price, *provided* that such sale or other transfer is consummated within one hundred and twenty (120) days after the date of the Notice, that any such sale or other transfer is effected in accordance with any applicable securities laws and that the Proposed Transferee agrees in writing that the provisions of this Section 5 shall continue to apply to the Shares in the hands of such Proposed Transferee. If the Shares described in the Notice are not transferred to the Proposed Transferee within such period, a new Notice shall be given to the Company, and the Company and/or its assignees shall again be offered the Right of First Refusal before any Shares held by the Holder may be sold or otherwise transferred.

(f) Exception for Certain Family Transfers. Anything to the contrary contained in this Section 5 notwithstanding, the transfer of any or all of the Shares during the Participant's lifetime or on the Participant's death by will or intestacy to the Participant's immediate family or a trust for the benefit of the Participant's immediate family shall be exempt from the provisions of this Section 5. "Immediate Family" as used herein shall mean spouse, lineal descendant or antecedent, father, mother, brother or sister. In such case, the transferee or other recipient shall receive and hold the Shares so transferred subject to the provisions of this Section 5, and there shall be no further transfer of such Shares except in accordance with the terms of this Section 5.

(g) Termination of Right of First Refusal. The Right of First Refusal shall terminate as to any Shares upon the earlier of (i) the first sale of Common Stock of the Company to the general public, or (ii) a Change in Control in which the successor corporation has equity securities that are publicly traded.

6. 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.

7. Restrictive Legends and Stop-Transfer Orders.

(a) Legends. Participant understands and agrees that the Company shall cause the legends set forth below or legends substantially equivalent thereto, to be placed upon any certificate(s) evidencing ownership of the Shares together with any other legends that may be required by the Company or by state or federal securities laws:

> THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933 (THE "ACT") AND MAY NOT BE OFFERED, SOLD OR OTHERWISE TRANSFERRED, PLEDGED OR HYPOTHECATED UNLESS AND UNTIL REGISTERED UNDER THE ACT OR, IN THE OPINION OF COUNSEL SATISFACTORY TO THE ISSUER OF THESE SECURITIES, SUCH OFFER, SALE OR TRANSFER, PLEDGE OR HYPOTHECATION IS IN COMPLIANCE THEREWITH.
>
> 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 EXERCISE NOTICE BETWEEN THE ISSUER AND THE ORIGINAL HOLDER OF THESE SHARES, 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.
>
> THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO RESTRICTIONS ON TRANSFER FOR A PERIOD OF TIME FOLLOWING THE EFFECTIVE DATE OF THE UNDERWRITTEN PUBLIC OFFERING OF THE COMPANY'S SECURITIES SET FORTH IN AN AGREEMENT BETWEEN THE ISSUER AND THE ORIGINAL HOLDER OF THESE SHARES AND MAY NOT BE SOLD OR OTHERWISE DISPOSED OF BY THE HOLDER PRIOR TO THE EXPIRATION OF SUCH PERIOD WITHOUT THE CONSENT OF THE COMPANY OR THE MANAGING UNDERWRITER.

(b) Stop-Transfer Notices. 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.

(c) Refusal to Transfer. 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 Exercise Notice 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.

8. Successors and Assigns. The Company may assign any of its rights under this Exercise Notice to single or multiple assignees, and this Exercise Notice shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth, this Exercise Notice shall be binding upon Participant and his or her heirs, executors, administrators, successors and assigns.

9. Interpretation. Any dispute regarding the interpretation of this Exercise Notice shall be submitted by Participant or by the Company forthwith to the Administrator, which shall review such dispute at its next regular meeting. The resolution of such a dispute by the Administrator shall be final and binding on all parties.

10. Governing Law; Severability. This Exercise Notice is governed by the internal substantive laws, but not the choice of law rules, of California. In the event that any provision hereof becomes or is declared by a court of competent jurisdiction to be illegal, unenforceable or void, this Exercise Notice shall continue in full force and effect.

11. Entire Agreement. The Plan and Option Agreement are incorporated herein by reference. This Exercise Notice, the Plan, the Option Agreement and the Investment Representation Statement constitute the entire agreement of the parties with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof, and may not be modified adversely to the Participant's interest except by means of a writing signed by the Company and Participant.

Submitted by:	Accepted by:
PARTICIPANT	TENAYA THERAPEUTICS, INC.
_____	_____
Signature	By
_____	_____
Print Name	Print Name
	_____
	Title
Address:	
	Address:
_____	171 Oyster Point Boulevard, 5th Floor
_____	South San Francisco, CA 94080

EXHIBIT B

INVESTMENT REPRESENTATION STATEMENT

PARTICIPANT :

COMPANY : TENAYA THERAPEUTICS, INC.

SECURITY : COMMON STOCK

AMOUNT :

DATE :

In connection with the purchase of the above-listed Securities, the undersigned Participant represents to the Company the following:

(a) 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 Securities Act of 1933, as amended (the "Securities Act").

(b) 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 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 (1) 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 the certificate evidencing the Securities shall be imprinted with any legend required under applicable state securities laws.

(c) 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 shall 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 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 be resold, subject to the satisfaction of the applicable conditions specified by Rule 144, including in the case of affiliates (1) the availability of certain public information about the Company, (2) the amount of Securities being sold during any three (3) month period not exceeding specified limitations, (3) the resale being made in an unsolicited "broker's transaction", transactions directly with a "market maker" or "riskless principal transactions" (as those terms are defined under the Securities Exchange Act of 1934) 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 may require (i) the availability of current public information about the Company; (ii) the resale to occur more than a specified period after the purchase and full payment (within the meaning of Rule 144) for the Securities; and (iii) in the case of the sale of Securities by an affiliate, the satisfaction of the conditions set forth in sections (2), (3) and (4) of the paragraph immediately above.

(d) 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 shall be required; and that, notwithstanding the fact that Rules 144 and 701 are not exclusive, the Staff of the 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 shall 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 shall be available in such event.

PARTICIPANT

_____

Signature

_____

Print Name

_____

Date

TENAYA THERAPEUTICS, INC.

2016 EQUITY INCENTIVE PLAN

STOCK OPTION AGREEMENT — EARLY EXERCISE

Unless otherwise defined herein, the terms defined in the 2016 Equity Incentive Plan (the "Plan") shall have the same defined meanings in this Stock Option Agreement – Early Exercise (the "Option Agreement").

Option Grant Number: _____

I. NOTICE OF STOCK OPTION GRANT

Name:

Address:

The undersigned Participant has been granted an Option to purchase Common Stock of the Company, subject to the terms and conditions of the Plan and this Option Agreement, as follows:

Date of Grant: _____

Vesting Commencement Date: _____

Exercise Price per Share: $_____

Total Number of Shares Granted: _____

Total Exercise Price: $_____

Type of Option: _____ Incentive Stock Option

_____ Nonstatutory Stock Option

Term/Expiration Date: _____

Vesting Schedule:

This Option shall be exercisable, in whole or in part, according to the following vesting schedule:

[Twenty-five percent (25%) of the Shares subject to the Option shall vest on the one (1) year anniversary of the Vesting Commencement Date, and one forty-eighth (1/48th) of the Shares subject to the Option shall vest each month thereafter on the same day of the month as the Vesting Commencement Date (and if there is no corresponding day, on the last day of the month), subject to Participant continuing to be a Service Provider through each such date.]

Termination Period:

This Option shall be exercisable for three (3) months after Participant ceases to be a Service Provider, unless such termination is due to Participant's death or Disability, in which case this Option shall be exercisable for twelve (12) months after Participant ceases to be a Service Provider. Notwithstanding the foregoing sentence, in no event may this Option be exercised after the Term/Expiration Date as provided above and this Option may be subject to earlier termination as provided in Section 13 of the Plan.

II. AGREEMENT

1. Grant of Option. The Administrator of the Company hereby grants to the Participant named in the Notice of Stock Option Grant in Part I of this Agreement ("Participant"), an option (the "Option") to purchase the number of Shares set forth in the Notice of Stock Option Grant, at the exercise price per Share set forth in the Notice of Stock Option Grant (the "Exercise Price"), and subject to the terms and conditions of the Plan, which is incorporated herein by reference. Subject to Section 18 of the Plan, in the event of a conflict between the terms and conditions of the Plan and this Option Agreement, the terms and conditions of the Plan shall prevail.

If designated in the Notice of Stock Option Grant as an Incentive Stock Option ("ISO"), this Option is intended to qualify as an Incentive Stock Option as defined in Section 422 of the Code. Nevertheless, to the extent that it exceeds the $100,000 rule of Code Section 422(d), this Option shall be treated as a Nonstatutory Stock Option ("NSO"). Further, if for any reason this Option (or portion thereof) shall not qualify as an ISO, then, to the extent of such nonqualification, such Option (or portion thereof) shall be regarded as a NSO granted under the Plan. In no event shall the Administrator, the Company or any Parent or Subsidiary or any of their respective employees or directors have any liability to Participant (or any other person) due to the failure of the Option to qualify for any reason as an ISO.

2. Exercise of Option. This Option shall be exercisable during its term in accordance with the provisions of Section 6 of the Plan as follows:

(a) Right to Exercise.

(i) Subject to subsections 2(a)(ii) and 2(a)(iii) below, this Option shall be exercisable cumulatively according to the vesting schedule set forth in the Notice of Stock Option Grant. Alternatively, at the election of Participant, this Option may be exercised in whole or in part at any time as to Shares that have not yet vested. Vested Shares shall not be subject to the Company's repurchase right (as set forth in the Restricted Stock Purchase Agreement, attached hereto as Exhibit C-1).

(ii) As a condition to exercising this Option for unvested Shares, Participant shall execute the Restricted Stock Purchase Agreement.

(iii) This Option may not be exercised for a fraction of a Share.

(b) Method of Exercise. This Option shall be exercisable by delivery of an exercise notice in the form attached as Exhibit A (the "Exercise Notice") or in a manner and pursuant to such

procedures as the Administrator may determine, which shall state the election to exercise the Option, the number of Shares with respect to which the Option is being exercised (the "Exercised Shares"), and such other representations and agreements as may be required by the Company. The Exercise Notice shall be accompanied by payment of the aggregate Exercise Price as to all Exercised Shares, together with any applicable tax withholding. This Option shall be deemed to be exercised upon receipt by the Company of such fully executed Exercise Notice accompanied by the aggregate Exercise Price, together with any applicable tax withholding.

No Shares shall be issued pursuant to the exercise of an Option unless such issuance and such exercise comply with Applicable Laws. Assuming such compliance, for income tax purposes the Shares shall be considered transferred to Participant on the date on which the Option is exercised with respect to such Shares.

3. Participant's Representations. In the event the Shares have not been registered under the Securities Act of 1933, as amended (the "Securities Act"), at the time this Option is exercised, Participant shall, if required by the Company, concurrently with the exercise of all or any portion of this Option, deliver to the Company his or her Investment Representation Statement in the form attached hereto as Exhibit B.

4. Lock-Up Period. Participant hereby agrees that 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 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 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 (10) 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 4 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 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 4.

5. Method of Payment. Payment of the aggregate Exercise Price shall be by any of the following, or a combination thereof, at the election of the Participant:

(a) cash;

(b) check;

(c) consideration received by the Company under a formal cashless exercise program adopted by the Company in connection with the Plan; or

(d) surrender of other Shares which (i) shall be valued at its Fair Market Value on the date of exercise, and (ii) must be owned free and clear of any liens, claims, encumbrances or security interests, if accepting such Shares, in the sole discretion of the Administrator, shall not result in any adverse accounting consequences to the Company.

6. Restrictions on Exercise. This Option may not be exercised until such time as the Plan has been approved by the stockholders of the Company, or if the issuance of such Shares upon such exercise or the method of payment of consideration for such shares would constitute a violation of any Applicable Law.

7. Non-Transferability of Option.

(a) This Option may not be transferred in any manner otherwise than by will or by the laws of descent or distribution and may be exercised during the lifetime of Participant only by Participant. The terms of the Plan and this Option Agreement shall be binding upon the executors, administrators, heirs, successors and assigns of Participant.

(b) Further, until the Company becomes subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act, or after the Administrator determines that it is, will, or may no longer be relying upon the exemption from registration of Options under the Exchange Act as set forth in Rule 12h-1(f) promulgated under the Exchange Act (the "Reliance End Date"), Participant shall not transfer this Option or, prior to exercise, the Shares subject to this Option, in any manner other than (i) to persons who are "family members" (as defined in Rule 701(c)(3) of the Securities Act) through gifts or domestic relations orders, or (ii) to an executor or guardian of Participant upon the death or disability of Participant. Until the Reliance End Date, the Options and, prior to exercise, the Shares subject to this Option, may not be pledged, hypothecated or otherwise transferred or disposed of, including by entering into any short position, any "put equivalent position" or any "call equivalent position" (as defined in Rule 16a-1(h) and Rule 16a-1(b) of the Exchange Act, respectively), other than as permitted in clauses (i) and (ii) of this paragraph.

8. Term of Option. This Option may be exercised only within the term set out in the Notice of Stock Option Grant, and may be exercised during such term only in accordance with the Plan and the terms of this Option Agreement.

9. Tax Obligations.

(a) Tax Withholding. Participant agrees to make appropriate arrangements with the Company (or the Parent or Subsidiary employing or retaining Participant) for the satisfaction of all Federal, state, local and foreign income and employment tax withholding requirements applicable to the Option exercise. Participant acknowledges and agrees that the Company may refuse to honor the exercise and refuse to deliver the Shares if such withholding amounts are not delivered at the time of exercise.

(b) Notice of Disqualifying Disposition of ISO Shares. If the Option granted to Participant herein is an ISO, and if Participant sells or otherwise disposes of any of the Shares acquired pursuant to the ISO on or before the later of (i) the date two (2) years after the Date of Grant, or (ii) the date one (1) year after the date of exercise, Participant shall immediately notify the Company in writing of such disposition. Participant agrees that Participant may be subject to income tax withholding by the Company on the compensation income recognized by Participant.

(c) Code Section 409A. Under Code Section 409A, an Option that vests after December 31, 2004 (or that vested on or prior to such date but which was materially modified after October 3, 2004) that was granted with a per Share exercise price that is determined by the Internal Revenue Service (the "IRS") to be less than the Fair Market Value of a Share on the date of grant (a "discount option") may be considered "deferred compensation." An Option that is a "discount option" may result in (i) income recognition by Participant prior to the exercise of the Option, (ii) an additional twenty percent (20%) federal income tax, and (iii) potential penalty and interest charges. The "discount option" may also result in additional state income, penalty and interest tax to the Participant. Participant acknowledges that the Company cannot and has not guaranteed that the IRS will agree that the per Share exercise price of this Option equals or exceeds the Fair Market Value of a Share on the date of grant in a later examination. Participant agrees that if the IRS determines that the Option was granted with a per Share exercise price that was less than the Fair Market Value of a Share on the date of grant, Participant shall be solely responsible for Participant's costs related to such a determination.

10. Entire Agreement; Governing Law. The Plan is incorporated herein by reference. The Plan and this Option Agreement constitute the entire agreement of the parties with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof, and may not be modified adversely to the Participant's interest except by means of a writing signed by the Company and Participant. This Option Agreement is governed by the internal substantive laws but not the choice of law rules of Delaware.

11. No Guarantee of Continued Service. PARTICIPANT ACKNOWLEDGES AND AGREES THAT THE VESTING OF SHARES PURSUANT TO THE VESTING SCHEDULE HEREOF IS EARNED ONLY BY CONTINUING AS A SERVICE PROVIDER AT THE WILL OF THE COMPANY (OR THE PARENT OR SUBSIDIARY EMPLOYING OR RETAINING PARTICIPANT) AND NOT THROUGH THE ACT OF BEING HIRED, BEING GRANTED THIS OPTION OR ACQUIRING SHARES HEREUNDER. PARTICIPANT FURTHER ACKNOWLEDGES AND AGREES THAT THIS AGREEMENT, THE TRANSACTIONS CONTEMPLATED HEREUNDER AND THE VESTING SCHEDULE SET FORTH HEREIN DO NOT CONSTITUTE AN EXPRESS OR IMPLIED PROMISE OF CONTINUED ENGAGEMENT AS A SERVICE PROVIDER FOR THE VESTING PERIOD, FOR ANY PERIOD, OR AT ALL,

AND SHALL NOT INTERFERE IN ANY WAY WITH PARTICIPANT'S RIGHT OR THE RIGHT OF THE COMPANY (OR THE PARENT OR SUBSIDIARY EMPLOYING OR RETAINING PARTICIPANT) TO TERMINATE PARTICIPANT'S RELATIONSHIP AS A SERVICE PROVIDER AT ANY TIME, WITH OR WITHOUT CAUSE.

Participant acknowledges receipt of a copy of the Plan and represents that he or she is familiar with the terms and provisions thereof, and hereby accepts this Option subject to all of the terms and provisions thereof. Participant has reviewed the Plan and this Option in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Option and fully understands all provisions of the Option. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan or this Option. Participant further agrees to notify the Company upon any change in the residence address indicated below.

PARTICIPANT	TENAYA THERAPEUTICS, INC.
_____	_____
Signature	By
_____	_____
Print Name	Print Name
_____	_____
	Title
_____	
Residence Address	

EXHIBIT A

2016 Equity Incentive Plan

EXERCISE NOTICE

Tenaya Therapeutics, Inc.
171 Oyster Point Boulevard, 5th Floor
South San Francisco, CA 94080

Attention: Secretary

1. Exercise of Option. Effective as of today, _____, _____, the undersigned ("Participant") hereby elects to exercise Participant's option (the "Option") to purchase _____ shares of the Common Stock (the "Shares") of Tenaya Therapeutics, Inc. (the "Company") under and pursuant to the 2016 Equity Incentive Plan (the "Plan") and the Stock Option Agreement – Early Exercise dated _____, _____ (the "Option Agreement").

2. Delivery of Payment. Participant herewith delivers to the Company the full purchase price of the Shares, as set forth in the Option Agreement, and any and all withholding taxes due in connection with the exercise of the Option.

3. Representations of Participant. Participant acknowledges that Participant has received, read and understood the Plan and the Option Agreement and agrees to abide by and be bound by their terms and conditions.

4. Rights as Stockholder. Until the issuance of the Shares (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder shall exist with respect to the Common Stock subject to an Award, notwithstanding the exercise of the Option. The Shares shall be issued to Participant as soon as practicable after the Option is exercised in accordance with the Option Agreement. No adjustment shall be made for a dividend or other right for which the record date is prior to the date of issuance except as provided in Section 13 of the Plan.

5. Company's Right of First Refusal. Before any Shares held by Participant or any transferee (either being sometimes referred to herein as the "Holder") may be sold or otherwise transferred (including transfer by gift or operation of law), the Company or its assignee(s) shall have a right of first refusal to purchase the Shares on the terms and conditions set forth in this Section 5 (the "Right of First Refusal").

(a) Notice of Proposed Transfer. The Holder of the Shares shall deliver to the Company a written notice (the "Notice") stating: (i) the Holder's bona fide intention to sell or otherwise transfer such Shares; (ii) the name of each proposed purchaser or other transferee ("Proposed Transferee"); (iii) the number of Shares to be transferred to each Proposed Transferee; and (iv) the bona fide cash price or other consideration for which the Holder proposes to transfer the Shares (the "Offered Price"), and the Holder shall offer the Shares at the Offered Price to the Company or its assignee(s).

(b) Exercise of Right of First Refusal. At any time within thirty (30) days after receipt of the Notice, the Company and/or its assignee(s) may, by giving written notice to the Holder, elect to purchase all, but not less than all, of the Shares proposed to be transferred to any one or more of the Proposed Transferees, at the purchase price determined in accordance with subsection (c) below.

(c) Purchase Price. The purchase price ("Purchase Price") for the Shares purchased by the Company or its assignee(s) under this Section 5 shall be the Offered Price. If the Offered Price includes consideration other than cash, the cash equivalent value of the non-cash consideration shall be determined by the Board of Directors of the Company in good faith.

(d) Payment. Payment of the Purchase Price shall be made, at the option of the Company or its assignee(s), in cash (by check), by cancellation of all or a portion of any outstanding indebtedness of the Holder to the Company (or, in the case of repurchase by an assignee, to the assignee), or by any combination thereof within thirty (30) days after receipt of the Notice or in the manner and at the times set forth in the Notice.

(e) Holder's Right to Transfer. If all of the Shares proposed in the Notice to be transferred to a given Proposed Transferee are not purchased by the Company and/or its assignee(s) as provided in this Section 5, then the Holder may sell or otherwise transfer such Shares to that Proposed Transferee at the Offered Price or at a higher price, provided that such sale or other transfer is consummated within one hundred and twenty (120) days after the date of the Notice, that any such sale or other transfer is effected in accordance with any applicable securities laws and that the Proposed Transferee agrees in writing that the provisions of this Section 5 shall continue to apply to the Shares in the hands of such Proposed Transferee. If the Shares described in the Notice are not transferred to the Proposed Transferee within such period, a new Notice shall be given to the Company, and the Company and/or its assignees shall again be offered the Right of First Refusal before any Shares held by the Holder may be sold or otherwise transferred.

(f) Exception for Certain Family Transfers. Anything to the contrary contained in this Section 5 notwithstanding, the transfer of any or all of the Shares during the Participant's lifetime or on the Participant's death by will or intestacy to the Participant's immediate family or a trust for the benefit of the Participant's immediate family shall be exempt from the provisions of this Section 5. "Immediate Family" as used herein shall mean spouse, lineal descendant or antecedent, father, mother, brother or sister. In such case, the transferee or other recipient shall receive and hold the Shares so transferred subject to the provisions of this Section 5, and there shall be no further transfer of such Shares except in accordance with the terms of this Section 5.

(g) Termination of Right of First Refusal. The Right of First Refusal shall terminate as to any Shares upon the earlier of (i) the first sale of Common Stock of the Company to the general public, or (ii) a Change in Control in which the successor corporation has equity securities that are publicly traded.

6. 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.

7. Restrictive Legends and Stop-Transfer Orders.

(a) Legends. Participant understands and agrees that the Company shall cause the legends set forth below or legends substantially equivalent thereto, to be placed upon any certificate(s) evidencing ownership of the Shares together with any other legends that may be required by the Company or by state or federal securities laws:

> THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933 (THE "ACT") AND MAY NOT BE OFFERED, SOLD OR OTHERWISE TRANSFERRED, PLEDGED OR HYPOTHECATED UNLESS AND UNTIL REGISTERED UNDER THE ACT OR, IN THE OPINION OF COUNSEL SATISFACTORY TO THE ISSUER OF THESE SECURITIES, SUCH OFFER, SALE OR TRANSFER, PLEDGE OR HYPOTHECATION IS IN COMPLIANCE THEREWITH.
>
> 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 EXERCISE NOTICE BETWEEN THE ISSUER AND THE ORIGINAL HOLDER OF THESE SHARES, 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.
>
> THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO RESTRICTIONS ON TRANSFER FOR A PERIOD OF TIME FOLLOWING THE EFFECTIVE DATE OF THE UNDERWRITTEN PUBLIC OFFERING OF THE COMPANY'S SECURITIES SET FORTH IN AN AGREEMENT BETWEEN THE ISSUER AND THE ORIGINAL HOLDER OF THESE SHARES AND MAY NOT BE SOLD OR OTHERWISE DISPOSED OF BY THE HOLDER PRIOR TO THE EXPIRATION OF SUCH PERIOD WITHOUT THE CONSENT OF THE COMPANY OR THE MANAGING UNDERWRITER.

(b) Stop-Transfer Notices. 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.

(c) Refusal to Transfer. 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 Exercise Notice 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.

8. Successors and Assigns. The Company may assign any of its rights under this Exercise Notice to single or multiple assignees, and this Exercise Notice shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth, this Exercise Notice shall be binding upon Participant and his or her heirs, executors, administrators, successors and assigns.

9. Interpretation. Any dispute regarding the interpretation of this Exercise Notice shall be submitted by Participant or by the Company forthwith to the Administrator, which shall review such dispute at its next regular meeting. The resolution of such a dispute by the Administrator shall be final and binding on all parties.

10. Governing Law; Severability. This Exercise Notice is governed by the internal substantive laws, but not the choice of law rules, of Delaware. In the event that any provision hereof becomes or is declared by a court of competent jurisdiction to be illegal, unenforceable or void, this Exercise Notice shall continue in full force and effect.

11. Entire Agreement. The Plan and Option Agreement are incorporated herein by reference. This Exercise Notice, the Plan, the Restricted Stock Purchase Agreement, the Option Agreement and the Investment Representation Statement constitute the entire agreement of the parties with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof, and may not be modified adversely to the Participant's interest except by means of a writing signed by the Company and Participant.

Submitted by: PARTICIPANT	Accepted by: TENAYA THERAPEUTICS, INC.
_____ Signature	_____ By
_____ Print Name	_____ Print Name
	_____ Title
Address:	Address:
_____	_____
_____	_____

EXHIBIT B

INVESTMENT REPRESENTATION STATEMENT

PARTICIPANT :

COMPANY : TENAYA THERAPEUTICS, INC.

SECURITY : COMMON STOCK

AMOUNT :

DATE :

In connection with the purchase of the above-listed Securities, the undersigned Participant represents to the Company the following:

(a) 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 Securities Act of 1933, as amended (the "Securities Act").

(b) 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 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 (1) 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 the certificate evidencing the Securities shall be imprinted with any legend required under applicable state securities laws.

(c) 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 shall 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 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 be resold, subject to the satisfaction of the applicable conditions specified by Rule 144, including in the case of affiliates (1) the availability of certain public information about the Company, (2) the amount of Securities being sold during any three (3) month period not exceeding specified limitations, (3) the resale being made in an unsolicited "broker's transaction", transactions directly with a "market maker" or "riskless principal transactions" (as those terms are defined under the Securities Exchange Act of 1934) 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 may require (i) the availability of current public information about the Company; (ii) the resale to occur more than a specified period after the purchase and full payment (within the meaning of Rule 144) for the Securities; and (iii) in the case of the sale of Securities by an affiliate, the satisfaction of the conditions set forth in sections (2), (3) and (4) of the paragraph immediately above.

(d) 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 shall be required; and that, notwithstanding the fact that Rules 144 and 701 are not exclusive, the Staff of the 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 shall 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 shall be available in such event.

PARTICIPANT

_____

Signature

_____

Print Name

_____

Date

EXHIBIT C-1

TENAYA THERAPEUTICS, INC.

2016 EQUITY INCENTIVE PLAN

RESTRICTED STOCK PURCHASE AGREEMENT

THIS RESTRICTED STOCK PURCHASE AGREEMENT (the "Agreement") is made between _____ (the "Purchaser") and Tenaya Therapeutics, Inc. (the "Company") or its assignees of rights hereunder as of _____, _____.

Unless otherwise defined herein, the terms defined in the 2016 Equity Incentive Plan shall have the same defined meanings in this Agreement.

RECITALS

A. Pursuant to the exercise of the option granted to Purchaser under the Plan and pursuant to the Stock Option Agreement – Early Exercise (the "Option Agreement") dated _____, _____ by and between the Company and Purchaser with respect to such grant (the "Option"), which Plan and Option Agreement are hereby incorporated by reference, Purchaser has elected to purchase _____ of those shares of Common Stock which have not become vested under the vesting schedule set forth in the Option Agreement ("Unvested Shares"). The Unvested Shares and the shares subject to the Option Agreement, which have become vested are sometimes collectively referred to herein as the "Shares."

B. As required by the Option Agreement, as a condition to Purchaser's election to exercise the option, Purchaser must execute this Agreement, which sets forth the rights and obligations of the parties with respect to Shares acquired upon exercise of the Option.

1. Repurchase Option.

(a) If Purchaser's status as a Service Provider is terminated for any reason, including for death and Disability, the Company shall have the right and option for ninety (90) days from such date to purchase from Purchaser, or Purchaser's personal representative, as the case may be, all of the Purchaser's Unvested Shares as of the date of such termination at the price paid by the Purchaser for such Shares (the "Repurchase Option").

(b) Upon the occurrence of such termination, the Company may exercise its Repurchase Option by delivering personally or by registered mail, to Purchaser (or his or her transferee or legal representative, as the case may be) with a copy to the escrow agent described in Section 2 below, a notice in writing indicating the Company's intention to exercise the Repurchase Option AND, at the Company's option, (i) by delivering to the Purchaser (or the Purchaser's transferee or legal representative) a check in the amount of the aggregate repurchase price, or (ii) by the Company canceling an amount of the Purchaser's indebtedness to the Company equal to the aggregate repurchase price, or (iii) by a combination of (i) and (ii) so that the combined payment and cancellation of indebtedness equals such aggregate repurchase price. Upon delivery of such notice

and payment of the aggregate repurchase price in any of the ways described above, the Company shall become the legal and beneficial owner of the Unvested Shares being repurchased and the rights and interests therein or relating thereto, and the Company shall have the right to retain and transfer to its own name the number of Unvested Shares being repurchased by the Company.

(c) Whenever the Company shall have the right to repurchase Unvested Shares hereunder, the Company may designate and assign one or more employees, officers, directors or stockholders of the Company or other persons or organizations to exercise all or a part of the Company's Repurchase Option under this Agreement and purchase all or a part of such Unvested Shares.

(d) If the Company does not elect to exercise the Repurchase Option conferred above by giving the requisite notice within ninety (90) days following the termination, the Repurchase Option shall terminate.

(e) The Repurchase Option shall terminate in accordance with the vesting schedule contained in Purchaser's Option Agreement.

2. Transferability of the Shares; Escrow.

(a) Purchaser hereby authorizes and directs the Secretary of the Company, or such other person designated by the Company, to transfer the Unvested Shares as to which the Repurchase Option has been exercised from Purchaser to the Company.

(b) To insure the availability for delivery of Purchaser's Unvested Shares upon repurchase by the Company pursuant to the Repurchase Option under Section 1, Purchaser hereby appoints the Secretary, or any other person designated by the Company as escrow agent (the "Escrow Agent"), as its attorney-in-fact to sell, assign and transfer unto the Company, such Unvested Shares, if any, repurchased by the Company pursuant to the Repurchase Option and shall, upon execution of this Agreement, deliver and deposit with the Escrow Agent, the share certificates representing the Unvested Shares, together with the stock assignment duly endorsed in blank, attached hereto as Exhibit C-2. The Unvested Shares and stock assignment shall be held by the Escrow Agent in escrow, pursuant to the Joint Escrow Instructions of the Company and Purchaser attached as Exhibit C-3 hereto, until the Company exercises its Repurchase Option, until such Unvested Shares are vested, or until such time as this Agreement no longer is in effect. Upon vesting of the Unvested Shares, the Escrow Agent shall promptly deliver to the Purchaser the certificate or certificates representing such Shares in the Escrow Agent's possession belonging to the Purchaser, and the Escrow Agent shall be discharged of all further obligations hereunder; provided, however, that the Escrow Agent shall nevertheless retain such certificate or certificates as Escrow Agent if so required pursuant to other restrictions imposed pursuant to this Agreement.

(c) Neither the Company nor the Escrow Agent shall be liable for any act it may do or omit to do with respect to holding the Shares in escrow and while acting in good faith and in the exercise of its judgment.

(d) Transfer or sale of the Shares is subject to restrictions on transfer imposed by any applicable state and federal securities laws. Any transferee shall hold such Shares subject to all the provisions hereof and the Exercise Notice executed by the Purchaser with respect to any Unvested Shares purchased by Purchaser and shall acknowledge the same by signing a copy of this Agreement.

3. Ownership, Voting Rights, Duties. This Agreement shall not affect in any way the ownership, voting rights or other rights or duties of Purchaser, except as specifically provided herein.

4. Legends. The share certificate evidencing the Shares issued hereunder shall be endorsed with the following legend (in addition to any legend required under applicable federal and state securities laws):

> THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN RESTRICTIONS UPON TRANSFER AND RIGHTS OF REPURCHASE AS SET FORTH IN AN AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY.

5. Adjustment for Stock Split. All references to the number of Shares and the purchase price of the Shares in this Agreement shall be appropriately adjusted to reflect any stock split, stock dividend or other change in the Shares, which may be made by the Company pursuant to Section 13 of the Plan after the date of this Agreement.

6. Notices. Notices required hereunder shall be given in person or by registered mail to the address of Purchaser shown on the records of the Company, and to the Company at their respective principal executive offices.

7. Survival of Terms. This Agreement shall apply to and bind Purchaser and the Company and their respective permitted assignees and transferees, heirs, legatees, executors, administrators and legal successors.

8. Section 83(b) Election. Purchaser hereby acknowledges that he or she has been informed that, with respect to the exercise of an Option for Unvested Shares, an election (the "Election") may be filed by the Purchaser with the Internal Revenue Service, within thirty (30) days of the purchase of the exercised Shares, electing pursuant to Section 83(b) of the Code to be taxed currently on any difference between the purchase price of the exercised Shares and their Fair Market Value on the date of purchase. In the case of a Nonstatutory Stock Option, this will result in the recognition of taxable income to the Purchaser on the date of exercise, measured by the excess, if any, of the Fair Market Value of the exercised Shares, at the time the Option is exercised over the purchase price for the exercised Shares. Absent such an Election, taxable income will be measured and recognized by Purchaser at the time or times on which the Company's Repurchase Option lapses. In the case of an Incentive Stock Option, such an Election will result in a recognition of income to the Purchaser for alternative minimum tax purposes on the date of exercise, measured by the excess, if any, of the Fair Market Value of the exercised Shares, at the time the option is exercised, over the purchase price for the exercised Shares. Absent such an Election, alternative minimum taxable income will be measured and recognized by Purchaser at the time or times on which the Company's Repurchase Option lapses.

This discussion is intended only as a summary of the general United States income tax laws that apply to exercising Options as to Shares that have not yet vested and is accurate only as of the date this form Agreement was approved by the Board. The federal, state and local tax consequences to any particular taxpayer will depend upon his or her individual circumstances. Purchaser is strongly encouraged to seek the advice of his or her own tax consultants in connection with the purchase of the Shares and the advisability of filing of the Election under Section 83(b) of the Code. A form of Election under Section 83(b) is attached hereto as Exhibit C-4 for reference.

PURCHASER ACKNOWLEDGES THAT IT IS PURCHASER'S SOLE RESPONSIBILITY AND NOT THE COMPANY'S TO FILE TIMELY THE ELECTION UNDER SECTION 83(b) OF THE CODE, EVEN IF PURCHASER REQUESTS THE COMPANY OR ITS REPRESENTATIVE TO MAKE THIS FILING ON PURCHASER'S BEHALF.

9. Representations. Purchaser has reviewed with his or her own tax advisors the federal, state, local and foreign tax consequences of this investment and the transactions contemplated by this Agreement. Purchaser is relying solely on such advisors and not on any statements or representations of the Company or any of its agents. Purchaser understands that he or she (and not the Company) shall be responsible for his or her own tax liability that may arise as a result of this investment or the transactions contemplated by this Agreement.

10. Entire Agreement; Governing Law. The Plan and Option Agreement are incorporated herein by reference. The Plan, the Option Agreement, the Exercise Notice, this Agreement, and the Investment Representation Statement constitute the entire agreement of the parties with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements of the Company and Purchaser with respect to the subject matter hereof, and may not be modified adversely to the Purchaser's interest except by means of a writing signed by the Company and Purchaser. This Agreement is governed by the internal substantive laws but not the choice of law rules of Delaware.

Purchaser represents that he or she has read this Agreement and is familiar with its terms and provisions. Purchaser hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Board upon any questions arising under this Agreement.

IN WITNESS WHEREOF, this Agreement is deemed made as of the date first set forth above.

PARTICIPANT	TENAYA THERAPEUTICS, INC.
Signature	By
Print Name	Print Name
	Title
Residence Address	

EXHIBIT C-2

ASSIGNMENT SEPARATE FROM CERTIFICATE

FOR VALUE RECEIVED I, _____, hereby sell, assign and transfer unto Tenaya Therapeutics, Inc. _____ shares of the Common Stock of Tenaya Therapeutics, Inc. standing in my name of the books of said corporation represented by Certificate No. ____ herewith and do hereby irrevocably constitute and appoint _____ to transfer the said stock on the books of the within named corporation with full power of substitution in the premises.

This Stock Assignment may be used only in accordance with the Restricted Stock Purchase Agreement between Tenaya Therapeutics, Inc. and the undersigned dated _____, ____ (the "Agreement").

Dated: _____, _____ Signature: _____

INSTRUCTIONS: Please do not fill in any blanks other than the signature line. The purpose of this assignment is to enable the Company to exercise its "repurchase option," as set forth in the Agreement, without requiring additional signatures on the part of the Purchaser.

EXHIBIT C-3

JOINT ESCROW INSTRUCTIONS

_____, ____

Corporate Secretary
Tenaya Therapeutics, Inc.
171 Oyster Point Boulevard, 5th Floor
South San Francisco, CA 94080

Dear Corporate Secretary:

As Escrow Agent for both Tenaya Therapeutics, Inc. (the "Company"), and the undersigned purchaser of stock of the Company (the "Purchaser"), you are hereby authorized and directed to hold the documents delivered to you pursuant to the terms of that certain Restricted Stock Purchase Agreement (the "Agreement") between the Company and the undersigned, in accordance with the following instructions:

1. In the event the Company and/or any assignee of the Company (referred to collectively for convenience herein as the "Company") exercises the Company's repurchase option set forth in the Agreement, the Company shall give to Purchaser and you a written notice specifying the number of shares of stock to be purchased, the purchase price, and the time for a closing hereunder at the principal office of the Company. Purchaser and the Company hereby irrevocably authorize and direct you to close the transaction contemplated by such notice in accordance with the terms of said notice.

2. At the closing, you are directed (a) to date the stock assignments necessary for the transfer in question, (b) to fill in the number of shares being transferred, and (c) to deliver the stock assignments, together with the certificate evidencing the shares of stock to be transferred, to the Company or its assignee, against the simultaneous delivery to you of the purchase price (by cash, a check, or some combination thereof) for the number of shares of stock being purchased pursuant to the exercise of the Company's repurchase option.

3. Purchaser irrevocably authorizes the Company to deposit with you any certificates evidencing shares of stock to be held by you hereunder and any additions and substitutions to said shares as defined in the Agreement. Purchaser does hereby irrevocably constitute and appoint you as Purchaser's attorney-in-fact and agent for the term of this escrow to execute with respect to such securities all documents necessary or appropriate to make such securities negotiable and to complete any transaction herein contemplated, including but not limited to the filing with any applicable state blue sky authority of any required applications for consent to, or notice of transfer of, the securities. Subject to the provisions of this paragraph 3, Purchaser shall exercise all rights and privileges of a stockholder of the Company while the stock is held by you.

4. Upon written request of the Purchaser, but no more than once per calendar year, unless the Company's repurchase option has been exercised, you shall deliver to Purchaser a certificate or certificates representing so many shares of stock as are not then subject to the Company's repurchase

option. Within one hundred and twenty (120) days after cessation of Purchaser's continuous employment by or services to the Company, or any parent or subsidiary of the Company, you shall deliver to Purchaser a certificate or certificates representing the aggregate number of shares held or issued pursuant to the Agreement and not purchased by the Company or its assignees pursuant to exercise of the Company's repurchase option.

5. If at the time of termination of this escrow you should have in your possession any documents, securities, or other property belonging to Purchaser, you shall deliver all of the same to Purchaser and shall be discharged of all further obligations hereunder.

6. Your duties hereunder may be altered, amended, modified or revoked only by a writing signed by all of the parties hereto.

7. You shall be obligated only for the performance of such duties as are specifically set forth herein and may rely and shall be protected in relying or refraining from acting on any instrument reasonably believed by you to be genuine and to have been signed or presented by the proper party or parties. You shall not be personally liable for any act you may do or omit to do hereunder as Escrow Agent or as attorney-in-fact for Purchaser while acting in good faith, and any act done or omitted by you pursuant to the advice of your own attorneys shall be conclusive evidence of such good faith.

8. You are hereby expressly authorized to disregard any and all warnings given by any of the parties hereto or by any other person or corporation, excepting only orders or process of courts of law and are hereby expressly authorized to comply with and obey orders, judgments or decrees of any court. In case you obey or comply with any such order, judgment or decree, you shall not be liable to any of the parties hereto or to any other person, firm or corporation by reason of such compliance, notwithstanding any such order, judgment or decree being subsequently reversed, modified, annulled, set aside, vacated or found to have been entered without jurisdiction.

9. You shall not be liable in any respect on account of the identity, authorities or rights of the parties executing or delivering or purporting to execute or deliver the Agreement or any documents or papers deposited or called for hereunder.

10. You shall not be liable for the outlawing of any rights under the Statute of Limitations with respect to these Joint Escrow Instructions or any documents deposited with you.

11. You shall be entitled to employ such legal counsel and other experts as you may deem necessary properly to advise you in connection with your obligations hereunder, may rely upon the advice of such counsel, and may pay such counsel reasonable compensation therefor.

12. Your responsibilities as Escrow Agent hereunder shall terminate if you shall cease to be an officer or agent of the Company or if you shall resign by written notice to each party. In the event of any such termination, the Company shall appoint a successor Escrow Agent.

13. If you reasonably require other or further instruments in connection with these Joint Escrow Instructions or obligations in respect hereto, the necessary parties hereto shall join in furnishing such instruments.

14. It is understood and agreed that should any dispute arise with respect to the delivery and/or ownership or right of possession of the securities held by you hereunder, you are authorized and directed to retain in your possession without liability to anyone all or any part of said securities until such disputes shall have been settled either by mutual written agreement of the parties concerned or by a final order, decree or judgment of a court of competent jurisdiction after the time for appeal has expired and no appeal has been perfected, but you shall be under no duty whatsoever to institute or defend any such proceedings.

15. Any notice required or permitted hereunder shall be given in writing and shall be deemed effectively given upon personal delivery or upon deposit in the United States Post Office, by registered or certified mail with postage and fees prepaid, addressed to each of the other parties thereunto entitled at the following addresses or at such other addresses as a party may designate by ten (10) days' advance written notice to each of the other parties hereto.

16. By signing these Joint Escrow Instructions, you become a party hereto only for the purpose of said Joint Escrow Instructions; you do not become a party to the Agreement.

17. This instrument shall be binding upon and inure to the benefit of the parties hereto, and their respective successors and permitted assigns.

18. These Joint Escrow Instructions shall be governed by the internal substantive laws, but not the choice of law rules, of Delaware.

PURCHASER

_____
Signature

_____
Print Name

_____

_____
Residence Address

ESCROW AGENT

_____
Corporate Secretary

TENAYA THERAPEUTICS, INC.

_____
By

_____
Print Name

_____
Title

EXHIBIT C-4

ELECTION UNDER SECTION 83(b)
OF THE INTERNAL REVENUE CODE OF 1986

The undersigned taxpayer hereby elects, pursuant to Sections 55 and 83(b) of the Internal Revenue Code of 1986, as amended, to include in taxpayer's gross income or alternative minimum taxable income, as the case may be, for the current taxable year the amount of any compensation taxable to taxpayer in connection with taxpayer's receipt of the property described below.

1. The name, address, taxpayer identification number and taxable year of the undersigned are as follows:

	TAXPAYER	SPOUSE
NAME:	_____	_____
ADDRESS:	_____	_____
TAX ID NO.:	_____	_____
TAXABLE YEAR:	_____	_____

2. The property with respect to which the election is made is described as follows: _____ shares (the "Shares") of the Common Stock of Tenaya Therapeutics, Inc. (the "Company").

3. The date on which the property was transferred is: _____ , _____.

4. The property is subject to the following restrictions:

The Shares may not be transferred and are subject to forfeiture under the terms of an agreement between the taxpayer and the Company. These restrictions lapse upon the satisfaction of certain conditions contained in such agreement.

5. The Fair Market Value at the time of transfer, determined without regard to any restriction other than a restriction which by its terms shall never lapse, of such property is: $_____.

6. The amount (if any) paid for such property is: $_____.

The undersigned has submitted a copy of this statement to the person for whom the services were performed in connection with the undersigned's receipt of the above-described property. The transferee of such property is the person performing the services in connection with the transfer of said property.

The undersigned understands that the foregoing election may not be revoked except with the consent of the Commissioner.

Dated: _____, _____

_____
Taxpayer

The undersigned spouse of taxpayer joins in this election.

Dated: _____, _____

_____
Spouse of Taxpayer

THE COVE AT OYSTER POINT

LEASE

This Lease (the "**Lease**"), dated as of the date set forth in Section 1 of the Summary of Basic Lease Information (the "**Summary**"), below, is made by and between HCP OYSTER POINT III LLC, a Delaware limited liability company ("**Landlord**"), and THE COLUMN GROUP, LLC, a Delaware limited liability company ("**Tenant**").

SUMMARY OF BASIC LEASE INFORMATION

TERMS OF LEASE	DESCRIPTION
1. Date:	September 6, 2016
2. Premises (Article 1).	
2.1 Building:	That certain five-story building containing approximately 132,797 rentable square feet of space ("**RSF**") located at: 171 Oyster Point Boulevard South San Francisco, California 94080
2.2 Premises:	Approximately 32,370 RSF on the fifth (5th) floor of the Building, as further set forth in **Exhibit A** to the Lease.
3. Lease Term (Article 2).	
3.1 Length of Term:	Eight (8) years.
3.2 Lease Commencement Date:	The date that is the later of (i) the date the Premises are "Ready for Occupancy", as defined in the Tenant Work Letter attached hereto as **Exhibit B**, and (ii) June 1, 2017.
3.3 Lease Expiration Date:	The day prior to the eighth (8th) anniversary of the Lease Commencement Date.

4. Base Rent (Article 3):

Lease Year	Annualized Base Rent	Monthly Installment of Base Rent	Approximate Monthly Base Rent per RSF
1* (months 1 – 5)	$ 941,967.00	$ 78,497.25	$ 4.85
1 (months 6 – 12)	$1,883,934.00	$156,994.50	$ 4.85
2	$1,949,871.69	$162,489.31	$ 5.02
3	$2,018,117.20	$168,176.43	$ 5.20

4	$2,088,751.30	$174,062.61	$5.38
5	$2,161,857.60	$180,154.80	$5.57
6	$2,237,522.61	$186,460.22	$5.76
7	$2,315,835.90	$192,986.33	$5.96
8	$2,396,890.16	$199,740.85	$6.17

* Note that for the first five (5) months of the first (1st) Lease Year of the Lease Term, Tenant's Base Rent obligation has been calculated as if the Premises contained only 16,185 rentable square feet. Such calculation shall not affect Tenant's right to use the entire Premises, or Tenant's obligations under this Lease with respect to the entire Premises, including without limitation, Tenant's obligation to pay Tenant's Share of Direct Expenses with respect to the Premises which shall be as provided in Section 6 of this Summary, all in accordance with the terms and conditions of this Lease.

Address for Payment of Rent:

If by check, remittances should be mailed to:
HCP Life Sciences REIT
File 51142
Los Angeles, CA 90074-1142

If by ACH, remit to:
HCP Life Sciences REIT Bank of America
ABA:
Acct:

If by Wire, remit to:
HCP Life Sciences REIT Bank of America
ABA:
Acct:

If by overnight mail, remit to:
Bank of America Lockbox Services
Lockbox 51142
2706 Media Center Drive
Los Angeles, CA 90065-1733

5. Tenant Improvement Allowance (**Exhibit B**): $140.00 per RSF of the Premises (i.e., $4,531,800.00).

6. Tenant's Share (Article 4): 24.38%.

7.	Permitted Use (Article 5):	The Premises shall be used only for general office, research and development, engineering, lab scale manufacturing and laboratory and vivarium uses, including, but not limited to, administrative offices and other lawful uses reasonably related to or incidental to such specified uses, all (i) consistent with first class life sciences projects in South San Francisco, California ("**First Class Life Sciences Projects**"), and (ii) in compliance with, and subject to, applicable laws and the terms of this Lease.
8.	Letter of Credit (Article 21):	$399,481.70.
9.	Parking (Article 28):	83 unreserved parking spaces, subject to the terms of Article 28 of the Lease.
10.	Address of Tenant (Section 29.18):	The Column Group, LLC 1700 Owens Street, Suite 500 San Francisco, CA 94158 Attention: Head of Administration
11.	Address of Landlord (Section 29.18):	See Section 29.18 of the Lease.
12.	Broker(s) (Section 29.24):	Newmark Cornish & Carey and CBRE, Inc.

1. PREMISES, BUILDING, PROJECT, AND COMMON AREAS.

1.1 **Premises, Building, Project and Common Areas**.

1.1.1 **The Premises**. Landlord hereby leases to Tenant and Tenant hereby leases from Landlord the premises set forth in Section 2.2 of the Summary (the "**Premises**"). The outline of the Premises is set forth in **Exhibit A** attached hereto. The outline of the "Building" and the "Project," as those terms are defined in Section 1.1.2 below, are further depicted on the Site Plan attached hereto as **Exhibit A**. The parties hereto agree that the lease of the Premises is upon and subject to the terms, covenants and conditions herein set forth, and Tenant covenants as a material part of the consideration for this Lease to keep and perform each and all of such terms, covenants and conditions by it to be kept and performed. The parties hereto hereby acknowledge that the purpose of **Exhibit A** is to show the approximate location of the Premises only, and such Exhibit is not meant to constitute an agreement, representation or warranty as to the construction of the Premises, the precise area thereof or the specific location of the "Common Areas," as that term is defined in Section 1.1.3, below, or the elements thereof or of the accessways to the Premises or the "Project," as that term is defined in Section 1.1.2, below, and that the square footage of the Premises shall be as set forth in Section 2.1 of the Summary of Basic Lease Information. Except as specifically set forth in this Lease and in the Tenant Work Letter attached hereto as **Exhibit B** (the "**Tenant Work Letter**"), Landlord shall not be obligated to provide or pay for any improvement work or services related to the improvement of the Premises. Tenant also acknowledges that neither Landlord nor any agent of Landlord has made any representation or warranty regarding the condition of the Premises, the Building or the Project or with respect to the suitability of any of the foregoing for the conduct of Tenant's business, except as specifically set forth in this Lease and the Tenant Work Letter. For purposes of Section 1938 of the California Civil Code, Landlord hereby discloses to Tenant, and Tenant hereby acknowledges, that the Building and Premises have not undergone inspection by a Certified Access Specialist (CASp). Landlord shall deliver the Premises to Tenant in good, vacant, broom clean condition, in compliance with all Applicable Laws, with the roof water-tight and shall cause the plumbing, electrical systems, fire sprinkler system, lighting, and all other building systems serving the Premises, including the Generator, in good operating condition and repair on or before the Lease Commencement Date, or such earlier date as Landlord and Tenant mutually agree. Landlord will be responsible for causing the exterior of the Building, the existing Building entrances, and all exterior Common Areas (including required striping and handicapped spaces in the parking areas) to be in compliance with ADA and parking requirements, to the extent required to allow the legal occupancy of the Premises or completion of the Tenant Improvements.

1.1.2 **The Building and The Project**. The Premises constitutes the space set forth in Section 2.1 of the Summary (the "**Building**"). The Building is part of an office/laboratory project currently known as "The Cove at Oyster Point." The term "**Project**," as used in this Lease, shall mean (i) the Building and the Common Areas, (ii) the land (which is improved with landscaping, parking facilities and other improvements) upon which the Building and the Common Areas are located, (iii) the other office/laboratory buildings located at The Cove at Oyster Point, and the land upon which such adjacent office/laboratory buildings are located, and (iv) at Landlord's discretion, any additional real property, areas, land, buildings or other improvements added thereto outside of the Project (provided that any such additions do not increase Tenant's obligations under this Lease).

1.1.3 **Common Areas**. Tenant shall have the non-exclusive right to use in common with other tenants in the Project, and subject to the rules and regulations referred to in Article 5 of this Lease, those portions of the Project which are provided, from time to time, for use in common by Landlord, Tenant and any other tenants of the Project, which shall include the shipping and receiving area in the Building (such areas, together with such other portions of the Project designated by Landlord, in its discretion, are collectively referred to herein as the "**Common Areas**"). Landlord shall maintain and operate the Common Areas, including all sprinkler and other systems serving the Common Areas, in a first class manner, and the use thereof shall be subject to such rules, regulations and restrictions as Landlord may reasonably make from time to time. Landlord reserves the right to close temporarily, make alterations or additions to, or change the location of elements of the Project and the Common Areas, provided that in connection therewith Landlord will use commercially reasonable efforts to minimize any interference with Tenant's use of and access to the Premises and parking areas. Landlord hereby acknowledges that as of the date of this Lease Landlord is planning to construct and operate an amenities center in the Project for use by the tenants of the Project during the Lease Term, and in connection therewith Landlord agrees to utilize commercially reasonable efforts to operate and maintain such amenities center (which amenities center shall include a café) throughout the

Lease Term (provided that Tenant acknowledges that the amenities center is currently anticipated to begin operations after the Lease Commencement Date); provided, however, Tenant nevertheless acknowledges herby that if despite such commercially reasonable efforts Landlord is unable for any reason to maintain continuous operation of the amenities center during the Lease Term, in no event shall such failure be deemed a default of the Lease, nor shall such failure impact the validity of this Lease and Landlord shall not be subject to any liability for such failure, provided that in such event Landlord shall utilize commercially reasonable efforts to provide replacement food services to Tenant (e.g., an on-site café in a different location or the routine scheduling of food trucks to the Project).

1.2 **Rentable Square Feet of Premises**. Tenant hereby acknowledges and agrees that Landlord shall have the one-time right during the Lease Term to remeasure the rentable square footage of the Premises and/or Building in accordance with the terms of this Section 1.2. Any such remeasurement shall be determined in accordance with the standards set forth in ANSI Z65.1-2010, as promulgated by the Building Owners and Managers Association (the "**BOMA Standard**"), and subject to related guidelines applicable thereto. Landlord's space planner/architect shall certify any such remeasurement and shall provide reasonable documentation to Tenant for Tenant's review following such remeasurement. In the event that Landlord's space planner/architect determines that the rentable square footage of the Premises and/or Building are different from those set forth in this Lease, all amounts, percentages and figures appearing or referred to in this Lease based upon such amounts (including, without limitation, the amount of the Base Rent, Tenant Improvement Allowance, First Additional TI Allowance, Second Additional TI Allowance, and Tenant's Share) shall be modified in accordance with such determination, provided that Landlord and Tenant hereby acknowledge and agree that the rentable square footage of the Premises shall not increase by more than one percent (1%) from the rentable square footage set forth in Section 2.2 of the Summary. If such determination is made, it will be confirmed in writing by Landlord to Tenant.

2. LEASE TERM; OPTION TERM.

2.1 **Lease Term**. The terms and provisions of this Lease shall be effective as of the date of this Lease. The term of this Lease (the "**Lease Term**") shall be as set forth in Section 3.1 of the Summary, shall commence on the date set forth in Section 3.2 of the Summary (the "**Lease Commencement Date**"), and shall terminate on the date set forth in Section 3.3 of the Summary (the "**Lease Expiration Date**") unless this Lease is sooner terminated as hereinafter provided. For purposes of this Lease, the term "**Lease Year**" shall mean each consecutive twelve (12) month period during the Lease Term. At any time during the Lease Term, Landlord may deliver to Tenant a notice in the form as set forth in **Exhibit C**, attached hereto, as a confirmation only of the information set forth therein, which Tenant shall execute and return to Landlord within five (5) days of receipt thereof. Notwithstanding the foregoing, if Landlord has not delivered possession of the Premises in the condition required by Section 1.1.1, above, (1) on or before September 1, 2017, then, as Tenant's sole remedy for such delay, the date Tenant is otherwise obligated to commence payment of rent shall be delayed by one day for each day that the delivery date is delayed beyond such date, or (2) January 1, 2018, then, Tenant shall also have the right to terminate this Lease by written notice thereof to Landlord, whereupon any monies previously paid by Tenant to Landlord shall be reimbursed to Tenant. The foregoing dates shall be extended to the extent of any delays in delivery of possession caused by (i) Tenant Delay, as provided in Section 1(j) of the Tenant Work Letter, or (ii) war, terrorism, acts of God, natural disaster, civil unrest, governmental strike or area-wide or industry-wide labor disputes, inability to obtain services, labor, or materials or reasonable substitutes therefor, or delays due to utility companies that are not the result of any action or inaction of Landlord (provided that any such delay in this item (ii) shall not extend any such date by more than ninety (90) days).

2.2 **Option Term**.

2.2.1 **Option Right**. Landlord hereby grants to the Tenant originally named in this Lease (the "**Original Tenant**"), and its "Permitted Assignees", as that term is defined in Section 14.8, below, two (2) options to extend the Lease Term for a period of five (5) years (each, an "**Option Term**"), which option shall be irrevocably exercised only by written notice delivered by Tenant to Landlord not more than twelve (12) months nor less than nine (9) months prior to the expiration of the then Lease Term, provided that the following conditions **(**the "**Option Conditions**") are satisfied: (i) as of the date of delivery of such notice, Tenant is not in default under this Lease, after the expiration of any applicable notice and cure period; (ii) Tenant has not previously been in default under this Lease, after the expiration of any applicable notice and cure period, more than twice in the twelve (12) month period prior to the date of Tenant's attempted exercise; and (iii) the Lease then remains in full force and effect. Landlord may, at Landlord's option, exercised in Landlord's sole and absolute discretion, waive any of the Option Conditions in which

case the option, if otherwise properly exercised by Tenant, shall remain in full force and effect. Upon the proper exercise of such option to extend, and provided that Tenant satisfies all of the Option Conditions (except those, if any, which are waived by Landlord), the Lease Term, as it applies to the Premises, shall be extended for a period of five (5) years. The rights contained in this Section 2.2 shall be personal to Original Tenant and any Permitted Assignees, and may be exercised by Original Tenant or such Permitted Assignees (and not by any assignee, sublessee or other "Transferee," as that term is defined in Section 14.1 of this Lease, of Tenant's interest in this Lease). Notwithstanding any contrary provision of this Section 2.2, in no event may Tenant exercise its right to extend the Lease Term for the second (2nd) Option Term under this Section 2.2 if Tenant fails to timely exercise its right to extend the initial Lease Term for the first (1st) Option Term under this Section 2.2.

2.2.2 **Option Rent**. The annual Rent payable by Tenant during the Option Term (the "**Option Rent**") shall be equal to the "Fair Rental Value," as that term is defined below, for the Premises as of the commencement date of the Option Term. The "**Fair Rental Value**," as used in this Lease, shall be equal to the annual rent per rentable square foot (including additional rent and considering any "base year" or "expense stop" applicable thereto), including all escalations, at which tenants (pursuant to leases consummated within the twelve (12) month period preceding the first day of the Option Term), are leasing non-sublease, non-encumbered, non-equity space which is not significantly greater or smaller in size than the subject space, with a comparable level of improvements (excluding any property that Tenant would be allowed to remove from the Premises at the termination of the Lease), for a comparable lease term, in an arm's length transaction, which comparable space is located in the "Comparable Buildings," as that term is defined in this Section 2.2.2, below (transactions satisfying the foregoing criteria shall be known as the "**Comparable Transactions**"), taking into consideration the following concessions (the "**Concessions**"): (a) rental abatement concessions, if any, being granted such tenants in connection with such comparable space; (b) tenant improvements or allowances provided or to be provided for such comparable space, and taking into account the value, if any, of the existing improvements in the subject space, such value to be based upon the age, condition, design, quality of finishes and layout of the improvements and the extent to which the same can be utilized by a general office/lab user other than Tenant; and (c) other reasonable monetary concessions being granted such tenants in connection with such comparable space; provided, however, that in calculating the Fair Rental Value, no consideration shall be given to the fact that Landlord is or is not required to pay a real estate brokerage commission in connection with Tenant's exercise of its right to extend the Lease Term, or the fact that landlords are or are not paying real estate brokerage commissions in connection with such comparable space. The Concessions shall be reflected in the effective rental rate (which effective rental rate shall take into consideration the total dollar value of such Concessions as amortized on a straight-line basis over the applicable term of the Comparable Transaction (in which case such Concessions evidenced in the effective rental rate shall not be granted to Tenant)) payable by Tenant. The term "**Comparable Buildings**" shall mean the Building and those other life sciences buildings which are comparable to the Building in terms of age (based upon the date of completion of construction or major renovation of to the building), quality of construction, level of services and amenities, size and appearance, and are located in South San Francisco, California and the surrounding commercial area.

2.2.3 **Determination of Option Rent**. In the event Tenant timely and appropriately exercises an option to extend the Lease Term, Landlord shall notify Tenant of Landlord's determination of the Option Rent within thirty (30) days thereafter. If Tenant, on or before the date which is ten (10) days following the date upon which Tenant receives Landlord's determination of the Option Rent, in good faith objects to Landlord's determination of the Option Rent, then Landlord and Tenant shall attempt to agree upon the Option Rent using their best good-faith efforts. If Landlord and Tenant fail to reach agreement within ten (10) days following Tenant's objection to the Option Rent (the "**Outside Agreement Date**"), then Tenant shall have the right to withdraw its exercise of the option by delivering written notice thereof to Landlord within five (5) days thereafter, in which event Tenant's right to extend the Lease pursuant to this Section 2.2 shall be of no further force or effect. If Tenant does not withdraw its exercise of the extension option, each party shall make a separate determination of the Option Rent, as the case may be, within ten (10) days after the Outside Agreement Date, and such determinations shall be submitted to arbitration in accordance with Sections 2.2.3.1 through 2.2.3.7, below. If Tenant fails to object to Landlord's determination of the Option Rent within the time period set forth herein, then Tenant shall be deemed to have objected to Landlord's determination of Option Rent.

2.2.3.1 Landlord and Tenant shall each appoint one arbitrator who shall be a real estate appraiser who shall have been active over the five (5) year period ending on the date of such appointment in the appraisal of other class A life sciences buildings located in the South San Francisco market area. The determination

of the arbitrators shall be limited solely to the issue of whether Landlord's or Tenant's submitted Option Rent is the closest to the actual Option Rent, taking into account the requirements of Section 2.2.2 of this Lease, as determined by the arbitrators. Each such arbitrator shall be appointed within fifteen (15) days after the Outside Agreement Date. Landlord and Tenant may consult with their selected arbitrators prior to appointment and may select an arbitrator who is favorable to their respective positions. The arbitrators so selected by Landlord and Tenant shall be deemed "**Advocate Arbitrators**."

2.2.3.2 The two (2) Advocate Arbitrators so appointed shall be specifically required pursuant to an engagement letter within ten (10) days of the date of the appointment of the last appointed Advocate Arbitrator to agree upon and appoint a third arbitrator ("**Neutral Arbitrator**") who shall be qualified under the same criteria set forth hereinabove for qualification of the two Advocate Arbitrators, except that neither the Landlord or Tenant or either parties' Advocate Arbitrator may, directly or indirectly, consult with the Neutral Arbitrator prior or subsequent to his or her appearance. The Neutral Arbitrator shall be retained via an engagement letter jointly prepared by Landlord's counsel and Tenant's counsel.

2.2.3.3 The three arbitrators shall, within thirty (30) days of the appointment of the Neutral Arbitrator, reach a decision as to whether the parties shall use Landlord's or Tenant's submitted Option Rent, and shall notify Landlord and Tenant thereof.

2.2.3.4 The decision of the majority of the three arbitrators shall be binding upon Landlord and Tenant.

2.2.3.5 If either Landlord or Tenant fails to appoint an Advocate Arbitrator within fifteen (15) days after the Outside Agreement Date, then either party may petition the presiding judge of the Superior Court of San Mateo County to appoint such Advocate Arbitrator subject to the criteria in Section 2.2.3.1 of this Lease, or if he or she refuses to act, either party may petition any judge having jurisdiction over the parties to appoint such Advocate Arbitrator.

2.2.3.6 If the two (2) Advocate Arbitrators fail to agree upon and appoint the Neutral Arbitrator, then either party may petition the presiding judge of the Superior Court of San Mateo County to appoint the Neutral Arbitrator, subject to criteria in Section 2.2.3.1 of this Lease, or if he or she refuses to act, either party may petition any judge having jurisdiction over the parties to appoint such arbitrator.

2.2.3.7 The cost of the arbitration shall be paid by Landlord and Tenant equally.

2.2.3.8 In the event that the Option Rent shall not have been determined pursuant to the terms hereof prior to the commencement of the Option Term, Tenant shall be required to pay the Option Rent initially provided by Landlord to Tenant, and upon the final determination of the Option Rent, the payments made by Tenant shall be reconciled with the actual amounts of Option Rent due, and the appropriate party shall make any corresponding payment to the other party.

3. BASE RENT. Tenant shall pay, without prior notice or demand, to Landlord at the address set forth in Section 4 of the Summary, or, at Landlord's option, at such other place as Landlord may from time to time designate in writing, by a check for currency which, at the time of payment, is legal tender for private or public debts in the United States of America, base rent ("**Base Rent**") as set forth in Section 4 of the Summary, payable in equal monthly installments as set forth in Section 4 of the Summary in advance on or before the first day of each and every calendar month during the Lease Term, without any setoff or deduction whatsoever. The Base Rent for the first full month of the Lease Term shall be paid at the time of Tenant's execution of this Lease. If any Rent payment date (including the Lease Commencement Date) falls on a day of the month other than the first day of such month or if any payment of Rent is for a period which is shorter than one month, the Rent for any fractional month shall accrue on a daily basis for the period from the date such payment is due to the end of such calendar month or to the end of the Lease Term at a rate per day which is equal to 1/365 of the applicable annual Rent. All other payments or adjustments required to be made under the terms of this Lease that require proration on a time basis shall be prorated on the same basis.

4. ADDITIONAL RENT.

4.1 **General Terms**.

4.1.1 **Direct Expenses; Additional Rent**. In addition to paying the Base Rent specified in Article 3 of this Lease, Tenant shall pay "**Tenant's Share**" of the annual "**Direct Expenses**," as those terms are defined in Sections 4.2.6 and 4.2.2 of this Lease, respectively, allocable to the Building as described in Section 4.3. Such payments by Tenant, together with any and all other amounts payable by Tenant to Landlord pursuant to the terms of this Lease, are hereinafter collectively referred to as the "**Additional Rent**", and the Base Rent and the Additional Rent are herein collectively referred to as "**Rent**." All amounts due under this Article 4 as Additional Rent shall be payable for the same periods and in the same manner as the Base Rent. Without limitation on other obligations of Tenant which survive the expiration of the Lease Term, the obligations of Tenant to pay the Additional Rent provided for in this Article 4 shall survive the expiration of the Lease Term.

4.1.2 **Triple Net Lease**. Landlord and Tenant acknowledge that, to the extent provided in this Lease, it is their intent and agreement that this Lease be a "**TRIPLE NET**" lease and that as such, the provisions contained in this Lease are intended to pass on to Tenant or reimburse Landlord for the costs and expenses reasonably associated with this Lease, the Building and the Project, and Tenant's operation therefrom to the extent provided in this Lease. To the extent such costs and expenses payable by Tenant cannot be charged directly to, and paid by, Tenant, such costs and expenses shall be paid by Landlord but reimbursed by Tenant as Additional Rent.

4.2 **Definitions of Key Terms Relating to Additional Rent**. As used in this Article 4, the following terms shall have the meanings hereinafter set forth:

4.2.1 Intentionally Deleted.

4.2.2 **"Direct Expenses**" shall mean "**Operating Expenses**" and "**Tax Expenses**."

4.2.3 **"Expense Year**" shall mean each calendar year in which any portion of the Lease Term falls, through and including the calendar year in which the Lease Term expires, provided that Landlord, upon notice to Tenant, may change the Expense Year from time to time to any other twelve (12) consecutive month period, and, in the event of any such change, Tenant's Share of Direct Expenses shall be equitably adjusted for any Expense Year involved in any such change.

4.2.4 **"Operating Expenses**" shall mean all expenses, costs and amounts of every kind and nature which Landlord pays or accrues during any Expense Year because of or in connection with the ownership, management, maintenance, security, repair, replacement, restoration or operation of the Project, or any portion thereof. Without limiting the generality of the foregoing, Operating Expenses shall specifically include any and all of the following: (i) the cost of supplying all utilities, the cost of operating, repairing and maintaining the utility, telephone, mechanical, sanitary, storm drainage, and elevator systems, and the cost of maintenance and service contracts in connection therewith; (ii) the cost of licenses, certificates, permits and inspections and the cost of contesting any governmental enactments which are reasonably likely to increase Operating Expenses during the Lease Term, and the costs incurred in connection with a governmentally mandated transportation system management program or similar program; (iii) the cost of all insurance carried by Landlord in connection with the Project and Premises as reasonably determined by Landlord; (iv) the cost of landscaping, relamping, and all supplies, tools, equipment and materials used in the operation, repair and maintenance of the Project, or any portion thereof; (v) the cost of parking area operation, repair, restoration, and maintenance; (vi) management and/or incentive fees, consulting fees, legal fees and accounting fees, of all contractors and consultants in connection with the management, operation, maintenance and repair of the Project; (vii) payments under any equipment rental agreements; (viii) subject to item (f), below, wages, salaries and other compensation and benefits, including taxes levied thereon, of all persons engaged in the operation, maintenance and security of the Project; (ix) costs under any easement pertaining to the sharing of costs by the Project; (x) operation, repair, maintenance and replacement of all systems and equipment and components thereof of the Project; (xi) the cost of janitorial, alarm, security and other services, replacement of wall and floor coverings, ceiling tiles and fixtures in Common Areas, maintenance and replacement of curbs and walkways, repair to roofs and re-roofing; (xii) amortization (including interest on the unamortized cost) over such period of time as Landlord shall reasonably determine, of the cost of acquiring or the rental expense of personal property used in the maintenance, operation and

repair of the Project, or any portion thereof; (xiii) the cost of capital improvements or other costs incurred in connection with the Project (A) which are intended to effect economies in the operation or maintenance of the Project, or any portion thereof, or to reduce current or future Operating Expenses or to enhance the safety or security of the Project or its occupants, (B) which are required to comply with present or anticipated conservation programs, (C) which are replacements or modifications of nonstructural items located in the Common Areas required to keep the Common Areas in good order or condition, or (D) which are required under any governmental law or regulation; provided, however, that any capital expenditure shall be amortized (including reasonable interest on the amortized cost) over the reasonable useful life of such capital item; and (xiv) costs, fees, charges or assessments imposed by, or resulting from any mandate imposed on Landlord by, any federal, state or local government for fire and police protection, trash removal, community services, or other services which do not constitute "Tax Expenses" as that term is defined in Section 4.2.5, below, and (xv) payments under any easement, license, operating agreement, declaration, restrictive covenant, or instrument pertaining to the sharing of costs by the Building, including, without limitation, any covenants, conditions and restrictions affecting the property, and reciprocal easement agreements affecting the property, any parking licenses, and any agreements with transit agencies affecting the Property (collectively, "**Underlying Documents**"). Notwithstanding the foregoing, for purposes of this Lease, Operating Expenses shall not, however, include:

(a) costs, including legal fees, space planners' fees, advertising and promotional expenses (except as otherwise set forth above), and brokerage fees incurred in connection with the original construction or development, or original or future leasing of the Project, and costs, including permit, license and inspection costs, incurred with respect to the installation of tenant improvements made for new tenants initially occupying space in the Project after the Lease Commencement Date or incurred in renovating or otherwise improving, decorating, painting or redecorating vacant space for tenants or other occupants of the Project (excluding, however, such costs relating to any common areas of the Project or parking facilities);

(b) except as set forth in items (xii), (xiii), and (xiv) above, depreciation, interest and principal payments on mortgages and other debt costs, if any, penalties and interest;

(c) costs for which the Landlord is reimbursed by any tenant or occupant of the Project or by insurance by its carrier or any tenant's carrier or by anyone else, electric power costs for which any tenant directly contracts with the local public service company and costs of utilities and services provided to other tenants that are not provided to Tenant;

(d) any bad debt loss, rent loss, or reserves for bad debts or rent loss or other reserves to the extent not used in the same year;

(e) costs associated with the operation of the business of the partnership or entity which constitutes the Landlord, as the same are distinguished from the costs of operation of the Project (which shall specifically include, but not be limited to, accounting costs associated with the operation of the Project). Costs associated with the operation of the business of the partnership or entity which constitutes the Landlord include costs of partnership accounting and legal matters, costs of defending any lawsuits with any mortgagee (except as the actions of the Tenant may be in issue), costs of selling, syndicating, financing, mortgaging or hypothecating any of the Landlord's interest in the Project, and costs incurred in connection with any disputes between Landlord and its employees, between Landlord and Project management, or between Landlord and other tenants or occupants;

(f) the wages and benefits of any employee who does not devote substantially all of his or her employed time to the Project unless such wages and benefits are prorated to reflect time spent on operating and managing the Project vis-a-vis time spent on matters unrelated to operating and managing the Project; provided, that in no event shall Operating Expenses for purposes of this Lease include wages and/or benefits attributable to personnel above the level of Project manager;

(g) amount paid as ground rental for the Project by the Landlord;

(h) except for a property management fee not to exceed three percent (3%) of gross revenues, overhead and profit increment paid to the Landlord, and any amounts paid to the Landlord or to subsidiaries or affiliates of the Landlord for services in the Project to the extent the same exceeds the costs of such services rendered by qualified, first-class unaffiliated third parties on a competitive basis;

(i) any compensation paid to clerks, attendants or other persons in commercial concessions operated by the Landlord (other than as direct reimbursement for costs which, if incurred directly by Landlord, would properly be included in Operating Expenses);

(j) rentals and other related expenses incurred in leasing air conditioning systems, elevators or other equipment which if purchased the cost of which would be excluded from Operating Expenses as a capital cost, except equipment not affixed to the Project which is used in providing engineering, janitorial or similar services and, further excepting from this exclusion such equipment rented or leased to remedy or ameliorate an emergency condition in the Project;

(k) all items and services for which Tenant or any other tenant in the Project reimburses Landlord or which Landlord provides selectively to one or more tenants (other than Tenant) without reimbursement;

(l) any costs expressly excluded from Operating Expenses elsewhere in this Lease;

(m) rent for the amenities center or for any office space occupied by Project management personnel;

(n) costs arising from the gross negligence or willful misconduct of Landlord or its agents, employees or contractors in connection with this Lease;

(o) costs incurred to comply with laws relating to the removal or remediation of hazardous material (as defined under applicable law), and any costs of fines or penalties relating to the presence of hazardous material, in each case to the extent not brought into the Building or Premises by Tenant or any Tenant Parties;

(p) costs to correct any construction defect in the Project or to remedy any violation of a covenant, condition, restriction, underwriter's requirement or law that exists as of the Lease Commencement Date;

(q) capital costs occasioned by casualties or condemnation.

(r) legal fees, accountants' fees (other than normal bookkeeping expenses) and other expenses incurred in connection with disputes of tenants or other occupants of the Project or associated with the enforcement of the terms of any leases with tenants or the defense of Landlord's title to or interest in the Project or any part thereof;

(s) costs incurred due to a violation by Landlord or any other tenant of the Project of the terms and conditions of a lease; and

(t) self-insurance retentions.

4.2.5 **Taxes**.

4.2.5.1 **"Tax Expenses**" shall mean all federal, state, county, or local governmental or municipal taxes, fees, charges or other impositions of every kind and nature, whether general, special, ordinary or extraordinary (including, without limitation, real estate taxes, general and special assessments, transit taxes, leasehold taxes or taxes based upon the receipt of rent, including gross receipts or sales taxes applicable to the receipt of rent, unless required to be paid by Tenant, personal property taxes imposed upon the fixtures, machinery, equipment, apparatus, systems and equipment, appurtenances, furniture and other personal property used in connection with the Project, or any portion thereof), which shall be paid or accrued during any Expense Year (without regard to any different fiscal year used by such governmental or municipal authority) because of or in connection with the ownership, leasing and operation of the Project, or any portion thereof.

4.2.5.2 Tax Expenses shall include, without limitation: (i) Any tax on the rent, right to rent or other income from the Project, or any portion thereof, or as against the business of leasing the Project, or any portion thereof; (ii) Any assessment, tax, fee, levy or charge in addition to, or in substitution, partially or totally, of any assessment, tax, fee, levy or charge previously included within the definition of real property tax; (iii) Any assessment, tax, fee, levy, or charge allocable to or measured by the area of the Premises or the Rent payable hereunder, including, without limitation, any business or gross income tax or excise tax with respect to the receipt of such rent, or upon or with respect to the possession, leasing, operating, management, maintenance, alteration, repair, use or occupancy by Tenant of the Premises, or any portion thereof; and (iv) Any assessment, tax, fee, levy or charge, upon this transaction or any document to which Tenant is a party, creating or transferring an interest or an estate in the Premises or the improvements thereon.

4.2.5.3 Any costs and expenses (including, without limitation, reasonable attorneys' and consultants' fees) incurred in attempting to protest, reduce or minimize Tax Expenses shall be included in Tax Expenses in the Expense Year such expenses are incurred. Tax refunds shall be credited against Tax Expenses and refunded to Tenant regardless of when received, based on the Expense Year to which the refund is applicable, provided that in no event shall the amount to be refunded to Tenant for any such Expense Year exceed the total amount paid by Tenant as Additional Rent under this Article 4 for such Expense Year. If Tax Expenses for any period during the Lease Term or any extension thereof are increased after payment thereof for any reason, including, without limitation, error or reassessment by applicable governmental or municipal authorities, Tenant shall pay Landlord upon demand Tenant's Share of any such increased Tax Expenses. Notwithstanding anything to the contrary contained in this Section 4.2.5, there shall be excluded from Tax Expenses (i) all excess profits taxes, franchise taxes, gift taxes, capital stock taxes, inheritance and succession taxes, transfer taxes, estate taxes, federal and state income taxes, and other taxes to the extent applicable to Landlord's net income (as opposed to rents, receipts or income attributable to operations at the Project), (ii) any items included as Operating Expenses, (iii) any items paid by Tenant under Section 4.5 of this Lease, (iv) assessments in excess of the amount which would be payable if such assessment expense were paid in installments over the longest permitted term; (v) taxes imposed on land and improvements other than the Project; and (vi) tax increases resulting from the improvement of any of the Project for the sole use of other occupants.

4.2.6 **"Tenant's Share**" shall mean the percentage set forth in Section 6 of the Summary.

4.3 **Allocation of Direct Expenses**. The parties acknowledge that the Building is a part of a multi-building project and that the costs and expenses incurred in connection with the Project (i.e., the Direct Expenses) should be shared between the Building and the other buildings in the Project. Accordingly, as set forth in Section 4.2 above, Direct Expenses (which consist of Operating Expenses and Tax Expenses) are determined annually for the Project as a whole, and a portion of the Direct Expenses, which portion shall be determined by Landlord on an equitable basis, shall be allocated to the Building (as opposed to other buildings in the Project). Such portion of Direct Expenses allocated to the Building shall include all Direct Expenses attributable solely to the Building and a pro rata portion of the Direct Expenses attributable to the Project as a whole, and shall not include Direct Expenses attributable solely to other buildings in the Project.

4.4 **Calculation and Payment of Additional Rent**. Commencing on the Lease Commencement Date, Tenant shall pay to Landlord, in the manner set forth in Section 4.4.1, below, and as Additional Rent, Tenant's Share of Direct Expenses for each Expense Year during the Lease Term.

4.4.1 **Statement of Actual Direct Expenses and Payment by Tenant**. Landlord shall give to Tenant within five (5) months following the end of each Expense Year, a statement (the "**Statement**") which shall state the Direct Expenses incurred or accrued for such preceding Expense Year, and which shall indicate the amount of Tenant's Share of Direct Expenses. Upon receipt of the Statement for each Expense Year commencing or ending during the Lease Term, Tenant shall pay, with its next installment of Base Rent due that is at least thirty (30) days thereafter, the full amount of Tenant's Share of Direct Expenses for such Expense Year, less the amounts, if any, paid during such Expense Year as "**Estimated Direct Expenses**," as that term is defined in Section 4.4.2, below, and if Tenant paid more as Estimated Direct Expenses than the actual Tenant's Share of Direct Expenses, Tenant shall receive a credit in the amount of Tenant's overpayment against Rent next due under this Lease. The failure of Landlord to

timely furnish the Statement for any Expense Year shall not prejudice Landlord or Tenant from enforcing its rights under this Article 4. Even though the Lease Term has expired and Tenant has vacated the Premises, when the final determination is made of Tenant's Share of Direct Expenses for the Expense Year in which this Lease terminates, Tenant shall immediately pay to Landlord such amount, and if Tenant paid more as Estimated Direct Expenses than the actual Tenant's Share of Direct Expenses, Landlord shall, within thirty (30) days, deliver a check payable to Tenant in the amount of the overpayment. The provisions of this Section 4.4.1 shall survive the expiration or earlier termination of the Lease Term. Notwithstanding the immediately preceding sentence, Tenant shall not be responsible for Tenant's Share of any Direct Expenses attributable to any Expense Year which are first billed to Tenant more than two (2) calendar years after the earlier of the expiration of the applicable Expense Year or the Lease Expiration Date, provided that in any event Tenant shall be responsible for Tenant's Share of Direct Expenses levied by any governmental authority or by any public utility companies at any time following the Lease Expiration Date which are attributable to any Expense Year (provided that Landlord delivers Tenant a bill for such amounts within two (2) years following Landlord's receipt of the bill therefor).

4.4.2 **Statement of Estimated Direct Expenses**. In addition, Landlord shall give Tenant a yearly expense estimate statement (the "**Estimate Statement**") which shall set forth Landlord's reasonable estimate (the "**Estimate**") of what the total amount of Direct Expenses for the then-current Expense Year shall be and the estimated Tenant's Share of Direct Expenses (the "**Estimated Direct Expenses**"). The failure of Landlord to timely furnish the Estimate Statement for any Expense Year shall not preclude Landlord from enforcing its rights to collect any Estimated Direct Expenses under this Article 4, nor shall Landlord be prohibited from revising any Estimate Statement or Estimated Direct Expenses theretofore delivered to the extent necessary. Thereafter, Tenant shall pay, with its next installment of Base Rent due that is at least thirty (30) days thereafter, a fraction of the Estimated Direct Expenses for the then-current Expense Year (reduced by any amounts paid pursuant to the last sentence of this Section 4.4.2). Such fraction shall have as its numerator the number of months which have elapsed in such current Expense Year, including the month of such payment, and twelve (12) as its denominator. Until a new Estimate Statement is furnished (which Landlord shall have the right to deliver to Tenant at any time), Tenant shall pay monthly, with the monthly Base Rent installments, an amount equal to one-twelfth (1/12) of the total Estimated Direct Expenses set forth in the previous Estimate Statement delivered by Landlord to Tenant.

4.5 **Taxes and Other Charges for Which Tenant Is Directly Responsible**. Tenant shall be liable for and shall pay ten (10) days before delinquency, taxes levied against Tenant's equipment, furniture, fixtures and any other personal property located in or about the Premises. If any such taxes on Tenant's equipment, furniture, fixtures and any other personal property are levied against Landlord or Landlord's property or if the assessed value of Landlord's property is increased by the inclusion therein of a value placed upon such equipment, furniture, fixtures or any other personal property and if Landlord pays the taxes based upon such increased assessment, which Landlord shall have the right to do regardless of the validity thereof but only under proper protest if requested by Tenant, Tenant shall upon demand repay to Landlord the taxes so levied against Landlord or the proportion of such taxes resulting from such increase in the assessment, as the case may be.

4.6 **Landlord's Books and Records**. Within one hundred twenty (120) days after receipt by Tenant of a Statement, if Tenant disputes the amount of Additional Rent set forth in the Statement, a member of Tenant's finance department, or an independent certified public accountant (which accountant is a member of a nationally recognized accounting firm and is not working on a contingency fee basis) ("**Tenant's Accountant**"), designated and paid for by Tenant, may, after reasonable notice to Landlord and at reasonable times, inspect Landlord's records with respect to the Statement at Landlord's offices, provided that there is no existing Event of Default and Tenant has paid all amounts required to be paid under the applicable Estimate Statement and Statement, as the case may be. In connection with such inspection, Tenant and Tenant's agents must agree in advance to follow Landlord's reasonable rules and procedures regarding inspections of Landlord's records, and shall execute a commercially reasonable confidentiality agreement regarding such inspection. Tenant's failure to dispute the amount of Additional Rent set forth in any Statement within one hundred twenty (120) days of Tenant's receipt of such Statement shall be deemed to be Tenant's approval of such Statement and Tenant, thereafter, waives the right or ability to dispute the amounts set forth in such Statement. If after such inspection, Tenant still disputes such Additional Rent, a determination as to the proper amount shall be made, at Tenant's expense, by an independent certified public accountant (the "**Accountant**") selected by Landlord and subject to Tenant's reasonable approval; provided that if such Accountant determines that Direct Expenses were overstated by more than five percent (5%), then the cost of the Accountant and the cost of such determination shall be paid for by Landlord, and Landlord shall reimburse Tenant's the cost of the Tenant's Accountant

(provided that such cost shall be a reasonable market cost for such services). Tenant hereby acknowledges that Tenant's sole right to inspect Landlord's books and records and to contest the amount of Direct Expenses payable by Tenant shall be as set forth in this Section 4.6, and Tenant hereby waives any and all other rights pursuant to applicable law to inspect such books and records and/or to contest the amount of Direct Expenses payable by Tenant.

5. USE OF PREMISES.

5.1 **Permitted Use**. Tenant shall use the Premises solely for the Permitted Use set forth in Section 7 of the Summary and Tenant shall not use or permit the Premises or the Project to be used for any other purpose or purposes whatsoever without the prior written consent of Landlord, which may be withheld in Landlord's sole discretion.

5.2 **Prohibited Uses**. Tenant further covenants and agrees that Tenant shall not use or permit any person or persons to use, the Premises or any part thereof for any use or purpose in violation of the laws of the United States of America, the State of California, or the ordinances, regulations or requirements of the local municipal or county governing body or other lawful authorities having jurisdiction over the Project) including, without limitation, any such laws, ordinances, regulations or requirements relating to hazardous materials or substances, as those terms are defined by applicable laws now or hereafter in effect. Landlord shall have the right to impose reasonable, nondiscriminatory and customary rules and regulations regarding the use of the Project that do not unreasonably interfere with Tenant's use of the Premises, as reasonably deemed necessary by Landlord with respect to the orderly operation of the Project, and Tenant shall comply with such reasonable rules and regulations. Tenant shall not do or permit anything to be done in or about the Premises which will in any way obstruct or interfere with the rights of other tenants or occupants of the Building, or injure or annoy them or use or allow the Premises to be used for any improper, unlawful or objectionable purpose, nor shall Tenant cause, maintain or permit any nuisance in, on or about the Premises. Tenant shall comply with, and Tenant's rights and obligations under the Lease and Tenant's use of the Premises shall be subject and subordinate to, all recorded easements, covenants, conditions, and restrictions now or hereafter affecting the Project, so long as the same do not unreasonably interfere with Tenant's use of the Premises or parking rights or materially increase Tenant's obligations or decrease Tenant's rights under this Lease.

5.3 **Hazardous Materials**.

5.3.1 **Tenant's Obligations**.

5.3.1.1 **Prohibitions**. As a material inducement to Landlord to enter into this Lease with Tenant, Tenant has fully and accurately completed Landlord's Pre-Leasing Environmental Exposure Questionnaire (the "**Environmental Questionnaire**"), which is attached as **Exhibit E**. Tenant agrees that except for those chemicals or materials, and their respective quantities, specifically listed on the Environmental Questionnaire (as the same may be updated from time to time as provided below), neither Tenant nor Tenant's employees, contractors and subcontractors of any tier, entities with a contractual relationship with Tenant (other than Landlord), or any entity acting as an agent or sub-agent of Tenant (collectively, "**Tenant's Agents**") will produce, use, store or generate any "Hazardous Materials," as that term is defined below, on, under or about the Premises, nor cause any Hazardous Material to be brought upon, placed, stored, manufactured, generated, blended, handled, recycled, used or "Released," as that term is defined below, on, in, under or about the Premises. If any information provided to Landlord by Tenant on the Environmental Questionnaire, or otherwise relating to information concerning Hazardous Materials is intentionally false, incomplete, or misleading in any material respect, the same shall be deemed a default by Tenant under this Lease. Upon Landlord's request, or in the event of any material change in Tenant's use of Hazardous Materials in the Premises, Tenant shall deliver to Landlord an updated Environmental Questionnaire at least once a year. Tenant shall notify Landlord prior to using any Hazardous Materials in the Premises not described on the initial Environmental Questionnaire, and, to the extent such use would, in Landlord's reasonable judgment, cause a material increase in the risk of liability compared to the uses previously allowed in the Premises, such additional use shall be subject to Landlord's prior consent, which may be withheld in Landlord's reasonable discretion. Tenant shall not install or permit Tenant's Agents to install any underground storage tank on the Premises. For purposes of this Lease, "**Hazardous Materials**" means all flammable explosives, petroleum and petroleum products, waste oil, radon, radioactive materials, toxic pollutants, asbestos, polychlorinated biphenyls ("**PCBs**"), medical waste, chemicals known to cause cancer or reproductive toxicity, pollutants, contaminants, hazardous wastes, toxic substances or related materials, including without limitation any chemical, element, compound, mixture, solution, substance, object, waste

or any combination thereof, which is or may be hazardous to human health, safety or to the environment due to its radioactivity, ignitability, corrosiveness, reactivity, explosiveness, toxicity, carcinogenicity, infectiousness or other harmful or potentially harmful properties or effects, or defined as, regulated as or included in, the definition of "hazardous substances," "hazardous wastes," "hazardous materials," or "toxic substances" under any Environmental Laws. For purposes of this Lease, "**Release**" or "**Released**" or "**Releases**" shall mean any release, deposit, discharge, emission, leaking, spilling, seeping, migrating, injecting, pumping, pouring, emptying, escaping, dumping, disposing, or other movement of Hazardous Materials into the environment. Landlord acknowledges that Tenant will be installing and using fume hoods in the Premises and that emissions of Hazardous Materials into the air in compliance with all Environmental Laws shall not be considered Releases.

5.3.1.2 **Notices to Landlord**. Tenant shall notify Landlord in writing as soon as possible but in no event later than five (5) days after (i) the occurrence of any actual, alleged or threatened Release of any Hazardous Material in, on, under, from, about or in the vicinity of the Premises (whether past or present), regardless of the source or quantity of any such Release, or (ii) Tenant becomes aware of any regulatory actions, inquiries, inspections, investigations, directives, or any cleanup, compliance, enforcement or abatement proceedings (including any threatened or contemplated investigations or proceedings) relating to or potentially affecting the Premises, or (iii) Tenant becomes aware of any claims by any person or entity relating to any Hazardous Materials in, on, under, from, about or in the vicinity of the Premises, whether relating to damage, contribution, cost recovery, compensation, loss or injury. Collectively, the matters set forth in clauses (i), (ii) and (iii) above are hereinafter referred to as "**Hazardous Materials Claims**". Tenant shall promptly forward to Landlord copies of all orders, notices, permits, applications and other communications and reports in connection with any Hazardous Materials Claims. Additionally, Tenant shall promptly advise Landlord in writing of Tenant's discovery of any occurrence or condition on, in, under or about the Premises that could subject Tenant or Landlord to any liability, or restrictions on ownership, occupancy, transferability or use of the Premises under any "Environmental Laws," as that term is defined below. Tenant shall not enter into any legal proceeding or other action, settlement, consent decree or other compromise with respect to any Hazardous Materials Claims without first notifying Landlord of Tenant's intention to do so and affording Landlord the opportunity to join and participate, as a party if Landlord so elects, in such proceedings and in no event shall Tenant enter into any agreements which are binding on Landlord or the Premises without Landlord's prior written consent. Landlord shall have the right to appear at and participate in, any and all legal or other administrative proceedings concerning any Hazardous Materials Claim. For purposes of this Lease, "**Environmental Laws**" means all applicable present and future laws relating to the protection of human health, safety, wildlife or the environment, including, without limitation, (i) all requirements pertaining to reporting, licensing, permitting, investigation and/or remediation of emissions, discharges, Releases, or threatened Releases of Hazardous Materials, whether solid, liquid, or gaseous in nature, into the air, surface water, groundwater, or land, or relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport, or handling of Hazardous Materials; and (ii) all requirements pertaining to the health and safety of employees or the public. Environmental Laws include, but are not limited to, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 USC § 9601, et seq., the Hazardous Materials Transportation Authorization Act of 1994, 49 USC § 5101, et seq., the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, and Hazardous and Solid Waste Amendments of 1984, 42 USC § 6901, et seq., the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, 33 USC § 1251, et seq., the Clean Air Act of 1966, 42 USC § 7401, et seq., the Toxic Substances Control Act of 1976, 15 USC § 2601, et seq., the Safe Drinking Water Act of 1974, 42 USC §§ 300f through 300j, the Occupational Safety and Health Act of 1970, as amended, 29 USC § 651 et seq., the Oil Pollution Act of 1990, 33 USC § 2701 et seq., the Emergency Planning and Community Right-To-Know Act of 1986, 42 USC § 11001 et seq., the National Environmental Policy Act of 1969, 42 USC § 4321 et seq., the Federal Insecticide, Fungicide and Rodenticide Act of 1947, 7 USC § 136 et seq., California Carpenter-Presley-Tanner Hazardous Substance Account Act, California Health & Safety Code §§ 25300 et seq., Hazardous Materials Release Response Plans and Inventory Act, California Health & Safety Code, §§ 25500 et seq., Underground Storage of Hazardous Substances provisions, California Health & Safety Code, §§ 25280 et seq., California Hazardous Waste Control Law, California Health & Safety Code, §§ 25100 et seq., and any other state or local law counterparts, as amended, as such applicable laws, are in effect as of the Lease Commencement Date, or thereafter adopted, published, or promulgated.

5.3.1.3 **Releases of Hazardous Materials**. If any Release of any Hazardous Material in, on, under, from or about the Premises shall occur at any time during the Lease by Tenant or Tenant's Agents, in addition to notifying Landlord as specified above, Tenant, at its own sole cost and expense, shall (i) immediately comply with any and all reporting requirements imposed pursuant to any and all Environmental Laws, (ii) provide a

written certification to Landlord indicating that Tenant has complied with all applicable reporting requirements, (iii) take any and all necessary investigation, corrective and remedial action in accordance with any and all applicable Environmental Laws, utilizing an environmental consultant approved by Landlord, all in accordance with the provisions and requirements of this **Section 5.3**, including, without limitation, **Section 5.3.4**, and (iv) take any such additional investigative, remedial and corrective actions as Landlord shall in its reasonable discretion deem necessary such that the Premises are remediated to the condition existing prior to such Release.

5.3.1.4 **Indemnification**.

5.3.1.4.1 **In General**. Without limiting in any way Tenant's obligations under any other provision of this Lease, Tenant shall be solely responsible for and shall protect, defend, indemnify and hold the Landlord Parties harmless from and against any and all claims, judgments, losses, damages, costs, expenses, penalties, enforcement actions, taxes, fines, remedial actions, liabilities (including, without limitation, actual attorneys' fees, litigation, arbitration and administrative proceeding costs, expert and consultant fees and laboratory costs) including, without limitation, consequential damages and sums paid in settlement of claims, which arise during or after the Lease Term, whether foreseeable or unforeseeable, that arise during or after the Lease Term in whole or in part, foreseeable or unforeseeable, directly or indirectly arising out of or attributable to the Release of Hazardous Materials in, on, under or about the Premises by Tenant or Tenant's Agents.

5.3.1.4.2 **Limitations**. Notwithstanding anything in **Section 5.3.1.4**, above, to the contrary, Tenant's indemnity of Landlord as set forth in **Section 5.3.1.4**, above, shall not be applicable to claims based upon Hazardous Materials not Released by Tenant or Tenant's Agents.

5.3.1.4.3 **Landlord Indemnity**. Under no circumstance shall Tenant be liable for, and Landlord shall indemnify, defend, protect and hold harmless Tenant and Tenant's Agents from and against, all losses, costs, claims, liabilities and damages (including attorneys' and consultants' fees) arising out of any Hazardous Materials that exist in, on or about the Project as of the date hereof, or Hazardous Material Released by Landlord or any Landlord Parties. Landlord has provided Tenant with an SMP description of environmental conditions from Roux Associates. The provision of such reports shall be for informational purposes only, and Landlord does not make any representation or warranty as to the correctness or completeness of any such reports.

5.3.1.5 **Compliance with Environmental Laws**. Without limiting the generality of Tenant's obligation to comply with applicable laws as otherwise provided in this Lease, Tenant shall, at its sole cost and expense, comply with all Environmental Laws related to the use of Hazardous Materials by Tenant and Tenant's Agents. Tenant shall obtain and maintain any and all necessary permits, licenses, certifications and approvals appropriate or required for the use, handling, storage, and disposal of any Hazardous Materials used, stored, generated, transported, handled, blended, or recycled by Tenant on the Premises. Landlord shall have a continuing right, without obligation, to require Tenant to obtain, and to review and inspect any and all such permits, licenses, certifications and approvals, together with copies of any and all Hazardous Materials management plans and programs, any and all Hazardous Materials risk management and pollution prevention programs, and any and all Hazardous Materials emergency response and employee training programs respecting Tenant's use of Hazardous Materials. Upon request of Landlord, Tenant shall deliver to Landlord a narrative description explaining the nature and scope of Tenant's activities involving Hazardous Materials and showing to Landlord's satisfaction compliance with all Environmental Laws and the terms of this Lease.

5.3.2 **Assurance of Performance**.

5.3.2.1 **Environmental Assessments In General**. Landlord may, but shall not be required to, engage from time to time such contractors as Landlord determines to be appropriate (and which are reasonably acceptable to Tenant) to perform environmental assessments of a scope reasonably determined by Landlord (an "**Environmental Assessment**") to ensure Tenant's compliance with the requirements of this Lease with respect to Hazardous Materials.

5.3.2.2 **Costs of Environmental Assessments**. All costs and expenses incurred by Landlord in connection with any such Environmental Assessment initially shall be paid by Landlord; provided that if any such Environmental Assessment shows that Tenant has failed to comply with the provisions of this **Section 5.3**, then all of the costs and expenses of such Environmental Assessment shall be reimbursed by Tenant as Additional Rent within thirty (30) days after receipt of written demand therefor.

5.3.3 **Tenant's Obligations upon Surrender**. At the expiration or earlier termination of the Lease Term, Tenant, at Tenant's sole cost and expense, shall: (i) cause an Environmental Assessment of the Premises to be conducted in accordance with **Section 15.3**; (ii) cause all Hazardous Materials brought onto the Premises by Tenant or Tenant's Agents to be removed from the Premises and disposed of in accordance with all Environmental Laws and as necessary to allow the Premises to be used for the purposes allowed as of the date of this Lease; and (iii) cause to be removed all containers installed or used by Tenant or Tenant's Agents to store any Hazardous Materials on the Premises, and cause to be repaired any damage to the Premises caused by such removal.

5.3.4 **Clean-up**.

5.3.4.1 **Environmental Reports; Clean-Up**. If any written report, including any report containing results of any Environmental Assessment (an "**Environmental Report**") shall indicate (i) the presence of any Hazardous Materials as to which Tenant has a removal or remediation obligation under this **Section 5.3**, and (ii) that as a result of same, the investigation, characterization, monitoring, assessment, repair, closure, remediation, removal, or other clean-up (the "**Clean-up**") of any Hazardous Materials is required, Tenant shall immediately prepare and submit to Landlord within thirty (30) days after receipt of the Environmental Report a comprehensive plan, subject to Landlord's written approval, specifying the actions to be taken by Tenant to perform the Clean-up so that the Premises are restored to the conditions required by this Lease. Upon Landlord's approval of the Clean-up plan, Tenant shall, at Tenant's sole cost and expense, without limitation on any rights and remedies of Landlord under this Lease, immediately implement such plan with a consultant reasonably acceptable to Landlord and proceed to Clean-Up Hazardous Materials in accordance with all applicable laws. If, within thirty (30) days after receiving a copy of such Environmental Report, Tenant fails either (a) to complete such Clean-up, or (b) with respect to any Clean-up that cannot be completed within such thirty-day period, fails to proceed with diligence to prepare the Clean-up plan and complete the Clean-up as promptly as practicable, then Landlord shall have the right, but not the obligation, and without waiving any other rights under this Lease, to carry out any Clean-up recommended by the Environmental Report or required by any governmental authority having jurisdiction over the Premises, and recover all of the costs and expenses thereof from Tenant as Additional Rent, payable within ten (10) days after receipt of written demand therefor.

5.3.4.2 **No Rent Abatement**. Tenant shall continue to pay all Rent due or accruing under this Lease during any Clean-up, and shall not be entitled to any reduction, offset or deferral of any Base Rent or Additional Rent due or accruing under this Lease during any such Clean-up.

5.3.4.3 **Surrender of Premises**. Tenant shall complete any Clean-up prior to surrender of the Premises upon the expiration or earlier termination of this Lease. Tenant shall obtain and deliver to Landlord a letter or other written determination from the overseeing governmental authority confirming that the Clean-up has been completed in accordance with all requirements of such governmental authority and that no further response action of any kind is required for the unrestricted use of the Premises ("**Closure Letter**"). Upon the expiration or earlier termination of this Lease, Tenant shall also be obligated to close all permits obtained in connection with Hazardous Materials used by Tenant or Tenant's Agents in accordance with applicable laws.

5.3.4.4 **Failure to Timely Clean-Up**. Should any Clean-up for which Tenant is responsible not be completed, or should Tenant not receive the Closure Letter and any governmental approvals required under Environmental Laws in conjunction with such Clean-up prior to the expiration or earlier termination of this Lease, then, commencing on the later of the termination of this Lease and three (3) business days after Landlord's delivery of notice of such failure and that it elects to treat such failure as a holdover, Tenant shall be liable to Landlord as a holdover tenant (as more particularly provided in **Article 16**) until Tenant has fully complied with its obligations under this **Section 5.3**.

5.3.5 **Confidentiality**. Unless compelled to do so by applicable law, Tenant agrees that Tenant shall not disclose, discuss, disseminate or copy any information, data, findings, communications, conclusions and reports regarding the environmental condition of the Premises to any Person (other than Tenant's consultants, attorneys, property managers, employees, shareholders and potential and actual investors, lenders, business and merger partners, subtenants and assignees that have a need to know such information), including any governmental authority, without the prior written consent of Landlord. In the event Tenant reasonably believes that disclosure is compelled by applicable law, it shall provide Landlord ten (10) days' advance notice of disclosure of confidential information so that Landlord may attempt to obtain a protective order. Tenant may additionally release such information to bona fide prospective purchasers or lenders, subject to any such parties' written agreement to be bound by the terms of this **Section 5.3**.

5.3.6 **Copies of Environmental Reports**. Within thirty (30) days of receipt thereof, Tenant shall provide Landlord with a copy of any and all environmental assessments, audits, studies and reports regarding Tenant's activities with respect to the Premises, or ground water beneath the Land, or the environmental condition or Clean-up thereof. Tenant shall be obligated to provide Landlord with a copy of such materials without regard to whether such materials are generated by Tenant or prepared for Tenant, or how Tenant comes into possession of such materials.

5.3.7 **Signs, Response Plans, Etc**. Tenant shall be responsible for posting on the Premises any signs required under applicable Environmental Laws with respect to the use of Hazardous Materials by Tenant or Tenant's Agents. Tenant shall also complete and file any business response plans or inventories required by any applicable laws. Tenant shall concurrently file a copy of any such business response plan or inventory with Landlord.

5.3.8 **Survival**. Each covenant, agreement, representation, warranty and indemnification made by Tenant set forth in this **Section 5.3** shall survive the expiration or earlier termination of this Lease and shall remain effective until all of Tenant's obligations under this **Section 5.3** have been completely performed and satisfied.

6. SERVICES AND UTILITIES.

6.1 **In General**. Landlord will be responsible, at Tenant's sole cost and expense (subject to the terms of Section 4.2.4, above), for the furnishing of heating, ventilation and air-conditioning, electricity, water, and interior Building security services to the Premises. Landlord shall not provide janitorial or telephone services for the Premises. Tenant shall be solely responsible for performing all janitorial services and other cleaning of the Premises, all in compliance with applicable laws. The janitorial and cleaning of the Premises shall be adequate to maintain the Premises in a manner consistent with First Class Life Sciences Projects.

Tenant shall cooperate fully with Landlord at all times and abide by all reasonable regulations and requirements that Landlord may reasonably prescribe for the proper functioning and protection of the HVAC, electrical, mechanical and plumbing systems. Provided that Landlord agrees to provide and maintain and keep in continuous service utility connections to the Project, including electricity, water and sewage connections, Landlord shall have no obligation to provide any services or utilities to the Building, including, but not limited to heating, ventilation and air-conditioning, electricity, water, telephone, janitorial and interior Building security services, except as set forth in this Section 6.1, above.

6.2 **Tenant Payment of Utilities Costs**. After the Lease Commencement Date, to the extent that any utilities (including without limitation, electricity, gas, sewer and water) to the Building are separately metered or sub-metered to the Premises, such utilities shall either be contracted for and paid directly by Tenant to the applicable utility provider, or reimbursed by Tenant to Landlord within thirty (30) days after billing. After the Lease Commencement Date, to the extent that any utilities (including without limitation, electricity, gas, sewer and water) to the Building are not separately metered to the Premises, then Tenant shall pay to Landlord, within thirty (30) days after billing, an equitable portion of the Building utility costs, based on Tenant's proportionate use thereof. In connection with the foregoing, Landlord shall install separate meters on the Building Systems as a part of Landlord's construction of the Base Building, and Tenant shall install separate meters on the systems installed in the Premises as part of the Tenant Improvements pursuant to the Work Letter.

6.3 **Interruption of Use**. Tenant agrees that Landlord shall not be liable for damages, by abatement of Rent or otherwise, for failure to furnish or delay in furnishing any service or utility (including, without limitation, telephone and telecommunication services, UPS services, or other laboratory services or utilities), or for any diminution in the quality or quantity thereof, when such failure or delay or diminution is occasioned, in whole or in part, by breakage, repairs, replacements, or improvements, by any strike, lockout or other labor trouble, by inability to secure electricity, gas, water, or other fuel at the Building or Project after reasonable effort to do so, by any riot or other dangerous condition, emergency, accident or casualty whatsoever, by act or default of Tenant or other parties, or by any other cause; and such failures or delays or diminution shall never be deemed to constitute an eviction or disturbance of Tenant's use and possession of the Premises or relieve Tenant from paying Rent or performing any of its obligations under this Lease. Notwithstanding the foregoing, Landlord may be liable for damages to the extent caused by the negligence or willful misconduct of Landlord or the Landlord Parties, provided that Landlord shall not be liable under any circumstances for injury to, or interference with, Tenant's business, including, without limitation, loss of profits, however occurring, through or in connection with or incidental to a failure to furnish any of the services or utilities as set forth in this Article 6.

6.4 **Energy Performance Disclosure Information**. Tenant hereby acknowledges that Landlord may be required to disclose certain information concerning the energy performance of the Building pursuant to California Public Resources Code Section 25402.10 and the regulations adopted pursuant thereto (collectively the "**Energy Disclosure Requirements**"). Tenant hereby acknowledges prior receipt of the Data Verification Checklist, as defined in the Energy Disclosure Requirements (the "**Energy Disclosure Information**"), and agrees that Landlord has timely complied in full with Landlord's obligations under the Energy Disclosure Requirements. Tenant acknowledges and agrees that (i) Landlord makes no representation or warranty regarding the energy performance of the Building or the accuracy or completeness of the Energy Disclosure Information, (ii) the Energy Disclosure Information is for the current occupancy and use of the Building and that the energy performance of the Building may vary depending on future occupancy and/or use of the Building, and (iii) Landlord shall have no liability to Tenant for any errors or omissions in the Energy Disclosure Information. If and to the extent not prohibited by applicable laws, Tenant hereby waives any right Tenant may have to receive the Energy Disclosure Information, including, without limitation, any right Tenant may have to terminate this Lease as a result of Landlord's failure to disclose such information. Further, Tenant hereby releases Landlord from any and all losses, costs, damages, expenses and/or liabilities relating to, arising out of and/or resulting from the Energy Disclosure Requirements, including, without limitation, any liabilities arising as a result of Landlord's failure to disclose the Energy Disclosure Information to Tenant prior to the execution of this Lease. Tenant's acknowledgment of the AS-IS condition of the Premises pursuant to the terms of this Lease shall be deemed to include the energy performance of the Building. Tenant further acknowledges that pursuant to the Energy Disclosure Requirements, Landlord may be required in the future to disclose information concerning Tenant's energy usage to certain third parties, including, without limitation, prospective purchasers, lenders and tenants of the Building (the "**Tenant Energy Use Disclosure**"). Tenant hereby (A) consents to all such Tenant Energy Use Disclosures, and (B) acknowledges that Landlord shall not be required to notify Tenant of any Tenant Energy Use Disclosure. Further, Tenant hereby releases Landlord from any and all losses, costs, damages, expenses and liabilities relating to, arising out of and/or resulting from any Tenant Energy Use Disclosure. The terms of this Section 6.3 shall survive the expiration or earlier termination of this Lease.

6.5 **Generator**. Commencing on the Lease Commencement Date, Tenant shall have the right to connect to the Building back-up generator, which Landlord shall install as part of Landlord's Work (the "**Generator**"), for Tenant's Share of the Generator's capacity to provide back-up generator services to the Premises. During the Lease Term, Landlord shall maintain the Generator in good condition and repair, and Tenant shall be responsible for a share of the costs of such maintenance and repair based on the proportion of the Generator capacity allocated to the Premises. Notwithstanding the foregoing, Landlord shall not be liable for any damages whatsoever resulting from any failure in operation of the Generator, or the failure of the Generator to provide suitable or adequate back-up power to the Premises, including but not limited to, loss of profits, loss of rents or other revenues, loss of business opportunity, loss of goodwill or loss of use, in each case, however occurring, or loss to inventory, scientific research, scientific experiments, laboratory animals, products, specimens, samples, and/or scientific, business, accounting and other records of every kind and description kept at the Premises and any and all income derived or derivable therefrom.

6.6 **Chemical Storage Room**. Tenant shall have the right to utilize storage space in the chemical storage room to be constructed by Landlord in the Building pursuant to **Schedule 1 to Exhibit B** (the "**Chemical Storage Room**"), for up to Tenant's Share of the Chemical Storage Room's storage capacity, provided that Tenant

shall be responsible for providing any equipment or modifications (e.g., (self-contained bunkers, dedicated exhaust, additional fire rating, etc.) to support Tenant's specific usage and Landlord shall demise by chain link fence Tenant's Share of the Chemical Storage Room. During the Lease Term, Landlord shall maintain the Chemical Storage Room in good condition and repair, and Tenant shall be responsible for a share of the costs of such maintenance and repair based on the proportion of the capacity of the Chemical Storage Room allocated to Tenant's use (subject to the provisions of Section 4.2.4 above). Notwithstanding the foregoing, Landlord shall not be liable for any damages whatsoever resulting from any failure in operation of the Chemical Storage Room, or the failure of the Chemical Storage Room to provide suitable or adequate storage of Tenant's chemicals, including but not limited to, loss of profits, loss of rents or other revenues, loss of business opportunity, loss of goodwill or loss of use, in each case, however occurring, or loss to inventory, scientific research, scientific experiments, laboratory animals, products, specimens, samples, and/or scientific, business, accounting and other records of every kind and description kept at the Chemical Storage Room or the Premises and any and all income derived or derivable therefrom.

7. REPAIRS.

7.1 **Tenant Repair Obligations**. Tenant shall, throughout the Term, at its sole cost and expense, maintain, repair or replace as required, the Premises in a good standard of maintenance, repair and replacement as required, and in good and sanitary condition, all in accordance with the standards of First Class Life Sciences Projects, except for the Landlord Repair Obligations, whether or not such maintenance, repair, replacement or improvement is required in order to comply with applicable Laws ("**Tenant's Repair Obligations**"), including without limitation, all electrical facilities and equipment, including lighting fixtures, lamps, fans and any exhaust equipment and systems, electrical motors and all other appliances and equipment of every kind and nature located in the Premises; all communications systems serving the Premises; all of Tenant's security systems in or about or serving the Premises; Tenant's signage; interior demising walls and partitions (including painting and wall coverings), equipment, floors. Tenant shall additionally be responsible, at Tenant's sole cost and expense, to furnish all expendables, including light bulbs, paper goods and soaps, used in the Premises.

7.2 **Landlord Repair Obligations**. Landlord shall be responsible, as a part of Operating Expenses, for repairs to and routine maintenance of the Building including without limitation: (1) exterior windows, window frames, window casements (including the repairing, resealing, cleaning and replacing of exterior windows); (2) exterior doors, door frames and door closers; (3) the Building (as opposed to the Premises) and Project plumbing, sewer, drainage, electrical, fire protection, life safety and security systems and equipment, existing heating, ventilation and air-conditioning systems, and all other mechanical and HVAC systems and equipment (collectively, the "**Building Systems**"), (4) the exterior glass, exterior walls, foundation and roof of the Building, the structural portions of the floors of the Building, including, without limitation, any painting, sealing, patching and waterproofing of exterior walls, and (5) repairs to the elevator in the Building and underground utilities, except to the extent that any such repairs are required due to the negligence or willful misconduct of Tenant (the "**Landlord Repair Obligations**"); provided, however, that if such repairs are due to the negligence or willful misconduct of Tenant, Landlord shall nevertheless make such repairs at Tenant's expense, or, if covered by Landlord's insurance, Tenant shall only be obligated to pay any deductible in connection therewith. Costs expended by Landlord in connection with the Landlord Repair Obligations shall be included in Operating Expenses to the extent allowed pursuant to the terms of Article 4, above. Landlord shall cooperate with Tenant to enforce any warranties that Landlord holds that could reduce Tenant's maintenance obligations under this Lease.

7.3 **Tenant's Right to Make Repairs**. Notwithstanding any provision to the contrary contained in this Lease, if Tenant provides written notice to Landlord of an event or circumstance which requires the action of Landlord under this Lease with respect to repair and/or maintenance required in the Premises, including repairs to the portions of the Building located within the Premises that are Landlord's responsibility under Section 7.4 (the "**Base Building**"), which event or circumstance with respect to the Base Building materially and adversely affects the conduct of Tenant's business from the Premises, and Landlord fails to commence corrective action within a reasonable period of time, given the circumstances, after the receipt of such notice, but in any event not later than thirty (30) days after receipt of said notice (unless Landlord's obligation cannot reasonably be performed within thirty (30) days, in which event Landlord shall be allowed additional time as is reasonably necessary to perform the obligation so long as Landlord begins performance within the initial thirty (30) days and diligently pursues performance to completion), or, in the event of an Emergency (as defined below), not later than five (5) business days after receipt of such notice, then Tenant shall have the right to undertake such actions as may be reasonably necessary to make such repairs if Landlord

thereafter fails to commence corrective action within five (5) business days following Landlord's receipt of a second written notice from Tenant specifying that Tenant will undertake such actions if Landlord fails to timely do so (provided that such notice shall include the following language in bold, capitalized text: "**IF LANDLORD FAILS TO COMMENCE THE REPAIRS DESCRIBED IN THIS LETTER WITHIN FIVE (5) BUSINESS DAYS FROM LANDLORD'S RECEIPT OF THIS LETTER, TENANT WILL PERFORM SUCH REPAIRS AT LANDLORD'S EXPENSE**"; provided, however, that in no event shall Tenant undertake any actions that could materially or adversely affect the Base Building. Notwithstanding the foregoing, in the event of an Emergency, no second written notice shall be required as long as Tenant advises Landlord in the first written notice of Tenant's intent to perform such Emergency repairs if Landlord does not commence the same within such five (5) business day period, utilizing the language required in second notices. If such action was required under the terms of this Lease to be taken by Landlord and was not commenced by Landlord within such five (5) business day period and thereafter diligently pursued to completion, then Tenant shall be entitled to prompt reimbursement by Landlord of the reasonable out-of-pocket third-party costs and expenses actually incurred by Tenant in taking such action. If Tenant undertakes such corrective actions pursuant to this Section 7.3, then (a) the insurance and indemnity provisions set forth in this Lease shall apply to Tenant's performance of such corrective actions, (b) Tenant shall proceed in accordance with all applicable laws, (c) Tenant shall retain to perform such corrective actions only such reputable contractors and suppliers as are duly licensed and qualified, (d) Tenant shall effect such repairs in a good and workmanlike and commercially reasonable manner, (e) Tenant shall use new or like new materials, and (f) Tenant shall take reasonable efforts to minimize any material interference or impact on the other tenants and occupants of the Building. Promptly following completion of any work taken by Tenant pursuant to the terms of this Section 7.5, Tenant shall deliver a detailed invoice of the work completed, the materials used and the costs relating thereto, and Landlord shall reimburse Tenant the amounts expended by Tenant in connection with such work, provided that Landlord shall have the right to object if Landlord claims that such action did not have to be taken by Landlord pursuant to the terms of this Lease or that the charges are excessive (in which case Landlord shall pay the amount it contends would not have been excessive). For purposes of this Section 7.5, an "**Emergency**" shall mean an event threatening immediate and material danger to people located in the Building or immediate, material damage to the Building, Base Building, or creating a realistic possibility of an immediate and material interference with, or immediate and material interruption of a material aspect of Tenant's business operations.

8. ADDITIONS AND ALTERATIONS.

8.1 **Landlord's Consent to Alterations**. Tenant may not make any improvements, alterations, additions or changes to the Premises or any mechanical, plumbing or HVAC facilities or systems pertaining to the Premises (collectively, the "**Alterations**") without first procuring the prior written consent of Landlord to such Alterations, which consent shall be requested by Tenant not less than ten (10) business days prior to the commencement thereof, and which consent shall not be unreasonably withheld by Landlord, provided it shall be deemed reasonable for Landlord to withhold its consent to any Alteration which adversely affects the structural portions or the systems or equipment of the Building or is visible from the exterior of the Building. Notwithstanding the foregoing, Tenant shall be permitted to make Alterations following ten (10) business days' notice to Landlord (as to Alterations costing more than $10,000 only), but without Landlord's prior consent, to the extent that such Alterations (i) do not affect the building systems or equipment (other than minor changes such as adding or relocating electrical outlets and thermostats), (ii) are not visible from the exterior of the Building, and (iii) cost less than $50,000.00 for a particular job of work. The construction of the Tenant Improvements to the Premises shall be governed by the terms of the Tenant Work Letter and not the terms of this Article 8.

8.2 **Manner of Construction**. Landlord may impose, as a condition of its consent to any and all Alterations or repairs of the Premises or about the Premises, such requirements as Landlord in its reasonable discretion may deem desirable, including, but not limited to, the requirement that upon Landlord's request, Tenant shall, at Tenant's expense, remove such Alterations upon the expiration or any early termination of the Lease Term. Tenant shall construct such Alterations and perform such repairs in a good and workmanlike manner, in conformance with any and all applicable federal, state, county or municipal laws, rules and regulations and pursuant to a valid building permit, issued by the city in which the Building is located (or other applicable governmental authority). Tenant shall not use (and upon notice from Landlord shall cease using) contractors, services, workmen, labor, materials or equipment that, in Landlord's reasonable judgment, would disturb labor harmony with the workforce or trades engaged in performing other work, labor or services in or about the Building or the Common Areas. Upon completion of any Alterations, Tenant shall deliver to Landlord final lien waivers from all contractors, subcontractors and materialmen

who performed such work. In addition to Tenant's obligations under Article 9 of this Lease, upon completion of any Alterations, Tenant agrees to cause a Notice of Completion to be recorded in the office of the Recorder of the County of San Mateo in accordance with Section 3093 of the Civil Code of the State of California or any successor statute, and Tenant shall deliver to the Project construction manager a reproducible copy of the "**as built**" drawings of the Alterations as well as all permits, approvals and other documents issued by any governmental agency in connection with the Alterations.

8.3 **Payment for Improvements**. In connection with any Alterations that affect the Building systems (other than minor changes such as adding or relocating electrical outlets and thermostats), or which have a cost in excess of $100,000, Tenant shall reimburse Landlord for Landlord's reasonable, actual, out-of-pocket costs and expenses actually incurred in connection with Landlord's review of such work.

8.4 **Construction Insurance**. In addition to the requirements of Article 10 of this Lease, in the event that Tenant makes any Alterations, prior to the commencement of such Alterations, Tenant shall provide Landlord with evidence that Tenant or Tenant's contractor carries "**Builder's All Risk**" insurance (to the extent that the cost of such work shall exceed $50,000) in an amount approved by Landlord covering the construction of such Alterations, and such other insurance as Landlord may reasonably require, it being understood and agreed that all of such Alterations shall be insured by Landlord pursuant to Article 10 of this Lease immediately upon completion thereof. In addition, Tenant's contractors and subcontractors shall be required to carry Commercial General Liability Insurance in an amount approved by Landlord and otherwise in accordance with the requirements of Article 10 of this Lease. In connection with Alterations with a cost in excess of $250,000, Landlord may, in its reasonable discretion, require Tenant to obtain a lien and completion bond or some alternate form of security satisfactory to Landlord in an amount sufficient to ensure the lien-free completion of such Alterations and naming Landlord as a co-obligee.

8.5 **Landlord's Property**. All Alterations, improvements, fixtures, equipment and/or appurtenances which may be installed or placed in or about the Premises, from time to time, shall be at the sole cost of Tenant and all Alterations and improvements, shall be and become the property of Landlord and remain in place at the Premises following the expiration or earlier termination of this Lease. Notwithstanding the foregoing, Landlord may, by written notice to Tenant given at the time it consents to an Alteration, require Tenant, at Tenant's expense, to remove any Alterations within the Premises and to repair any damage to the Premises and Building caused by such removal. If Tenant fails to complete such removal and/or to repair any damage caused by the removal of any Alterations, Landlord may do so and may charge the cost thereof to Tenant. Tenant hereby protects, defends, indemnifies and holds Landlord harmless from any liability, cost, obligation, expense or claim of lien in any manner relating to the installation, placement, removal or financing of any such Alterations, improvements, fixtures and/or equipment in, on or about the Premises, which obligations of Tenant shall survive the expiration or earlier termination of this Lease. Notwithstanding the foregoing, except to the extent the same are paid for by the Tenant Improvement Allowance, the items set forth in **Exhibit F** attached hereto (the "**Tenant's Property**") shall at all times be and remain Tenant's property. **Exhibit F** may be updated from time to time by agreement of the parties. Tenant may remove the Tenant's Property from the Premises at any time, provided that Tenant repairs all damage caused by such removal. Landlord shall have no lien or other interest in the Tenant's Property.

9. COVENANT AGAINST LIENS. Tenant shall keep the Project and Premises free from any liens or encumbrances arising out of the work performed, materials furnished or obligations incurred by or on behalf of Tenant, and shall protect, defend, indemnify and hold Landlord harmless from and against any claims, liabilities, judgments or costs (including, without limitation, reasonable attorneys' fees and costs) arising out of same or in connection therewith. Except as to Alterations as to which no notice is required under the second sentence of Section 8.1, Tenant shall give Landlord notice at least ten (10) business days prior to the commencement of any such work on the Premises (or such additional time as may be necessary under applicable laws) to afford Landlord the opportunity of posting and recording appropriate notices of non-responsibility (to the extent applicable pursuant to then applicable laws). Tenant shall remove any such lien or encumbrance by bond or otherwise within ten (10) business days after notice by Landlord, and if Tenant shall fail to do so, Landlord may pay the amount necessary to remove such lien or encumbrance, without being responsible for investigating the validity thereof.

10. INSURANCE.

10.1 **Indemnification and Waiver**. Except as provided in Section 10.5 or to the extent due to the negligence, willful misconduct or violation of this Lease by Landlord or the Landlord Parties, Tenant hereby assumes all risk of damage to property in, upon or about the Premises from any cause whatsoever (including, but not limited to, any personal injuries resulting from a slip and fall in, upon or about the Premises) and agrees that Landlord, its partners, subpartners and their respective officers, agents, servants, employees, and independent contractors (collectively, "**Landlord Parties**") shall not be liable for, and are hereby released from any responsibility for, any damage either to person or property or resulting from the loss of use thereof, which damage is sustained by Tenant or by other persons claiming through Tenant. Tenant shall indemnify, defend, protect, and hold harmless the Landlord Parties from any and all loss, cost, damage, expense and liability (including without limitation court costs and reasonable attorneys' fees) incurred in connection with or arising from any cause in, on or about the Premises (including, but not limited to, a slip and fall), any acts, omissions or negligence of Tenant or of any person claiming by, through or under Tenant, or of the contractors, agents, servants, employees, invitees, guests or licensees of Tenant or any such person, in, on or about the Project or any breach of the terms of this Lease, either prior to, during, or after the expiration of the Lease Term, provided that the terms of the foregoing indemnity and release shall not apply to the negligence or willful misconduct of Landlord or its agents, employees, contractors, licensees or invitees, or Landlord's violation of this Lease. Should Landlord be named as a defendant in any suit brought against Tenant in connection with or arising out of Tenant's occupancy of the Premises, Tenant shall pay to Landlord its costs and expenses incurred in such suit, including without limitation, its actual professional fees such as reasonable appraisers', accountants' and attorneys' fees. Notwithstanding anything to the contrary in this Lease, Landlord shall not be released or indemnified from, and shall indemnify, defend, protect and hold harmless Tenant from, all losses, damages, liabilities, claims, attorneys' fees, costs and expenses arising from the gross negligence or willful misconduct of Landlord or its agents, contractors, licensees or invitees, or a violation of Landlord's obligations or representations under this Lease. The provisions of this Section 10.1 shall survive the expiration or sooner termination of this Lease with respect to any claims or liability arising in connection with any event occurring prior to such expiration or termination.

10.2 **Tenant's Compliance With Landlord's Property Insurance**. Landlord shall insure the Building, Tenant Improvements and any Alterations during the Lease Term against loss or damage under an "all risk" property insurance policy. Such coverage shall be in such amounts, from such companies, and on such other terms and conditions, as Landlord may from time to time reasonably determine. Additionally, at the option of Landlord, such insurance coverage may include the risks of earthquakes and/or flood damage and additional hazards, a rental loss endorsement and one or more loss payee endorsements in favor of the holders of any mortgages or deeds of trust encumbering the interest of Landlord in the Building or the ground or underlying lessors of the Building, or any portion thereof. The costs of such insurance shall be included in Operating Expenses, subject to the terms of Section 4.2.4. Tenant shall, at Tenant's expense, comply with all insurance company requirements pertaining to the use of the Premises. If Tenant's conduct or use of the Premises causes any increase in the premium for such insurance policies then Tenant shall reimburse Landlord for any such increase. Tenant, at Tenant's expense, shall comply with all rules, orders, regulations or requirements of the American Insurance Association (formerly the National Board of Fire Underwriters) and with any similar body. Notwithstanding anything to the contrary in this Lease, Tenant shall not be required to comply with or cause the Premises to comply with any laws, rules, regulations or insurance requirements requiring the construction of alterations unless such compliance is necessitated solely due to Tenant's particular use of the Premises.

10.3 **Tenant's Insurance**. Tenant shall maintain the following coverages in the following amounts during the Lease Term (except Tenant shall carry the insurance described in Section 10.3.1 during any period in which it enters the Premises).

10.3.1 Commercial General Liability Insurance on an occurrence form covering the insured against claims of bodily injury and property damage (including loss of use thereof) arising out of Tenant's operations, and contractual liabilities including a contractual coverage for limits of liability (which limits may be met together with umbrella liability insurance) of not less than:

Bodily Injury and	$4,000,000 each occurrence
Property Damage Liability	$4,000,000 annual aggregate
Personal Injury Liability	$4,000,000 annual aggregate

10.3.2 Property Insurance covering all office furniture, business and trade fixtures, office and lab equipment, free-standing cabinet work, movable partitions, merchandise and all other items of Tenant's property on the Premises installed by, for, or at the expense of Tenant. Such insurance shall be written on an "**all risks**" of physical loss or damage basis, for the full replacement cost value (subject to reasonable deductible amounts) new without deduction for depreciation of the covered items and in amounts that meet any co-insurance clauses of the policies of insurance and shall include coverage for damage or other loss caused by fire or other peril including, but not limited to, vandalism and malicious mischief, theft, water damage (excluding flood), including sprinkler leakage, bursting or stoppage of pipes, and explosion, and providing business interruption coverage for a period of ninety (90) days.

10.3.3 Business Income Interruption for ninety (90) days plus Extra Expense insurance in such amounts as will reimburse Tenant for actual direct or indirect loss of earnings attributable to the risks outlined in Section 10.3.2 above.

10.3.4 Worker's Compensation and Employer's Liability or other similar insurance pursuant to all applicable state and local statutes and regulations. The policy shall include a waiver of subrogation in favor of Landlord, its employees, Lenders and any property manager or partners.

10.4 **Form of Policies**. The minimum limits of policies of insurance required of Tenant under this Lease shall in no event limit the liability of Tenant under this Lease. Such insurance shall (i) name Landlord, its subsidiaries and affiliates, its property manager (if any) and any other party the Landlord so specifies, as an additional insured on the liability insurance, including Landlord's managing agent, if any; (ii) be issued by an insurance company having a rating of not less than A-:VII in Best's Insurance Guide or which is otherwise acceptable to Landlord and authorized to do business in the State of California; and (iv) be primary insurance as to all claims thereunder and provide that any insurance carried by Landlord is excess and is non-contributing with any insurance required of Tenant. Tenant shall not cause said insurance to be canceled or coverage changed unless thirty (30) days' prior written notice shall have been given to Landlord and any mortgagee of Landlord (unless such cancellation is the result of non-payment of premiums, in which case note less than five (5) days' notice shall be provided). Tenant shall deliver said policy or policies or certificates thereof to Landlord on or before the Lease Commencement Date and at least ten (10) days before the expiration dates thereof. In the event Tenant shall fail to procure such insurance, or to deliver such policies or certificate, Landlord may, at its option, procure such policies for the account of Tenant, and the cost thereof shall be paid to Landlord within five (5) days after delivery to Tenant of bills therefor.

10.5 **Subrogation**. Landlord and Tenant hereby agree to look solely to, and seek recovery only from, their respective insurance carriers in the event of a property or business interruption loss to the extent that such coverage is agreed to be provided hereunder, notwithstanding the negligence of either party. Notwithstanding anything to the contrary in this Lease, the parties each hereby waive all rights and claims against each other for such losses, and waive all rights of subrogation of their respective insurers. The parties agree that their respective insurance policies do now, or shall, contain the waiver of subrogation.

10.6 **Additional Insurance Obligations**. Tenant shall carry and maintain during the entire Lease Term, at Tenant's sole cost and expense, increased amounts of the insurance required to be carried by Tenant pursuant to this Article 10 and such other reasonable types of insurance coverage and in such reasonable amounts covering the Premises and Tenant's operations therein, as may be reasonably requested by Landlord or Landlord's lender, but in no event in excess of the amounts and types of insurance then being required by landlords of buildings comparable to and in the vicinity of the Building.

10.7 **Construction Period**: The term "Construction Period" shall mean the period from the date of this Lease to the date that Landlord completes construction of the Landlord's Work (including any "**Additional Base Building Items**", as defined in Section 3(f) of the Tenant Work Letter), and Common Areas, regardless of the occurrence of any Tenant Delay and without regard to the effect of any provision of this Lease pursuant to which the Premises are deemed to be Ready for Occupancy in advance of its actual occurrence. Notwithstanding any provision of this Lease to the contrary (including **Exhibit B**), during the Construction Period only, the following provisions shall be applicable:

10.7.1 with respect to any indemnity obligation of Tenant arising at any time during the Construction Period only, (A) the term "Landlord Parties" shall mean and shall be limited to HCP Oyster Point III LLC, a Delaware limited liability company (or any entity that that succeeds to HCP Oyster Point III LLC's interest as Landlord under the Lease) and shall not include any other person or entity; provided, however, that Landlord may include in any claim owed by Tenant to it any amount which Landlord shall pay or be obligated to indemnify any other person or entity, and (B) any indemnity obligation shall be limited to losses caused by, or arising as a result of any act or failure to act of, Tenant or Tenant's employees, agents or contractors; and

10.7.2 during the Construction Period only, Tenant's liability under this Lease for Tenant's actions or failures to act under the Lease during the Construction Period, including, without limitation, (A) Tenant's indemnity obligations, plus (B) Base Rent and Additional Rent (as a consequence of Tenant Delay), plus (C) any and all other costs payable to Landlord or otherwise payable by Tenant under this Lease, which amount shall calculated to include (i) the accreted value of any payments previously made by Tenant plus (ii) the present value of the maximum amount that Tenant could be required to pay as of that point in time (whether or not construction is completed) discounted at Tenant's incremental borrowing rate used to classify the Lease under ASC 840 (FAS 13), shall be limited to 89.9% of Landlord's Project Costs determined as of the date of Landlord's claim for such amount owed by Tenant. As used herein, "**Landlord's Project Costs**" shall mean the amount capitalized in the Project by Landlord in accordance with GAAP, plus other costs related to the Project (including related site improvements and other Project costs) paid by Landlord to third parties other than lenders or owners of Landlord (excluding land acquisition costs and "Force Majeure Costs," as that term is defined below, but including land carrying costs, such as interest or ground rent incurred during the Construction Period, and including all other costs incurred by Landlord in connection with the development and construction of the Project);

10.7.3 "**Force Majeure Costs**" means the sum of (a) all costs and expenses that are incurred because the Building is damaged by a fire or other casualty event (including capitalized interest on such costs and expenses), less the amount of all insurance proceeds applied to restore the Building, and (b) any loss in fair market value of the Premises to the extent the same are not restored following a fire or other casualty event; and

10.7.4 the provisions of Section 21.1(H) of the Lease shall not apply during the Construction Period.

10.8 For the avoidance of doubt, Landlord and Tenant agree that:

10.8.1 no claim by Landlord for Tenant's repudiation of this Lease at any time shall be limited under this section; and

10.8.2 for any claim other than under Section 10.8.1 above, if during the Construction Period Landlord makes any claim for any anticipatory breach by Tenant of any obligation under this Lease owed to Landlord for any period after the Construction Period and the amount payable by Tenant for such claim is limited by the provisions of Section 10.7.2 above, the entire amount (to the extent not theretofore paid) shall be payable promptly after the Construction Period; and

10.8.3 following the end of the Construction Period, the terms of Section 10.7 shall be of no further force or effect.

11. DAMAGE AND DESTRUCTION.

11.1 **Repair of Damage to Premises by Landlord**. Tenant shall promptly notify Landlord of any damage to the Premises resulting from fire or any other casualty. If the Premises or any Common Areas serving or providing access to the Premises shall be damaged by fire or other casualty, Landlord shall promptly and diligently, subject to reasonable delays for insurance adjustment or other matters beyond Landlord's reasonable control, and subject to all other terms of this Article 11, restore the Premises and such Common Areas. Such restoration shall be

to substantially the same condition of the Premises and the Common Areas prior to the casualty, except for modifications required by zoning and building codes and other laws or any other modifications to the Common Areas deemed desirable by Landlord, which are consistent with the character of the Project, provided that access to the Premises shall not be materially impaired. Landlord shall not be liable for any inconvenience or annoyance to Tenant or its visitors, or injury to Tenant's business resulting in any way from such damage or the repair thereof; provided however, that if such fire or other casualty shall have damaged the Premises or Common Areas necessary to Tenant's occupancy, and the damaged portions of the Premises are not occupied by Tenant as a result thereof, then during the time and to the extent the Premises are unfit for occupancy, the Rent shall be abated in proportion to the ratio that the amount of rentable square feet of the Premises which is unfit for occupancy for the purposes permitted under this Lease bears to the total rentable square feet of the Premises.

11.2 **Landlord's Option to Repair**. Notwithstanding the terms of Section 11.1 of this Lease, Landlord may elect not to rebuild and/or restore the Premises, Building and/or Project, and instead terminate this Lease, by notifying Tenant in writing of such termination within sixty (60) days after the date of discovery of the damage, such notice to include a termination date giving Tenant sixty (60) days to vacate the Premises, but Landlord may so elect only if the Building shall be damaged by fire or other casualty or cause, and one or more of the following conditions is present: (i) in Landlord's reasonable judgment, repairs cannot reasonably be completed within one (1) year after the date of discovery of the damage (when such repairs are made without the payment of overtime or other premiums); (ii) the damage is due to a risk that Landlord is not required to insure under this Lease, and the cost of restoration exceed five percent (5%) of the replacement cost of the Building (unless Tenant agrees to pay any uninsured amount in excess of such five percent (5%)); or (iii) the damage occurs during the last twelve (12) months of the Lease Term and will take more than sixty (60) days to restore; provided, however, that if Landlord does not elect to terminate this Lease pursuant to Landlord's termination right as provided above, and the repairs cannot, in the reasonable opinion of Landlord, be completed within eight (8) months days after the date of discovery of the damage (or are not in fact completed within nine (9) months after the date of discovery of the damage), Tenant may elect, no earlier than sixty (60) days after the date of the damage and not later than ninety (90) days after the date of such damage, or within thirty (30) days after such repairs are not timely completed, to terminate this Lease by written notice to Landlord effective as of the date specified in the notice, which date shall not be less than thirty (30) days nor more than sixty (60) days after the date such notice is given by Tenant.

11.3 **Waiver of Statutory Provisions**. The provisions of this Lease, including this Article 11, constitute an express agreement between Landlord and Tenant with respect to any and all damage to, or destruction of, all or any part of the Premises, the Building or the Project, and any statute or regulation of the State of California, including, without limitation, Sections 1932(2) and 1933(4) of the California Civil Code, with respect to any rights or obligations concerning damage or destruction in the absence of an express agreement between the parties, and any other statute or regulation, now or hereafter in effect, shall have no application to this Lease or any damage or destruction to all or any part of the Premises, the Building or the Project.

12. NONWAIVER. No provision of this Lease shall be deemed waived by either party hereto unless expressly waived in a writing signed thereby. The waiver by either party hereto of any breach of any term, covenant or condition herein contained shall not be deemed to be a waiver of any subsequent breach of same or any other term, covenant or condition herein contained. The subsequent acceptance of Rent hereunder by Landlord shall not be deemed to be a waiver of any preceding breach by Tenant of any term, covenant or condition of this Lease, other than the failure of Tenant to pay the particular Rent so accepted, regardless of Landlord's knowledge of such preceding breach at the time of acceptance of such Rent. No acceptance of a lesser amount than the Rent herein stipulated shall be deemed a waiver of Landlord's right to receive the full amount due, nor shall any endorsement or statement on any check or payment or any letter accompanying such check or payment be deemed an accord and satisfaction, and Landlord may accept such check or payment without prejudice to Landlord's right to recover the full amount due. No receipt of monies by Landlord from Tenant after the termination of this Lease shall in any way alter the length of the Lease Term or of Tenant's right of possession hereunder, or after the giving of any notice shall reinstate, continue or extend the Lease Term or affect any notice given Tenant prior to the receipt of such monies, it being agreed that after the service of notice or the commencement of a suit, or after final judgment for possession of the Premises, Landlord may receive and collect any Rent due, and the payment of said Rent shall not waive or affect said notice, suit or judgment.

13. CONDEMNATION. If the whole or any part of the Premises shall be taken by power of eminent domain or condemned by any competent authority for any public or quasi-public use or purpose, or if any adjacent property

or street shall be so taken or condemned, or reconfigured or vacated by such authority in such manner as to require the use or reconstruction of any part of the Premises, or if Landlord shall grant a deed or other instrument in lieu of such taking by eminent domain or condemnation, Landlord shall have the option to terminate this Lease effective as of the date possession is required to be surrendered to the authority. Tenant shall not because of such taking assert any claim against Landlord or the authority for any compensation because of such taking and Landlord shall be entitled to the entire award or payment in connection therewith, except that Tenant shall have the right to file any separate claim available to Tenant for any taking of Tenant's personal property and fixtures belonging to Tenant and removable by Tenant upon expiration of the Lease Term pursuant to the terms of this Lease, for moving expenses, for the unamortized value of any improvements paid for by Tenant and for the Lease "bonus value", so long as such claims are payable separately to Tenant. All Rent shall be apportioned as of the date of such termination. If any part of the Premises shall be taken, and this Lease shall not be so terminated, the Rent shall be proportionately abated. Tenant hereby waives any and all rights it might otherwise have pursuant to Section 1265.130 of The California Code of Civil Procedure. Notwithstanding anything to the contrary contained in this Article 13, in the event of a temporary taking of all or any portion of the Premises for a period of one hundred and eighty (180) days or less, then this Lease shall not terminate but the Base Rent and the Additional Rent shall be abated for the period of such taking in proportion to the ratio that the amount of rentable square feet of the Premises taken bears to the total rentable square feet of the Premises. Landlord shall be entitled to receive the entire award made in connection with any such temporary taking.

14. ASSIGNMENT AND SUBLETTING.

14.1 **Transfers**. Tenant shall not, without the prior written consent of Landlord, assign, mortgage, pledge, hypothecate, encumber, or permit any lien to attach to, or otherwise transfer, this Lease or any interest hereunder, permit any assignment, or other transfer of this Lease or any interest hereunder by operation of law, sublet the Premises or any part thereof, or enter into any license or concession agreements or otherwise permit the occupancy or use of the Premises or any part thereof by any persons other than Tenant and its employees and contractors (all of the foregoing are hereinafter sometimes referred to collectively as "**Transfers**" and any person to whom any Transfer is made or sought to be made is hereinafter sometimes referred to as a "**Transferee**"). If Tenant desires Landlord's consent to any Transfer, Tenant shall notify Landlord in writing, which notice (the "**Transfer Notice**") shall include (i) the proposed effective date of the Transfer, which shall not be less than thirty (30) days nor more than one hundred eighty (180) days after the date of delivery of the Transfer Notice, (ii) a description of the portion of the Premises to be transferred (the "**Subject Space**"), (iii) all of the terms of the proposed Transfer and the consideration therefor, including calculation of the "**Transfer Premium**", as that term is defined in Section 14.3 below, in connection with such Transfer, the name and address of the proposed Transferee, and a copy of all existing executed and/or proposed documentation pertaining to the proposed Transfer, and (iv) current financial statements of the proposed Transferee certified by an officer, partner or owner thereof, and any other information reasonably required by Landlord which will enable Landlord to determine the financial responsibility, character, and reputation of the proposed Transferee, nature of such Transferee's business and proposed use of the Subject Space. Any Transfer made without Landlord's prior written consent shall, at Landlord's option, be null, void and of no effect, and shall, at Landlord's option, constitute a default by Tenant under this Lease. Whether or not Landlord consents to any proposed Transfer, Tenant shall pay Landlord's reasonable review and processing fees, as well as any reasonable professional fees (including, without limitation, attorneys', accountants', architects', engineers' and consultants' fees) incurred by Landlord (not to exceed $3,500 in the aggregate for any particular Transfer), within thirty (30) days after written request by Landlord.

14.2 **Landlord's Consent**. Landlord shall not unreasonably withhold or delay its consent to any proposed Transfer of the Subject Space to the Transferee on the terms specified in the Transfer Notice. Without limitation as to other reasonable grounds for withholding consent, the parties hereby agree that it shall be reasonable under this Lease and under any applicable law for Landlord to withhold consent to any proposed Transfer where one or more of the following apply:

14.2.1 The Transferee is of a character or reputation or engaged in a business which is not consistent with the quality of the Building or the Project;

14.2.2 The Transferee is either a governmental agency or instrumentality thereof;

14.2.3 The Transferee is not a party of reasonable financial worth and/or financial stability in light of the responsibilities to be undertaken in connection with the Transfer on the date consent is requested; or

14.2.4 The proposed Transfer would cause a violation of another lease for space in the Project, or would give an occupant of the Project a right to cancel its lease.

If Landlord consents to any Transfer pursuant to the terms of this Section 14.2 (and does not exercise any recapture rights Landlord may have under Section 14.4 of this Lease), Tenant may within six (6) months after Landlord's consent, but not later than the expiration of said six-month period, enter into such Transfer of the Premises or portion thereof, upon substantially the same terms and conditions as are set forth in the Transfer Notice furnished by Tenant to Landlord pursuant to Section 14.1 of this Lease, provided that if there are any changes in the terms and conditions from those specified in the Transfer Notice such that Landlord would initially have been entitled to refuse its consent to such Transfer under this Section 14.2, Tenant shall again submit the Transfer to Landlord for its approval and other action under this Article 14 (including Landlord's right of recapture, if any, under Section 14.4 of this Lease). Notwithstanding anything to the contrary in this Lease, if Tenant or any proposed Transferee claims that Landlord has unreasonably withheld or delayed its consent under Section 14.2 or otherwise has breached or acted unreasonably under this Article 14, their sole remedies shall be a suit for contract damages (other than damages for injury to, or interference with, Tenant's business including, without limitation, loss of profits, however occurring) or declaratory judgment and an injunction for the relief sought, and Tenant hereby waives all other remedies, including, without limitation, any right at law or equity to terminate this Lease, on its own behalf and, to the extent permitted under all applicable laws, on behalf of the proposed Transferee.

14.3 **Transfer Premium**. If Landlord consents to a Transfer, as a condition thereto which the parties hereby agree is reasonable, Tenant shall pay to Landlord fifty percent (50%) of any "**Transfer Premium**," as that term is defined in this Section 14.3, received by Tenant from such Transferee. "**Transfer Premium**" shall mean all rent, additional rent or other consideration payable by such Transferee in connection with the Transfer in excess of the Rent and Additional Rent payable by Tenant under this Lease during the term of the Transfer on a per rentable square foot basis if less than all of the Premises is transferred, and after deduction of (i) any costs of improvements made to the Subject Space in connection with such Transfer, (ii) brokerage commissions paid in connection with such Transfer, and (iii) reasonable legal fees incurred in connection with such Transfer. "**Transfer Premium**" shall also include, but not be limited to, key money, bonus money or other cash consideration paid by Transferee to Tenant in connection with such Transfer, and any payment in excess of fair market value for services rendered by Tenant to Transferee or for assets, fixtures, inventory, equipment, or furniture transferred by Tenant to Transferee in connection with such Transfer. The determination of the amount of Landlord's applicable share of the Transfer Premium shall be made on a monthly basis as rent or other consideration is received by Tenant under the Transfer.

14.4 **Landlord's Option as to Subject Space**. Notwithstanding anything to the contrary contained in this Article 14, in the event Tenant contemplates a Transfer other than to a Permitted Transferee which, together with all prior Transfers then remaining in effect, would cause fifty percent (50%) or more of the Premises to be Transferred for more than fifty percent (50%) of the then remaining Lease Term (taking into account any extension of the Lease Term which has irrevocably exercised by Tenant), Tenant shall give Landlord notice (the "**Intention to Transfer Notice**") of such contemplated Transfer (whether or not the contemplated Transferee or the terms of such contemplated Transfer have been determined). The Intention to Transfer Notice shall specify the portion of and amount of rentable square feet of the Premises which Tenant intends to Transfer in the subject Transfer (the "**Contemplated Transfer Space**"), the contemplated date of commencement of the Contemplated Transfer (the "**Contemplated Effective Date**"), and the contemplated length of the term of such contemplated Transfer. Thereafter, Landlord shall have the option, by giving written notice to Tenant within thirty (30) days after receipt of any Intention to Transfer Notice, to recapture the Contemplated Transfer Space. Such recapture shall cancel and terminate this Lease with respect to such Contemplated Transfer Space as of the Contemplated Effective Date. In the event of a recapture by Landlord, if this Lease shall be canceled with respect to less than the entire Premises, the Rent reserved herein shall be prorated on the basis of the number of rentable square feet retained by Tenant in proportion to the number of rentable square feet contained in the Premises, and this Lease as so amended shall continue thereafter in full force and effect, and upon request of either party, the parties shall execute written confirmation of the same. If Landlord declines, or fails to elect in a timely manner, to recapture such Contemplated Transfer Space under this Section 14.4, then, subject to the other terms of this Article 14, for a period of nine (9) months (the "**Nine Month Period**") commencing on the last day of such thirty (30) day period, Landlord shall not have any right to recapture the Contemplated Transfer Space with respect to any Transfer made during the Nine Month Period, provided that any such Transfer is substantially on the terms set forth in the Intention to Transfer Notice, and provided further that any such Transfer shall be subject to the remaining terms of this Article 14. If such a Transfer is not so consummated within the Nine Month Period (or if a

Transfer is so consummated, then upon the expiration of the term of any Transfer of such Contemplated Transfer Space consummated within such Nine Month Period), Tenant shall again be required to submit a new Intention to Transfer Notice to Landlord with respect any contemplated Transfer, as provided above in this Section 14.4. Tenant shall not be required to provide a separate Intention to Transfer Notice and Tenant's request for Landlord's consent to a Transfer shall satisfy Tenant's obligations in this Section 14.4.

14.5 **Effect of Transfer**. If Landlord consents to a Transfer, (i) the terms and conditions of this Lease shall in no way be deemed to have been waived or modified, (ii) such consent shall not be deemed consent to any further Transfer by either Tenant or a Transferee, (iii) Tenant shall deliver to Landlord, promptly after execution, an original executed copy of all documentation pertaining to the Transfer in form reasonably acceptable to Landlord, (iv) Tenant shall furnish upon Landlord's request a complete statement, certified by an independent certified public accountant, or Tenant's chief financial officer, setting forth in detail the computation of any Transfer Premium Tenant has derived and shall derive from such Transfer, and (v) no Transfer relating to this Lease or agreement entered into with respect thereto, whether with or without Landlord's consent, shall relieve Tenant or any guarantor of the Lease from any liability under this Lease, including, without limitation, in connection with the Subject Space. Landlord or its authorized representatives shall have the right at all reasonable times to audit the books, records and papers of Tenant relating to any Transfer, and shall have the right to make copies thereof. If the Transfer Premium respecting any Transfer shall be found understated, Tenant shall, within thirty (30) days after demand, pay the deficiency, and if understated by more than two percent (2%), Tenant shall pay Landlord's costs of such audit.

14.6 **Additional Transfers**. For purposes of this Lease, the term "**Transfer**" shall also include if Tenant is a partnership, the withdrawal or change, voluntary, involuntary or by operation of law, of fifty percent (50%) or more of the partners, or transfer of fifty percent (50%) or more of partnership interests, within a twelve (12)-month period, or the dissolution of the partnership without immediate reconstitution thereof.

14.7 **Occurrence of Default**. Any Transfer hereunder shall be subordinate and subject to the provisions of this Lease, and if this Lease shall be terminated during the term of any Transfer, Landlord shall have the right to: (i) treat such Transfer as cancelled and repossess the Subject Space by any lawful means, or (ii) require that such Transferee attorn to and recognize Landlord as its landlord under any such Transfer. If Tenant shall be in default under this Lease, Landlord is hereby irrevocably authorized, as Tenant's agent and attorney-in-fact, to direct any Transferee to make all payments under or in connection with the Transfer directly to Landlord (which Landlord shall apply towards Tenant's obligations under this Lease) until such default is cured. Such Transferee shall rely on any representation by Landlord that Tenant is in default hereunder, without any need for confirmation thereof by Tenant. Upon any assignment, the assignee shall assume in writing all obligations and covenants of Tenant thereafter to be performed or observed under this Lease. No collection or acceptance of rent by Landlord from any Transferee shall be deemed a waiver of any provision of this Article 14 or the approval of any Transferee or a release of Tenant from any obligation under this Lease, whether theretofore or thereafter accruing. In no event shall Landlord's enforcement of any provision of this Lease against any Transferee be deemed a waiver of Landlord's right to enforce any term of this Lease against Tenant or any other person. If Tenant's obligations hereunder have been guaranteed, Landlord's consent to any Transfer shall not be effective unless the guarantor also consents to such Transfer.

14.8 **Non-Transfers**. Notwithstanding anything to the contrary contained in this Article 14, (i) an assignment or subletting of all or a portion of the Premises to an affiliate of Tenant (an entity which is controlled by, controls, or is under common control with, Tenant), (ii) an assignment of the Premises to an entity which acquires all or substantially all of the assets or interests (partnership, stock or other) of Tenant, (iii) an assignment of the Premises to an entity which is the resulting entity of a merger or consolidation of Tenant with another entity, or (iv) a sale of corporate shares of capital stock in Tenant in connection with an initial public offering of Tenant's stock on a nationally-recognized stock exchange (collectively, a "**Permitted Transferee**"), shall not be deemed a Transfer under this Article 14, provided that (A) Tenant notifies Landlord of any such assignment or sublease and promptly supplies Landlord with any documents or information requested by Landlord regarding such assignment or sublease or such affiliate, (B) such assignment or sublease is not a subterfuge by Tenant to avoid its obligations under this Lease, (C) such Permitted Transferee shall be of a character and reputation consistent with the quality of the Building, and (D) such Permitted Transferee described in subpart (ii) or (iii) above shall have a tangible net worth (not including goodwill as an asset) computed in accordance with generally accepted accounting principles ("**Net Worth**") at least equal to the Net Worth of Tenant on the day immediately preceding the effective date of such assignment or sublease. An assignee of Tenant's entire interest that is also a Permitted Transferee may also be known as a "**Permitted**

Assignee". "**Control**," as used in this Section 14.8, shall mean the ownership, directly or indirectly, of at least fifty-one percent (51%) of the voting securities of, or possession of the right to vote, in the ordinary direction of its affairs, of at least fifty-one percent (51%) of the voting interest in, any person or entity. No such permitted assignment or subletting shall serve to release Tenant from any of its obligations under this Lease.

14.9 **Pre-Approved Assignee**. In addition to the foregoing and consistent with the terms of Section 14.8 subparts (A) – (C) above, Landlord and Tenant hereby acknowledge and agree that Original Tenant shall have the one-time right to assign its interest in this Lease without Landlord's additional consent or being subject to the terms of Sections 14.1-14.4 above, to an entity in which Tenant owns at least fifty percent (50%) of the preferred shares and which entity has closed an equity financing with a current and future commitment of at least Thirty Million Dollars ($30,000,000) in cash or cash equivalents, as determined in accordance with generally accepted accounting practices, consistently applied ("**GAAP**") and as evidenced by reasonable supporting documentation provided to Landlord. Such assignment shall be pursuant to the assignment form attached hereto as Exhibit I or another materially consistent form prepared by Tenant and approved by Landlord, which approval shall not be unreasonably withheld or delayed. The assignee pursuant to such an assignment shall be considered a "Permitted Assignee" hereunder. Upon such assignment pursuant to the express terms of this Section 14.9, notwithstanding Sections 14.5(v) and 14.8 above, Tenant shall be released by Landlord from all liability under this Lease.

15. SURRENDER OF PREMISES; OWNERSHIP AND REMOVAL OF TRADE FIXTURES.

15.1 **Surrender of Premises**. No act or thing done by Landlord or any agent or employee of Landlord during the Lease Term shall be deemed to constitute an acceptance by Landlord of a surrender of the Premises unless such intent is specifically acknowledged in writing by Landlord. The delivery of keys to the Premises to Landlord or any agent or employee of Landlord shall not constitute a surrender of the Premises or effect a termination of this Lease, whether or not the keys are thereafter retained by Landlord, and notwithstanding such delivery Tenant shall be entitled to the return of such keys at any reasonable time upon request until this Lease shall have been properly terminated. The voluntary or other surrender of this Lease by Tenant, whether accepted by Landlord or not, or a mutual termination hereof, shall not work a merger, and at the option of Landlord shall operate as an assignment to Landlord of all subleases or subtenancies affecting the Premises or terminate any or all such sublessees or subtenancies.

15.2 **Removal of Tenant Property by Tenant**. Upon the expiration of the Lease Term, or upon any earlier termination of this Lease, Tenant shall, subject to the provisions of this Article 15, quit and surrender possession of the Premises to Landlord in as good order and condition as when Tenant took possession and as thereafter improved by Landlord and/or Tenant, reasonable wear and tear, damage caused by casualty, repairs required as a result of condemnation, and repairs which are specifically made the responsibility of Landlord hereunder excepted. Upon such expiration or termination, Tenant shall, without expense to Landlord, remove or cause to be removed from the Premises all debris and rubbish, and such items of furniture, equipment, free-standing cabinet work, movable partitions (but not demountable walls) and other articles of personal property owned by Tenant or installed or placed by Tenant at its expense in the Premises, and such similar articles of any other persons claiming under Tenant, as Landlord may, in its sole discretion, require to be removed, and Tenant shall repair at its own expense all damage to the Premises and Building resulting from such removal.

15.3 **Environmental Assessment**. In connection with its surrender of the Premises, Tenant shall submit to Landlord, at least fifteen (15) days prior to the expiration date of this Lease (or in the event of an earlier termination of this Lease, as soon as reasonably possible following such termination), an environmental Assessment of the Premises by a competent and experienced environmental engineer or engineering firm reasonably satisfactory to Landlord (pursuant to a contract approved by Landlord and providing that Landlord can rely on the Environmental Assessment). If such Environmental Assessment reveals that remediation or Clean-up is required under any Environmental Laws that Tenant is responsible for under this Lease, Tenant shall submit a remediation plan prepared by a recognized environmental consultant and shall be responsible for all costs of remediation and Clean-up, as more particularly provided in Section 5.3, above.

15.4 **Condition of the Building and Premises Upon Surrender**. In addition to the above requirements of this Article 15, upon the expiration of the Lease Term, or upon any earlier termination of this Lease, Tenant shall, surrender the Premises and Building with Tenant having complied with all of Tenant's obligations under this Lease,

including those relating to improvement, repair, maintenance, compliance with law, testing and other related obligations of Tenant set forth in Article 7 of this Lease. In the event that the Building and Premises shall be surrendered in a condition which does not comply with the terms of this Section 15.4, because Tenant failed to comply with its obligations set forth in Lease, then following thirty (30) days' notice to Tenant, during which thirty (30) day period Tenant shall have the right to cure such noncompliance, Landlord shall be entitled to expend all reasonable costs in order to cause the same to comply with the required condition upon surrender and Tenant shall immediately reimburse Landlord for all such costs upon notice and, commencing on the later of the termination of this Lease and three (3) business days after Landlord's delivery of notice of such failure and that it elects to treat such failure as a holdover, Tenant shall be deemed during the period that Tenant or Landlord, as the case may be, perform obligations relating to the Surrender Improvements to be in holdover under Article 16 of this Lease.

16. HOLDING OVER. If Tenant holds over after the expiration of the Lease Term or earlier termination thereof, with the express or implied consent of Landlord, such tenancy shall be from month-to-month only, and shall not constitute a renewal hereof or an extension for any further term. If Tenant holds over after the expiration of the Lease Term of earlier termination thereof, without the express or implied consent of Landlord, such tenancy shall be deemed to be a tenancy by sufferance only, and shall not constitute a renewal hereof or an extension for any further term. In either case, Base Rent shall be payable at a monthly rate equal to one hundred fifty percent (150%) of the Base Rent applicable during the last rental period of the Lease Term under this Lease. Such month-to-month tenancy or tenancy by sufferance, as the case may be, shall be subject to every other applicable term, covenant and agreement contained herein. Nothing contained in this Article 16 shall be construed as consent by Landlord to any holding over by Tenant, and Landlord expressly reserves the right to require Tenant to surrender possession of the Premises to Landlord as provided in this Lease upon the expiration or other termination of this Lease. The provisions of this Article 16 shall not be deemed to limit or constitute a waiver of any other rights or remedies of Landlord provided herein or at law. If Tenant fails to surrender the Premises upon the termination or expiration of this Lease, in addition to any other liabilities to Landlord accruing therefrom, Tenant shall protect, defend, indemnify and hold Landlord harmless from all loss, costs (including reasonable attorneys' fees) and liability resulting from such failure, including, without limiting the generality of the foregoing, any claims made by any succeeding tenant founded upon such failure to surrender and any lost profits to Landlord resulting therefrom.

17. ESTOPPEL CERTIFICATES. Within ten (10) business days following a request in writing by Landlord, Tenant shall execute, acknowledge and deliver to Landlord an estoppel certificate, which, as submitted by Landlord, shall be substantially in the form of **Exhibit D**, attached hereto (or such other form as may be reasonably required by any prospective mortgagee or purchaser of the Project, or any portion thereof), indicating therein any exceptions thereto that may exist at that time, and shall also contain any other information reasonably requested by Landlord or Landlord's mortgagee or prospective mortgagee. Any such certificate may be relied upon by any prospective mortgagee or purchaser of all or any portion of the Project. Tenant shall execute and deliver whatever other instruments may be reasonably required for such purposes. At any time during the Lease Term, in connection with a sale or financing of the Building by Landlord, Landlord may require Tenant to provide Landlord with its most recent annual financial statement and annual financial statements of the preceding two (2) years. Such statements shall be prepared in accordance with generally accepted accounting principles and, if such is the normal practice of Tenant, shall be audited by an independent certified public accountant. Landlord shall hold such statements confidential. Failure of Tenant to timely execute, acknowledge and deliver such estoppel certificate or other instruments shall constitute an acceptance of the Premises and an acknowledgment by Tenant that statements included in the estoppel certificate are true and correct, without exception.

18. SUBORDINATION. Landlord hereby represents and warrants to Tenant that the Project is not currently subject to any ground lease, or to the lien of any mortgage or deed of trust. This Lease shall be subject and subordinate to all future ground or underlying leases of the Building or Project and to the lien of any mortgage, trust deed or other encumbrances now or hereafter in force against the Building or Project or any part thereof, if any, and to all renewals, extensions, modifications, consolidations and replacements thereof, and to all advances made or hereafter to be made upon the security of such mortgages or trust deeds, unless the holders of such mortgages, trust deeds or other encumbrances, or the lessors under such ground lease or underlying leases, require in writing that this Lease be superior thereto. The subordination of this Lease to any such future ground or underlying leases of the Building or Project or to the lien of any mortgage, trust deed or other encumbrances, shall be subject to Tenant's receipt of a commercially reasonable subordination, non-disturbance, and attornment agreement in favor of Tenant. Tenant covenants and agrees in the event any proceedings are brought for the foreclosure of any such mortgage or deed in

lieu thereof (or if any ground lease is terminated), to attorn, without any deductions or set-offs whatsoever, to the lienholder or purchaser or any successors thereto upon any such foreclosure sale or deed in lieu thereof (or to the ground lessor), if so requested to do so by such purchaser or lienholder or ground lessor, and to recognize such purchaser or lienholder or ground lessor as the lessor under this Lease, provided such lienholder or purchaser or ground lessor shall agree to accept this Lease and not disturb Tenant's occupancy, so long as Tenant timely pays the rent and observes and performs the terms, covenants and conditions of this Lease to be observed and performed by Tenant. Landlord's interest herein may be assigned as security at any time to any lienholder. Tenant shall, within ten (10) days of request by Landlord, execute such further instruments or assurances as Landlord may reasonably deem necessary to evidence or confirm the subordination or superiority of this Lease to any such mortgages, trust deeds, ground leases or underlying leases. Tenant waives the provisions of any current or future statute, rule or law which may give or purport to give Tenant any right or election to terminate or otherwise adversely affect this Lease and the obligations of the Tenant hereunder in the event of any foreclosure proceeding or sale.

19. DEFAULTS; REMEDIES.

19.1 **Events of Default**. The occurrence of any of the following shall constitute a default of this Lease by Tenant:

19.1.1 Any failure by Tenant to pay any Rent or any other charge required to be paid under this Lease, or any part thereof, when due unless such failure is cured within five (5) business days after notice; or

19.1.2 Except where a specific time period is otherwise set forth for Tenant's performance in this Lease, in which event the failure to perform by Tenant within such time period shall be a default by Tenant under this Section 19.1.2, any failure by Tenant to observe or perform any other provision, covenant or condition of this Lease to be observed or performed by Tenant where such failure continues for thirty (30) days after written notice thereof from Landlord to Tenant; provided that if the nature of such default is such that the same cannot reasonably be cured within a thirty (30) day period, Tenant shall not be deemed to be in default if it diligently commences such cure within such period and thereafter diligently proceeds to rectify and cure such default; or

19.1.3 Abandonment or vacation of all or a substantial portion of the Premises by Tenant while Tenant is in default under the Lease; or

19.1.4 The failure by Tenant to observe or perform according to the provisions of Articles 5, 14, 17 or 18 of this Lease where such failure continues for more than five (5) business days after notice from Landlord.

19.2 **Remedies Upon Default**. Upon the occurrence of any event of default by Tenant, Landlord shall have, in addition to any other remedies available to Landlord at law or in equity (all of which remedies shall be distinct, separate and cumulative), the option to pursue any one or more of the following remedies, each and all of which shall be cumulative and nonexclusive, without any notice or demand whatsoever.

19.2.1 Terminate this Lease, in which event Tenant shall immediately surrender the Premises to Landlord, and if Tenant fails to do so, Landlord may, without prejudice to any other remedy which it may have for possession or arrearages in rent, enter upon and take possession of the Premises and expel or remove Tenant and any other person who may be occupying the Premises or any part thereof, without being liable for prosecution or any claim or damages therefor; and Landlord may recover from Tenant the following:

(i) The worth at the time of award of the unpaid rent which has been earned at the time of such termination; plus

(ii) The worth at the time of award of the amount by which the unpaid rent which would have been earned after termination until the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided; plus

(iii) The worth at the time of award of the amount by which the unpaid rent for the balance of the Lease Term after the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided; plus

(iv) Any other amount necessary to compensate Landlord for all the detriment proximately caused by Tenant's failure to perform its obligations under this Lease or which in the ordinary course of things would be likely to result therefrom, specifically including but not limited to, in each case to the extent allocable to the remaining Lease Term, brokerage commissions and advertising expenses incurred to obtain a new tenant, expenses of remodeling the Premises or any portion thereof for a new tenant, whether for the same or a different use, and any special concessions made to obtain a new tenant; and

(v) At Landlord's election, such other amounts in addition to or in lieu of the foregoing as may be permitted from time to time by applicable law.

The term "**rent**" as used in this Section 19.2 shall be deemed to be and to mean all sums of every nature required to be paid by Tenant pursuant to the terms of this Lease, whether to Landlord or to others. As used in Sections 19.2.1(i) and (ii), above, the "worth at the time of award" shall be computed by allowing interest at the rate set forth in Article 25 of this Lease, but in no case greater than the maximum amount of such interest permitted by law. As used in Section 19.2.1(iii) above, the "**worth at the time of award**" shall be computed by discounting such amount at the discount rate of the Federal Reserve Bank of San Francisco at the time of award plus one percent (1%).

19.2.2 Landlord shall have the remedy described in California Civil Code Section 1951.4 (lessor may continue lease in effect after lessee's breach and abandonment and recover rent as it becomes due, if lessee has the right to sublet or assign, subject only to reasonable limitations). Accordingly, if Landlord does not elect to terminate this Lease on account of any default by Tenant, Landlord may, from time to time, without terminating this Lease, enforce all of its rights and remedies under this Lease, including the right to recover all rent as it becomes due.

19.2.3 Landlord shall at all times have the rights and remedies (which shall be cumulative with each other and cumulative and in addition to those rights and remedies available under Sections 19.2.1 and 19.2.2, above, or any law or other provision of this Lease), without prior demand or notice except as required by applicable law, to seek any declaratory, injunctive or other equitable relief, and specifically enforce this Lease, or restrain or enjoin a violation or breach of any provision hereof.

19.3 **Subleases of Tenant**. If Landlord elects to terminate this Lease on account of any default by Tenant, as set forth in this Article 19, Landlord shall have the right to terminate any and all subleases, licenses, concessions or other consensual arrangements for possession entered into by Tenant and affecting the Premises or may, in Landlord's sole discretion, succeed to Tenant's interest in such subleases, licenses, concessions or arrangements. In the event of Landlord's election to succeed to Tenant's interest in any such subleases, licenses, concessions or arrangements, Tenant shall, as of the date of notice by Landlord of such election, have no further right to or interest in the rent or other consideration receivable thereunder.

19.4 **Efforts to Relet**. No re-entry, repairs, maintenance, changes, alterations and additions, appointment of a receiver to protect Landlord's interests hereunder, or any other action or omission by Landlord shall be construed as an election by Landlord to terminate this Lease or Tenant's right to possession, or to accept a surrender of the Premises, nor shall same operate to release Tenant in whole or in part from any of Tenant's obligations hereunder, unless express written notice of such intention is sent by Landlord to Tenant.

20. COVENANT OF QUIET ENJOYMENT. Landlord covenants that Tenant, on paying the Rent, charges for services and other payments herein reserved and on keeping, observing and performing all the other terms, covenants, conditions, provisions and agreements herein contained on the part of Tenant to be kept, observed and performed, shall, during the Lease Term, peaceably and quietly have, hold and enjoy the Premises subject to the terms, covenants, conditions, provisions and agreements hereof without interference by any persons lawfully claiming by or through Landlord. The foregoing covenant is in lieu of any other covenant express or implied.

21. LETTER OF CREDIT.

21.1 **Delivery of Letter of Credit**. Tenant shall deliver to Landlord, within ten (10) business days following Tenant's execution of this Lease, an unconditional, clean, irrevocable letter of credit (the "**L-C**") in the amount set forth in Section 8 of the Lease Summary (the "**L-C Amount**"), which L-C shall be issued by a money-center, solvent and nationally recognized bank (a bank which accepts deposits, maintains accounts, has a local San Francisco Bay Area office which will negotiate a letter of credit, and whose deposits are insured by the FDIC) reasonably acceptable to Landlord (such approved, issuing bank being referred to herein as the "**Bank**"), which Bank must have a rating from Standard and Poors Corporation of A- or better (or any equivalent rating thereto from any successor or substitute rating service selected by Lessor) and a letter of credit issuer rating from Moody's Investor Service of A3 or better (or any equivalent rating thereto from any successor rating agency thereto)) (collectively, the "**Bank's Credit Rating Threshold**"), and which L-C shall be in the form of **Exhibit H**, attached hereto, or another form reasonably acceptable to Landlord. Notwithstanding the foregoing, Landlord hereby approves First Republic Bank as the Bank. Tenant shall pay all expenses, points and/or fees incurred by Tenant in obtaining the L-C. The L-C shall (i) be "callable" at sight, irrevocable and unconditional, (ii) be maintained in effect, whether through renewal or extension, for the period commencing on the date of this Lease and continuing until the date (the "**L-C Expiration Date**") that is no less than sixty (60) days after the expiration of the Lease Term as the same may be extended, and Tenant shall deliver a new L-C or certificate of renewal or extension to Landlord at least thirty (30) days prior to the expiration of the L-C then held by Landlord, without any action whatsoever on the part of Landlord, (iii) be fully assignable by Landlord, its successors and assigns, (iv) permit partial draws and multiple presentations and drawings, and (v) be otherwise subject to the Uniform Customs and Practices for Documentary Credits (1993-Rev), International Chamber of Commerce Publication #500, or the International Standby Practices-ISP 98, International Chamber of Commerce Publication #590. Landlord, or its then managing agent, shall have the right to draw down an amount up to the face amount of the L-C if any of the following shall have occurred or be applicable: (A) such amount is due to Landlord under the terms and conditions of this Lease, and has not been paid within applicable notice and cure periods (or, if Landlord is prevented by law from providing notice, within the period for payment set forth in the Lease), or (B) Tenant has filed a voluntary petition under the U. S. Bankruptcy Code or any state bankruptcy code (collectively, "**Bankruptcy Code**"), or (C) an involuntary petition has been filed against Tenant under the Bankruptcy Code that is not dismissed within thirty (30) days, or (D) the Lease has been rejected, or is deemed rejected, under Section 365 of the U.S. Bankruptcy Code, following the filing of a voluntary petition by Tenant under the Bankruptcy Code, or the filing of an involuntary petition against Tenant under the Bankruptcy Code, or (E) the Bank has notified Landlord that the L-C will not be renewed or extended through the L-C Expiration Date, and Tenant has not provided a replacement L-C that satisfies the requirements of this Lease at least thirty (30) days prior to such expiration, or (F) Tenant is placed into receivership or conservatorship, or becomes subject to similar proceedings under Federal or State law, or (G) Tenant executes an assignment for the benefit of creditors, or (H) if (1) any of the Bank's (other than First Republic Bank) Fitch Ratings (or other comparable ratings to the extent the Fitch Ratings are no longer available) have been reduced below the Bank's Credit Rating Threshold, or (2) there is otherwise a material adverse change in the financial condition of the Bank, and Tenant has failed to provide Landlord with a replacement letter of credit, conforming in all respects to the requirements of this Article 21 (including, but not limited to, the requirements placed on the issuing Bank more particularly set forth in this Section 21.1 above), in the amount of the applicable L-C Amount, within ten (10) days following Landlord's written demand therefor (with no other notice or cure or grace period being applicable thereto, notwithstanding anything in this Lease to the contrary) (each of the foregoing being an "**L-C Draw Event**"). The L-C shall be honored by the Bank regardless of whether Tenant disputes Landlord's right to draw upon the L-C. In addition, in the event the Bank is placed into receivership or conservatorship by the Federal Deposit Insurance Corporation or any successor or similar entity, then, effective as of the date such receivership or conservatorship occurs, said L-C shall be deemed to fail to meet the requirements of this Article 21, and, within ten (10) days following Landlord's notice to Tenant of such receivership or conservatorship (the "**L-C FDIC Replacement Notice**"), Tenant shall replace such L-C with a substitute letter of credit from a different issuer (which issuer shall meet or exceed the Bank's Credit Rating Threshold and shall otherwise be acceptable to Landlord in its reasonable discretion) and that complies in all respects with the requirements of this Article 21. If Tenant fails to replace such L-C with such conforming, substitute letter of credit pursuant to the terms and conditions of this Section 21.1, then, notwithstanding anything in this Lease to the contrary, Landlord shall have the right to declare Tenant in default of this Lease for which there shall be no notice or grace or cure periods being applicable thereto (other than the aforesaid ten (10) day period). Tenant shall be responsible for the payment of any and all Tenant's and Bank's costs incurred with the review of any replacement L-C, which replacement is required pursuant to this Section or is otherwise requested by Tenant. In the event of an assignment by Tenant of its interest in the Lease (and

irrespective of whether Landlord's consent is required for such assignment), the acceptance of any replacement or substitute letter of credit by Landlord from the assignee shall be subject to Landlord's prior written approval, in Landlord's reasonable discretion, and the actual and reasonable attorney's fees incurred by Landlord in connection with such determination shall be payable by Tenant to Landlord within ten (10) days of billing.

21.2 **Application of L-C**. Tenant hereby acknowledges and agrees that Landlord is entering into this Lease in material reliance upon the ability of Landlord to draw upon the L-C upon the occurrence of any L-C Draw Event. In the event of any L-C Draw Event, Landlord may, but without obligation to do so, and without notice to Tenant (except in connection with an L-C Draw Event under Section 21.1(H) above), draw upon the L-C, in part or in whole, in the amount necessary to cure any such L-C Draw Event and/or to compensate Landlord for any and all damages of any kind or nature sustained or which Landlord reasonably estimates that it will sustain resulting from Tenant's breach or default of the Lease or other L-C Draw Event and/or to compensate Landlord for any and all damages arising out of, or incurred in connection with, the termination of this Lease, including, without limitation, those specifically identified in Section 1951.2 of the California Civil Code. The use, application or retention of the L-C, or any portion thereof, by Landlord shall not prevent Landlord from exercising any other right or remedy provided by this Lease or by any applicable law, it being intended that Landlord shall not first be required to proceed against the L-C, and such L-C shall not operate as a limitation on any recovery to which Landlord may otherwise be entitled. Tenant agrees and acknowledges that (i) the L-C constitutes a separate and independent contract between Landlord and the Bank, (ii) Tenant is not a third party beneficiary of such contract, (iii) Tenant has no property interest whatsoever in the L-C or the proceeds thereof, and (iv) in the event Tenant becomes a debtor under any chapter of the Bankruptcy Code, Tenant is placed into receivership or conservatorship, and/or there is an event of a receivership, conservatorship or a bankruptcy filing by, or on behalf of, Tenant, neither Tenant, any trustee, nor Tenant's bankruptcy estate shall have any right to restrict or limit Landlord's claim and/or rights to the L-C and/or the proceeds thereof by application of Section 502(b)(6) of the U. S. Bankruptcy Code or otherwise.

21.3 **Maintenance of L-C by Tenant**. If, as a result of any drawing by Landlord of all or any portion of the L-C, the amount of the L-C shall be less than the L-C Amount, Tenant shall, within five (5) days thereafter, provide Landlord with additional letter(s) of credit in an amount equal to the deficiency, and any such additional letter(s) of credit shall comply with all of the provisions of this Article 21. Tenant further covenants and warrants that it will neither assign nor encumber the L-C or any part thereof and that neither Landlord nor its successors or assigns will be bound by any such assignment, encumbrance, attempted assignment or attempted encumbrance. Without limiting the generality of the foregoing, if the L-C expires earlier than the L-C Expiration Date, Landlord will accept a renewal thereof (such renewal letter of credit to be in effect and delivered to Landlord, as applicable, not later than thirty (30) days prior to the expiration of the L-C), which shall be irrevocable and automatically renewable as above provided through the L-C Expiration Date upon the same terms as the expiring L-C or such other terms as may be acceptable to Landlord in its sole discretion. If Tenant exercises its option to extend the Lease Term pursuant to Section 2.2 of this Lease then, not later than thirty (30) days prior to the commencement of the Option Term, Tenant shall deliver to Landlord a new L C or certificate of renewal or extension evidencing the L-C Expiration Date as thirty (30) days after the expiration of the Option Term. However, if the L-C is not timely renewed, or if Tenant fails to maintain the L-C in the amount and in accordance with the terms set forth in this Article 21, Landlord shall have the right to present the L-C to the Bank in accordance with the terms of this Article 21, and the proceeds of the L-C may be applied by Landlord against any Rent payable by Tenant under this Lease that is not paid when due and/or to pay for all losses and damages that Landlord has suffered or that Landlord reasonably estimates that it will suffer as a result of any breach or default by Tenant under this Lease. In the event Landlord elects to exercise its rights as provided above, (I) any unused proceeds shall constitute the property of Landlord (and not Tenant's property or, in the event of a receivership, conservatorship, or a bankruptcy filing by, or on behalf of, Tenant, property of such receivership, conservatorship or Tenant's bankruptcy estate) and need not be segregated from Landlord's other assets, and (II) Landlord agrees to pay to Tenant within thirty (30) days after the L-C Expiration Date the amount of any proceeds of the L-C received by Landlord and not applied against any Rent payable by Tenant under this Lease that was not paid when due or used to pay for any losses and/or damages suffered by Landlord (or reasonably estimated by Landlord that it will suffer) as a result of any breach or default by Tenant under this Lease; provided, however, that if prior to the L-C Expiration Date a voluntary petition is filed by Tenant, or an involuntary petition is filed against Tenant by any of Tenant's creditors, under the Bankruptcy Code, then Landlord shall not be obligated to make such payment in the amount of the unused L-C proceeds until either all preference issues relating to payments under this Lease have been resolved in such bankruptcy or reorganization case or such bankruptcy or reorganization case has been dismissed. If Landlord draws on the L-C due to Tenant's failure to timely renew or provide a replacement L-C, such failure shall not be considered a default under this Lease and Landlord shall return such cash proceeds upon Tenant's presentation of a replacement L-C that satisfies the requirements of this Lease, subject to reasonable satisfaction of any preference risk to Landlord.

21.4 **Transfer and Encumbrance**. The L-C shall also provide that Landlord may, at any time and without notice to Tenant and without first obtaining Tenant's consent thereto, transfer (one or more times) all or any portion of its interest in and to the L-C to another party, person or entity, regardless of whether or not such transfer is from or as a part of the assignment by Landlord of its rights and interests in and to this Lease. In the event of a transfer of Landlord's interest in under this Lease, Landlord shall transfer the L-C, in whole or in part, to the transferee and thereupon Landlord shall, without any further agreement between the parties, be released by Tenant from all liability therefor, and it is agreed that the provisions hereof shall apply to every transfer or assignment of the whole of said L-C to a new landlord. In connection with any such transfer of the L-C by Landlord, Tenant shall, at Tenant's sole cost and expense, execute and submit to the Bank such applications, documents and instruments as may be necessary to effectuate such transfer and, Tenant shall be responsible for paying the Bank's transfer and processing fees in connection therewith; provided that, Landlord shall have the right (in its sole discretion), but not the obligation, to pay such fees on behalf of Tenant, in which case Tenant shall reimburse Landlord within ten (10) days after Tenant's receipt of an invoice from Landlord therefor.

21.5 **L-C Not a Security Deposit**. Landlord and Tenant (1) acknowledge and agree that in no event or circumstance shall the L-C or any renewal thereof or substitute therefor or any proceeds thereof be deemed to be or treated as a "security deposit" under any law applicable to security deposits in the commercial context, including, but not limited to, Section 1950.7 of the California Civil Code, as such Section now exists or as it may be hereafter amended or succeeded (the "**Security Deposit Laws**"), (2) acknowledge and agree that the L-C (including any renewal thereof or substitute therefor or any proceeds thereof) is not intended to serve as a security deposit, and the Security Deposit Laws shall have no applicability or relevancy thereto, and (3) waive any and all rights, duties and obligations that any such party may now, or in the future will, have relating to or arising from the Security Deposit Laws. Tenant hereby irrevocably waives and relinquishes the provisions of Section 1950.7 of the California Civil Code and any successor statute, and all other provisions of law, now or hereafter in effect, which (x) establish the time frame by which a landlord must refund a security deposit under a lease, and/or (y) provide that a landlord may claim from a security deposit only those sums reasonably necessary to remedy defaults in the payment of rent, to repair damage caused by a tenant or to clean the premises, it being agreed that Landlord may, in addition, claim those sums specified in this Article 21 and/or those sums reasonably necessary to (a) compensate Landlord for any loss or damage caused by Tenant's breach of this Lease, including any damages Landlord suffers following termination of this Lease, and/or (b) compensate Landlord for any and all damages arising out of, or incurred in connection with, the termination of this Lease, including, without limitation, those specifically identified in Section 1951.2 of the California Civil Code. Tenant agrees not to interfere in any way with any payment to Landlord of the proceeds of the L-C, either prior to or following a "draw" by Landlord of all or any portion of the L-C, regardless of whether any dispute exists between Tenant and Landlord as to Landlord's right to draw down all or any portion of the L-C. No condition or term of this Lease shall be deemed to render the L-C conditional and thereby afford the Bank a justification for failing to honor a drawing upon such L-C in a timely manner. Tenant shall not request or instruct the Bank of any L-C to refrain from paying sight draft(s) drawn under such L-C.

21.6 **Remedy for Improper Drafts**. Tenant's sole remedy in connection with the improper presentment or payment of sight drafts drawn under any L-C shall be the right to obtain from Landlord a refund of the amount of any sight draft(s) that were improperly presented or the proceeds of which were misapplied, and reasonable actual out-of-pocket attorneys' fees, provided that at the time of such refund, Tenant increases the amount of such L-C to the amount (if any) then required under the applicable provisions of this Lease. Tenant acknowledges that the presentment of sight drafts drawn under any L-C, or the Bank's payment of sight drafts drawn under such L-C, could not under any circumstances cause Tenant injury that could not be remedied by an award of money damages, and that the recovery of money damages would be an adequate remedy therefor. In the event Tenant shall be entitled to a refund as aforesaid and Landlord shall fail to make such payment within ten (10) business days after demand, Tenant shall have the right to deduct the amount thereof from the next installment(s) of Base Rent.

22. COMMUNICATIONS AND COMPUTER LINE. Tenant may install, maintain, replace, remove or use any communications or computer wires and cables serving the Premises (collectively, the "**Lines**"), provided that Tenant shall obtain Landlord's prior written consent, use an experienced and qualified contractor approved in writing

by Landlord, and comply with all of the other provisions of Articles 7 and 8 of this Lease. Tenant shall pay all costs in connection therewith. Landlord reserves the right, upon notice to Tenant prior to the expiration or earlier termination of this Lease, to require that Tenant, at Tenant's sole cost and expense, remove any Lines located in or serving the Premises prior to the expiration or earlier termination of this Lease.

23. SIGNS.

23.1 **Exterior Signage**. Subject to Landlord's prior written approval, which shall not be unreasonably withheld, conditioned or delayed, and provided all signs are in keeping with the quality, design and style of the Building and Project, Tenant, at its sole cost and expense, may install (i) identification signage on the monument sign outside the front entrance to the Building (which monument sign shall be installed by Landlord at its sole cost prior to the Lease Commencement Date), (ii) internal directional and lobby identification signage, and (iii) signage in the elevator lobby on the floor containing the Premises (collectively, "**Tenant Signage**"); provided, however, in no event shall Tenant's Signage include an "Objectionable Name," as that term is defined in Section 23.3, of this Lease. All such signage shall be subject to Tenant's obtaining all required governmental approvals. All permitted signs shall be maintained by Tenant at its expense in a first-class and safe condition and appearance. Upon the expiration or earlier termination of this Lease, Tenant shall remove all of its signs at Tenant's sole cost and expense. The graphics, materials, color, design, lettering, lighting, size, illumination, specifications and exact location of Tenant's Signage (collectively, the "**Sign Specifications**") shall be subject to the prior written approval of Landlord, which approval shall not be unreasonably withheld, conditioned or delayed, and shall be consistent and compatible with the quality and nature of the Project. Tenant hereby acknowledges that, notwithstanding Landlord's approval of Tenant's Signage, Landlord has made no representation or warranty to Tenant with respect to the probability of obtaining all necessary governmental approvals and permits for Tenant's Signage. In the event Tenant does not receive the necessary governmental approvals and permits for Tenant's Signage, Tenant's and Landlord's rights and obligations under the remaining terms of this Lease shall be unaffected. Except as required by applicable law, Landlord shall not install any other signage on the Building. If Landlord elects to install a multi-tenant identification sign at the entrance to the Project, Tenant shall be entitled to install its name on such sign (subject to availability on a pro-rata basis based on the relative square footages leased by the tenants of the Project), at Tenant's sole cost and expense.

23.2 **Objectionable Name**. Tenant's Signage shall not include a name or logo which relates to an entity which is of a character or reputation, or is associated with a political faction or orientation, which is inconsistent with the quality of the Project, or which would otherwise reasonably offend a landlord of the Comparable Buildings (an "**Objectionable Name**"). Landlord agrees that "The Column Group, LLC" and " TCG" are not Objectionable Names.

23.3 **Prohibited Signage and Other Items**. Any signs, notices, logos, pictures, names or advertisements which are installed and that have not been separately approved by Landlord may be removed without notice by Landlord at the sole expense of Tenant. Any signs, window coverings, or blinds (even if the same are located behind the Landlord-approved window coverings for the Building), or other items visible from the exterior of the Premises or Building, shall be subject to the prior approval of Landlord, in its sole discretion.

24. COMPLIANCE WITH LAW. Tenant shall not do anything or suffer anything to be done in or about the Premises or the Project which will in any way conflict with any law, statute, ordinance or other governmental rule, regulation or requirement now in force or which may hereafter be enacted or promulgated (specifically including the handicap access codes and Americans With Disabilities Act as locally enacted ("**ADA**") and Environmental Laws) (collectively, "**Applicable Laws**"). At its sole cost and expense, Tenant shall promptly comply with all such governmental measures. Should any standard or regulation now or hereafter be imposed on Landlord or Tenant by a state, federal or local governmental body charged with the establishment, regulation and enforcement of occupational, health or safety standards for employers, employees, landlords or tenants, then Tenant agrees, at its sole cost and expense, to comply promptly with such standards or regulations. Tenant shall be responsible, at its sole cost and expense, to make all alterations to the Building and Premises as are required to comply with the governmental rules, regulations, requirements or standards described in this Article 24. The judgment of any court of competent jurisdiction or the admission of Tenant in any judicial action, regardless of whether Landlord is a party thereto, that Tenant has violated any of said governmental measures, shall be conclusive of that fact as between Landlord and Tenant. Tenant's obligations under this Article 24 are subject to the limitation in Section 10.2, above.

25. LATE CHARGES. If any installment of Rent or any other sum due from Tenant shall not be received by Landlord or Landlord's designee within five (5) business days after Tenant's receipt of written notice from Landlord that said amount is delinquent, then Tenant shall pay to Landlord a late charge equal to five percent (5%) of the overdue amount plus any reasonable attorneys' fees incurred by Landlord by reason of Tenant's failure to pay Rent and/or other charges when due hereunder. The late charge shall be deemed Additional Rent and the right to require it shall be in addition to all of Landlord's other rights and remedies hereunder or at law and shall not be construed as liquidated damages or as limiting Landlord's remedies in any manner. In addition to the late charge described above, any Rent or other amounts owing hereunder which are not paid within ten (10) days after Tenant's receipt of written notice that said amount is delinquent shall bear interest from the date when due until paid at a rate per annum equal to the lesser of (i) the annual "Bank Prime Loan" rate cited in the Federal Reserve Statistical Release Publication G.13(415), published on the first Tuesday of each calendar month (or such other comparable index as Landlord and Tenant shall reasonably agree upon if such rate ceases to be published) plus four (4) percentage points, and (ii) the highest rate permitted by applicable law.

26. LANDLORD'S RIGHT TO CURE DEFAULT; PAYMENTS BY TENANT.

26.1 **Landlord's Cure**. All covenants and agreements to be kept or performed by Tenant under this Lease shall be performed by Tenant at Tenant's sole cost and expense and without any reduction of Rent, except to the extent, if any, otherwise expressly provided herein. If Tenant shall fail to perform any obligation under this Lease, and such failure shall continue in excess of the time allowed under Section 19.1.2, above, unless a specific time period is otherwise stated in this Lease, Landlord may, but shall not be obligated to, make any such payment or perform any such act on Tenant's part without waiving its rights based upon any default of Tenant and without releasing Tenant from any obligations hereunder.

26.2 **Tenant's Reimbursement**. Except as may be specifically provided to the contrary in this Lease, Tenant shall pay to Landlord, upon delivery by Landlord to Tenant of statements therefor: (i) sums equal to expenditures reasonably made and obligations incurred by Landlord in connection with the remedying by Landlord of Tenant's defaults pursuant to the provisions of Section 26.1; (ii) sums equal to all losses, costs, liabilities, damages and expenses referred to in Article 10 of this Lease; and (iii) subject to Section 29.21, sums equal to all expenditures made and obligations incurred by Landlord in collecting or attempting to collect the Rent or in enforcing or attempting to enforce any rights of Landlord under this Lease or pursuant to law, including, without limitation, all reasonable legal fees and other amounts so expended. Tenant's obligations under this Section 26.2 shall survive the expiration or sooner termination of the Lease Term.

27. ENTRY BY LANDLORD. Landlord reserves the right at all reasonable times and upon reasonable notice to Tenant (except in the case of an Emergency) to enter the Premises to (i) inspect them; (ii) show the Premises to prospective purchasers, or to current or prospective mortgagees, ground or underlying lessors or insurers or, during the last nine (9) months of the Lease Term, to prospective tenants; (iii) post notices of nonresponsibility (to the extent applicable pursuant to then applicable law); or (iv) repair the Premises or the Building, or for structural repairs to the Building or the Building's systems and equipment as provided under the Lease. Landlord may make any such entries without the abatement of Rent, except as otherwise provided in this Lease, and may take such reasonable steps as required to accomplish the stated purposes. In an Emergency, Landlord shall have the right to use any means that Landlord may deem proper to open the doors in and to the Premises. Any entry into the Premises by Landlord in the manner hereinbefore described shall not be deemed to be a forcible or unlawful entry into, or a detainer of, the Premises, or an actual or constructive eviction of Tenant from any portion of the Premises. Landlord shall use commercially reasonable efforts to minimize any interference with Tenant's use of or access to the Premises in connection with any such entry, and shall comply with Tenant's reasonable security measures. Landlord shall hold confidential any information regarding Tenant's business that it may learn as a result of such entry.

28. TENANT PARKING. Tenant shall have the right, without the payment of any parking charge or fee (other than as a reimbursement of operating expenses to the extent allowed pursuant to the terms or Article 4 of this Lease, above), commencing on the Lease Commencement Date, to use the amount of parking set forth in Section 9 of the Summary, in the on-site parking lot and garage which serves the Building. Tenant shall abide by all reasonable rules and regulations which are prescribed from time to time for the orderly operation and use of the parking facility where the parking passes are located (including any sticker or other identification system established by Landlord and the prohibition of vehicle repair and maintenance activities in the parking facilities), and shall cooperate in seeing that

Tenant's employees and visitors also comply with such rules and regulations. Tenant's use of the Project parking facility shall be at Tenant's sole risk and Tenant acknowledges and agrees that Landlord shall have no liability whatsoever for damage to the vehicles of Tenant, its employees and/or visitors, or for other personal injury or property damage or theft relating to or connected with the parking rights granted herein or any of Tenant's, its employees' and/or visitors' use of the parking facilities.

29. MISCELLANEOUS PROVISIONS.

29.1 **Terms; Captions**. The words "**Landlord**" and "**Tenant**" as used herein shall include the plural as well as the singular. The necessary grammatical changes required to make the provisions hereof apply either to corporations or partnerships or individuals, men or women, as the case may require, shall in all cases be assumed as though in each case fully expressed. The captions of Articles and Sections are for convenience only and shall not be deemed to limit, construe, affect or alter the meaning of such Articles and Sections.

29.2 **Binding Effect**. Subject to all other provisions of this Lease, each of the covenants, conditions and provisions of this Lease shall extend to and shall, as the case may require, bind or inure to the benefit not only of Landlord and of Tenant, but also of their respective heirs, personal representatives, successors or assigns, provided this clause shall not permit any assignment by Tenant contrary to the provisions of Article 14 of this Lease.

29.3 **No Air Rights**. No rights to any view or to light or air over any property, whether belonging to Landlord or any other person, are granted to Tenant by this Lease. If at any time any windows of the Premises are temporarily darkened or the light or view therefrom is obstructed by reason of any repairs, improvements, maintenance or cleaning in or about the Project, the same shall be without liability to Landlord and without any reduction or diminution of Tenant's obligations under this Lease.

29.4 **Modification of Lease**. Should any current or prospective mortgagee or ground lessor for the Building or Project require a modification of this Lease, which modification will not cause an increased cost or expense to Tenant or in any other way materially and adversely change the rights and obligations of Tenant hereunder or interfere with Tenant's use of the Premises, then and in such event, Tenant agrees that this Lease may be so modified and agrees to execute whatever documents are reasonably required therefor and to deliver the same to Landlord within ten (10) business days following a request therefor. At the request of Landlord or any mortgagee or ground lessor, Tenant agrees to execute a short form of Lease and deliver the same to Landlord within ten (10) business days following the request therefor.

29.5 **Transfer of Landlord's Interest**. Tenant acknowledges that Landlord has the right to transfer all or any portion of its interest in the Project or Building and in this Lease, and Tenant agrees that in the event of any such transfer, Landlord shall automatically be released from all liability under this Lease and Tenant agrees to look solely to such transferee for the performance of Landlord's obligations hereunder accruing after the date of transfer provided such transferee shall have fully assumed and agreed in writing to be liable for all obligations of this Lease to be performed by Landlord, including the return of any security deposit or L-C, and Tenant shall attorn to such transferee.

29.6 **Prohibition Against Recording**. Except as provided in Section 29.4 of this Lease, neither this Lease, nor any memorandum, affidavit or other writing with respect thereto, shall be recorded by Tenant or by anyone acting through, under or on behalf of Tenant.

29.7 **Landlord's Title**. Landlord's title is and always shall be paramount to the title of Tenant. Nothing herein contained shall empower Tenant to do any act which can, shall or may encumber the title of Landlord.

29.8 **Relationship of Parties**. Nothing contained in this Lease shall be deemed or construed by the parties hereto or by any third party to create the relationship of principal and agent, partnership, joint venturer or any association between Landlord and Tenant.

29.9 **Payment under Protest**. If Tenant in good faith disputes any amounts billed by Landlord, other than (i) Base Rent, (ii) Tenant's Share of Direct Expenses (as to which Tenant may exercise its rights under Section 4.6,

above), Tenant may make payment of such amounts under protest, and reserve all of its rights with respect to such amounts (the "**Disputed Amounts**"). Landlord and Tenant shall meet and confer to discuss the Disputed Amounts and attempt, in good faith, to resolve the particular dispute. If, despite such good faith efforts, Landlord and Tenant are unable to reach agreement regarding the Disputed Amounts, either party may submit the matter to binding arbitration under the JAMS Streamlined Arbitration Rules & Procedures. The non-prevailing party, as determined by JAMS, will be responsible to pay all fees and costs incurred in connection with the JAMS procedure, as well as all other costs and expenses, including reasonable attorneys' fees, incurred by the prevailing party. This Section 29.9 shall not apply to claims relating to Landlord's exercise of any unlawful detainer rights pursuant to California law or rights or remedies used by Landlord to gain possession of the Premises or terminate Lessee's right of possession to the Premises.

29.10 **Time of Essence**. Time is of the essence with respect to the performance of every provision of this Lease in which time of performance is a factor.

29.11 **Partial Invalidity**. If any term, provision or condition contained in this Lease shall, to any extent, be invalid or unenforceable, the remainder of this Lease, or the application of such term, provision or condition to persons or circumstances other than those with respect to which it is invalid or unenforceable, shall not be affected thereby, and each and every other term, provision and condition of this Lease shall be valid and enforceable to the fullest extent possible permitted by law.

29.12 **No Warranty**. In executing and delivering this Lease, Tenant has not relied on any representations, including, but not limited to, any representation as to the amount of any item comprising Additional Rent or the amount of the Additional Rent in the aggregate or that Landlord is furnishing the same services to other tenants, at all, on the same level or on the same basis, or any warranty or any statement of Landlord which is not set forth herein or in one or more of the exhibits attached hereto.

29.13 **Landlord Exculpation**. The liability of Landlord or the Landlord Parties to Tenant for any default by Landlord under this Lease or arising in connection herewith or with Landlord's operation, management, leasing, repair, renovation, alteration or any other matter relating to the Project or the Premises shall be limited solely and exclusively to an amount which is equal to the lesser of (a) the interest of Landlord in the Project or (b) the equity interest Landlord would have in the Project if the Project were encumbered by third-party debt in an amount equal to eighty percent (80%) of the value of the Project (as such value is determined by Landlord), including any rental, condemnation, sales and insurance proceeds received by Landlord or the Landlord Parties in connection with the Project, Building or Premises. No Landlord Parties (other than Landlord) shall have any personal liability therefor, and Tenant hereby expressly waives and releases such liability on behalf of itself and all persons claiming by, through or under Tenant. The limitations of liability contained in this Section 29.13 shall inure to the benefit of Landlord's and the Landlord Parties' present and future partners, beneficiaries, officers, directors, trustees, shareholders, agents and employees, and their respective partners, heirs, successors and assigns. Under no circumstances shall any present or future partner of Landlord (if Landlord is a partnership), or trustee or beneficiary (if Landlord or any partner of Landlord is a trust), have any liability for the performance of Landlord's obligations under this Lease. Notwithstanding any contrary provision herein, neither Landlord nor the Landlord Parties shall be liable under any circumstances for injury or damage to, or interference with, Tenant's business, including but not limited to, loss of profits, loss of rents or other revenues, loss of business opportunity, loss of goodwill or loss of use, in each case, however occurring, or loss to inventory, scientific research, scientific experiments, laboratory animals, products, specimens, samples, and/or scientific, business, accounting and other records of every kind and description kept at the premises and any and all income derived or derivable therefrom.

29.14 **Entire Agreement**. It is understood and acknowledged that there are no oral agreements between the parties hereto affecting this Lease and this Lease constitutes the parties' entire agreement with respect to the leasing of the Premises and supersedes and cancels any and all previous negotiations, arrangements, brochures, agreements and understandings, if any, between the parties hereto or displayed by Landlord to Tenant with respect to the subject matter thereof, and none thereof shall be used to interpret or construe this Lease. None of the terms, covenants, conditions or provisions of this Lease can be modified, deleted or added to except in writing signed by the parties hereto.

29.15 **Right to Lease**. Landlord reserves the absolute right to effect such other tenancies in the Project as Landlord in the exercise of its sole business judgment shall determine to best promote the interests of the Building or Project. Tenant does not rely on the fact, nor does Landlord represent, that any specific tenant or type or number of tenants shall, during the Lease Term, occupy any space in the Building or Project.

29.16 **Force Majeure**. Any prevention, delay or stoppage due to strikes, lockouts, labor disputes, acts of God, acts of war, terrorist acts, inability to obtain services, labor, or materials or reasonable substitutes therefor, governmental actions, civil commotions, fire or other casualty, and other causes beyond the reasonable control of the party obligated to perform, except with respect to the obligations imposed with regard to Rent and other charges to be paid by Tenant pursuant to this Lease (collectively, a "**Force Majeure**"), notwithstanding anything to the contrary contained in this Lease, shall excuse the performance of such party for a period equal to any such prevention, delay or stoppage and, therefore, if this Lease specifies a time period for performance of an obligation of either party, that time period shall be extended by the period of any delay in such party's performance caused by a Force Majeure, provided, however, the foregoing delays shall not apply to Tenant's termination rights hereunder.

29.17 **Intentionally Omitted**.

29.18 **Notices**. All notices, demands, statements, designations, approvals or other communications (collectively, "**Notices**") given or required to be given by either party to the other hereunder or by law shall be in writing, shall be (A) sent by United States certified or registered mail, postage prepaid, return receipt requested ("**Mail**"), (B) delivered by a nationally recognized overnight courier, or (C) delivered personally. Any Notice shall be sent, transmitted, or delivered, as the case may be, to Tenant at the appropriate address set forth in Section 10 of the Summary, or to such other place as Tenant may from time to time designate in a Notice to Landlord, or to Landlord at the addresses set forth below, or to such other places as Landlord may from time to time designate in a Notice to Tenant. Any Notice will be deemed given (i) three (3) business days after the date it is posted if sent by Mail, (ii) the date the overnight courier delivery is made, or (iii) the date personal delivery is made. As of the date of this Lease, any Notices to Landlord must be sent, transmitted, or delivered, as the case may be, to the following addresses:

HCP, Inc.
1920 Main Street, Suite 1200
Irvine, CA 92614
Attention: Legal Department

with a copy to:

HCP Life Science Estates
950 Tower Lane, Suite 1650
Foster City, CA 94404
Attention: Jonathan M. Bergschneider

and

Allen Matkins Leck Gamble Mallory & Natsis LLP
1901 Avenue of the Stars, Suite 1800
Los Angeles, California 90067
Attention: Anton N. Natsis, Esq.

29.19 **Joint and Several**. If there is more than one tenant, the obligations imposed upon Tenant under this Lease shall be joint and several.

29.20 **Authority**. If Tenant is a corporation, trust or partnership, Tenant hereby represents and warrants that Tenant is a duly formed and existing entity qualified to do business in the State of California and that Tenant has full right and authority to execute and deliver this Lease and that each person signing on behalf of Tenant is authorized to do so.

29.21 **Attorneys' Fees**. In the event that either Landlord or Tenant should bring suit for the possession of the Premises, for the recovery of any sum due under this Lease, or because of the breach of any provision of this Lease or for any other relief against the other, then all costs and expenses, including reasonable attorneys' fees, incurred by the prevailing party therein shall be paid to the prevailing party by the other party, which obligation on the part of the other party shall be deemed to have accrued on the date of the commencement of such action and shall be enforceable whether or not the action is prosecuted to judgment.

29.22 **Governing Law; WAIVER OF TRIAL BY JURY**. This Lease shall be construed and enforced in accordance with the laws of the State of California. IN ANY ACTION OR PROCEEDING ARISING HEREFROM, LANDLORD AND TENANT HEREBY CONSENT TO (I) THE JURISDICTION OF ANY COMPETENT COURT WITHIN THE STATE OF CALIFORNIA, (II) SERVICE OF PROCESS BY ANY MEANS AUTHORIZED BY CALIFORNIA LAW, AND (III) IN THE INTEREST OF SAVING TIME AND EXPENSE, TRIAL WITHOUT A JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM BROUGHT BY EITHER OF THE PARTIES HERETO AGAINST THE OTHER OR THEIR SUCCESSORS IN RESPECT OF ANY MATTER ARISING OUT OF OR IN CONNECTION WITH THIS LEASE, THE RELATIONSHIP OF LANDLORD AND TENANT, TENANT'S USE OR OCCUPANCY OF THE PREMISES, AND/OR ANY CLAIM FOR INJURY OR DAMAGE, OR ANY EMERGENCY OR STATUTORY REMEDY. IN THE EVENT LANDLORD COMMENCES ANY SUMMARY PROCEEDINGS OR ACTION FOR NONPAYMENT OF BASE RENT OR ADDITIONAL RENT, TENANT SHALL NOT INTERPOSE ANY COUNTERCLAIM OF ANY NATURE OR DESCRIPTION (UNLESS SUCH COUNTERCLAIM SHALL BE MANDATORY) IN ANY SUCH PROCEEDING OR ACTION, BUT SHALL BE RELEGATED TO AN INDEPENDENT ACTION AT LAW.

29.23 **Submission of Lease**. Submission of this instrument for examination or signature by Tenant does not constitute a reservation of, option for or option to lease, and it is not effective as a lease or otherwise until execution and delivery by both Landlord and Tenant.

29.24 **Brokers**. Landlord and Tenant hereby warrant to each other that they have had no dealings with any real estate broker or agent in connection with the negotiation of this Lease, excepting only the real estate brokers or agents specified in Section 12 of the Summary (the "**Brokers**"), and that they know of no other real estate broker or agent who is entitled to a commission in connection with this Lease. Each party agrees to indemnify and defend the other party against and hold the other party harmless from any and all claims, demands, losses, liabilities, lawsuits, judgments, costs and expenses (including without limitation reasonable attorneys' fees) with respect to any leasing commission or equivalent compensation alleged to be owing on account of any dealings with any real estate broker or agent, other than the Brokers, occurring by, through, or under the indemnifying party. The terms of this Section 29.24 shall survive the expiration or earlier termination of the Lease Term.

29.25 **Independent Covenants**. This Lease shall be construed as though the covenants herein between Landlord and Tenant are independent and not dependent and Tenant hereby expressly waives the benefit of any statute to the contrary and agrees that if Landlord fails to perform its obligations set forth herein, Tenant shall not be entitled to make any repairs or perform any acts hereunder at Landlord's expense or to any setoff of the Rent or other amounts owing hereunder against Landlord.

29.26 **Project or Building Name, Address and Signage**. Landlord shall have the right at any time to change the name and/or address of the Project or Building (and Landlord shall reimburse Tenant its actual, reasonable costs incurred as a result of such change, if any) and, subject to Section 23.1, to install, affix and maintain any and all signs on the exterior and on the interior of the Project or Building as Landlord may, in Landlord's sole discretion, desire. Tenant shall not use the name of the Project or Building or use pictures or illustrations of the Project or Building in advertising or other publicity or for any purpose other than as the address of the business to be conducted by Tenant in the Premises, without the prior written consent of Landlord.

29.27 **Counterparts**. This Lease may be executed in counterparts with the same effect as if both parties hereto had executed the same document. Both counterparts shall be construed together and shall constitute a single lease.

29.28 **Good Faith**. Except (i) for matters for which there is a standard of consent or discretion specifically set forth in this Lease; (ii) matters which could have an adverse effect on the Building Structure or the Building

Systems, or which could affect the exterior appearance of the Building, or (iii) matters covered by Article 4 (Additional Rent), or Article 19 (Defaults; Remedies) of this Lease (collectively, the "**Excepted Matters**"), any time the consent of Landlord or Tenant is required, such consent shall not be unreasonably withheld or delayed, and, except with regard to the Excepted Matters, whenever this Lease grants Landlord or Tenant the right to take action, exercise discretion, establish rules and regulations or make an allocation or other determination, Landlord and Tenant shall act reasonably and in good faith.

29.29 **Development of the Project**.

29.29.1 **Subdivision**. Landlord reserves the right to subdivide all or a portion of the buildings and Common Areas, so long as the same does not interfere with Tenant's use of or access to the Premises or Tenant's parking rights. Tenant agrees to execute and deliver, upon demand by Landlord and in the form requested by Landlord, any additional documents needed to conform this Lease to the circumstances resulting from a subdivision and any all maps in connection therewith, so long as the same does not increase Tenant's obligations or decrease Tenant's rights under this Lease. Notwithstanding anything to the contrary set forth in this Lease, the separate ownership of any buildings and/or Common Areas by an entity other than Landlord shall not affect the calculation of Direct Expenses or Tenant's payment of Tenant's Share of Direct Expenses.

29.29.2 **Construction of Property and Other Improvements**. Tenant acknowledges that portions of the Project may be under construction following Tenant's occupancy of the Premises, and that such construction may result in levels of noise, dust, obstruction of access, etc. which are in excess of that present in a fully constructed project. Tenant hereby waives any and all rent offsets or claims of constructive eviction which may arise in connection with such construction, so long as the same does not interfere with Tenant's use of or access to the Premises or Tenant's parking rights. Landlord acknowledges that Tenant will have in the Premises a large vivarium with sensitivity to noise and vibration, and agrees that it shall use commercially reasonable efforts to minimize and mitigate noise and vibrations in connection with any such construction.

29.30 **No Violation**. Tenant hereby warrants and represents that neither its execution of nor performance under this Lease shall cause Tenant to be in violation of any agreement, instrument, contract, law, rule or regulation by which Tenant is bound, and Tenant shall protect, defend, indemnify and hold Landlord harmless against any claims, demands, losses, damages, liabilities, costs and expenses, including, without limitation, reasonable attorneys' fees and costs, arising from Tenant's breach of this warranty and representation.

29.31 **Transportation Management**. Tenant shall fully comply with all present or future programs intended to manage parking, transportation or traffic in and around the Project and/or the Building, and in connection therewith, Tenant shall take responsible action for the transportation planning and management of all employees located at the Premises by working directly with Landlord, any governmental transportation management organization or any other transportation-related committees or entities. Such programs may include, without limitation: (i) restrictions on the number of peak-hour vehicle trips generated by Tenant; (ii) increased vehicle occupancy; (iii) implementation of an in-house ridesharing program and an employee transportation coordinator; (iv) working with employees and any Project, Building or area-wide ridesharing program manager; (v) instituting employer-sponsored incentives (financial or in-kind) to encourage employees to rideshare; and (vi) utilizing flexible work shifts for employees.

IN WITNESS WHEREOF, Landlord and Tenant have caused this Lease to be executed the day and date first above written.

LANDLORD:

HCP OYSTER POINT III LLC,
a Delaware limited liability company

By: /s/ Jonathan M. Bergschneider
Jonathan M. Bergschneider
Executive Vice President

TENANT:

THE COLUMN GROUP, LLC,
a Delaware limited liability company

By: /s/ David V. Goeddel
Name: David V. Goeddel
Its: Managing Director

By: /s/ James Evangelista
Name: James Evangelista
Its: Chief Financial Officer

EXHIBIT A

OUTLINE OF PREMISES; PROJECT SITE PLAN

**floor plan below is representative to show the outline of Premises and is not a final plan

EXHIBIT B

TENANT WORK LETTER

1. **Defined Terms**. As used in this Tenant Work Letter, the following capitalized terms have the following meanings:

(a) **Approved TI Plans**: Plans and specifications prepared by the applicable Architect for the Tenant Improvements and approved by Landlord and Tenant in accordance with Paragraph 2 of this Tenant Work Letter, subject to further modification from time to time to the extent provided in and in accordance with such Paragraph 2.

(b) **Architect**: Landlord shall engage DGA with respect to any Tenant Improvements which Landlord is to cause to be constructed pursuant to this Tenant Work Letter.

(c) **Tenant Change Request**: See definition in Paragraph 2(c)(ii) hereof.

(d) **Final TI Working Drawings**: See definition in Paragraph 2(a) hereof.

(e) **General Contractor**: The general contractor reasonably selected by Landlord with respect to Landlord's TI Work as provided in Section 2(c) below. Tenant shall have no right to direct or control such General Contractor.

(f) **Landlord's TI Work**: Any Tenant Improvements which Landlord is to construct or install pursuant to this Tenant Work Letter or by mutual agreement of Landlord and Tenant from time to time.

(g) **Project Manager**. Project Management Advisors, Inc., or any other project manager designated by Landlord in its reasonable discretion from time to time to act in a supervisory, oversight, project management or other similar capacity on behalf of Landlord in connection with the design and/or construction of the Tenant Improvements.

(h) **Punch List Work**: Minor corrections of construction or decoration details, and minor mechanical adjustments, that are required in order to cause any applicable portion of the Tenant Improvements or Landlord's Work as constructed to conform to the Approved TI Plans or this Tenant Work Letter in all material respects and that do not materially interfere with Tenant's use or occupancy of the Building and the Premises.

(i) **Substantial Completion Certificate**: See definition in Paragraph 3(a) hereof.

(j) **Tenant Delay**: Any of the following types of delay in the completion of construction of Landlord's TI Work (but in each instance, only to the extent that any of the following has actually and proximately caused substantial completion of Landlord's TI Work to be delayed):

(i) Any delay resulting from Tenant's failure to furnish, in a timely manner, information reasonably requested by Landlord or by Landlord's Project Manager in connection with the design or construction of Landlord's TI Work, or from Tenant's failure to approve in a timely manner any matters requiring approval by Tenant;

(ii) Any delay resulting from Tenant Change Requests initiated by Tenant, including any delay resulting from the need to revise any drawings or obtain further governmental approvals as a result of any such Tenant Change Request; or

(iii) Any delay caused by Tenant (or Tenant's contractors, agents or employees) materially interfering with the performance of Landlord's TI Work, provided that Landlord shall have given Tenant prompt notice of such material interference and, before the first time a Tenant Delay is deemed to have occurred as a result of such delay, such interference has continued for more than twenty-four (24) hours after Tenant's receipt of such notice.

(k) **Tenant Improvements**: The improvements to or within the Building shown on the Approved TI Plans from time to time and to be constructed by Landlord pursuant to the Lease and this Tenant Work Letter. The term "Tenant Improvements" does not include the improvements existing in the Building and Premises at the date of execution of the Lease.

(l) **Unavoidable Delays**: Delays due to acts of God, acts of public agencies, labor disputes, strikes, fires, freight embargoes, inability (despite the exercise of due diligence) to obtain supplies, materials, fuels or permits, or other causes or contingencies (excluding financial inability) beyond the reasonable control of Landlord or Tenant, as applicable. Landlord shall use commercially reasonable efforts to provide Tenant with prompt notice of any Unavoidable Delays.

(m) Capitalized terms not otherwise defined in this Tenant Work Letter shall have the definitions set forth in the Lease.

2. **Plans and Construction**. Landlord and Tenant shall comply with the procedures set forth in this Paragraph 2 in preparing, delivering and approving matters relating to the Tenant Improvements.

(a) Approved Plans and Working Drawings for Tenant Improvements. Tenant shall promptly and diligently work with the Architect to cause to be prepared and delivered to Landlord for approval (which approval shall not be unreasonably withheld, conditioned or delayed by Landlord) proposed schematic plans and outline specifications for the Tenant Improvements. Following mutual approval of such proposed schematic plans and outline specifications by Landlord and by Tenant (as so approved, the "**Approved Schematic Plans**"), Tenant shall then work with the Architect to cause to be prepared, promptly and diligently (assuming timely delivery by Landlord of any information and decisions required to be furnished or made by Landlord in order to permit preparation of final working drawings, all of which information and decisions Landlord will deliver promptly and with reasonable diligence), and delivered to Landlord for approval (which approval shall not be unreasonably withheld, conditioned or delayed by Landlord) final detailed working drawings and specifications for the Tenant Improvements, including (without limitation) any applicable life safety, mechanical, electrical and plumbing working drawings and final architectural drawings (collectively, "**Final TI Working Drawings**"), which Final TI Working Drawings shall substantially conform to the Approved Schematic Plans. Upon receipt from Tenant of proposed schematic plans and outline specifications, proposed Final TI Working Drawings, any other plans and specifications, or any revisions or resubmittals of any of the foregoing, as applicable, Landlord shall promptly and diligently (and in all events within 10 business days after receipt in the case of an initial submittal of schematic plans and outline specifications or proposed Final TI Working Drawings, and within 7 business days after receipt in the case of any other plans and specifications or any revisions or resubmittals of any of the foregoing) either approve such proposed schematic plans and outline specifications or proposed Final TI Working Drawings, as applicable, or set forth in writing with particularity any changes necessary to bring the aspects of such proposed schematic plans and outline specifications or proposed Final TI Working Drawings into a form which will be reasonably acceptable to Landlord. Upon approval of the Final TI Working Drawings by Landlord and Tenant, the Final TI Working Drawings shall constitute the **"Approved TI Plans,"** superseding (to the extent of any inconsistencies) any inconsistent features of the previously existing Approved Schematic Plans. Tenant shall respond to any request for information or approval of plans or drawings from Landlord or Architect within five (5) business days. Tenant acknowledges that the Tenant Improvements will include the items set forth on Schedule 2 to this Exhibit B, in order to allow the Premises to achieve a LEED "Silver" certification level.

(b) Cost of Improvements. "**Cost of Improvement**" shall mean, with respect to any item or component for which a cost must be determined in order to allocate such cost, or an increase in such cost, to Tenant pursuant to this Tenant Work Letter, the sum of the following (unless otherwise agreed in writing by Landlord and Tenant with respect to any specific item or component or any category of items or components): (i) all sums paid to contractors or subcontractors for labor and materials furnished in connection with construction of such item or component; (ii) all costs, expenses, payments, fees and charges (other than penalties) paid to or at the direction of any city, county or other governmental or quasi-governmental authority or agency which are required to be paid in order to obtain all necessary governmental permits, licenses, inspections and approvals relating to construction of such item

or component; (iii) engineering and architectural fees for services rendered in connection with the design and construction of such item or component (including, but not limited to, the Architect for such item or component and an electrical engineer, mechanical engineer, structural engineer and civil engineer, if applicable); (iv) sales and use taxes; (v) testing and inspection costs; (vi) the cost of power, water and other utility facilities and the cost of collection and removal of debris required in connection with construction of such item or component; (vii) costs for builder's risk insurance; and (viii) all other "hard" and "soft" costs incurred in the construction of such item or component in accordance with the Approved TI Plans (if applicable) and this Tenant Work Letter; provided that the Cost of Improvements shall not include any internal or third-party costs incurred by Landlord except as provided in Section 2(e).

(c) **Construction of Landlord's TI Work**. Following completion of the Approved TI Plans, Landlord shall apply for and use reasonable efforts to obtain the necessary permits and approvals to allow construction of all Tenant Improvements. Upon receipt of such permits and approvals, Landlord shall, at Tenant's expense (subject to Landlord's payment of the Tenant Improvement Allowance and, to the extent requested by Tenant, the First Additional TI Allowance and Second Additional TI Allowance), construct and complete the Tenant Improvements substantially in accordance with the Approved TI Plans, subject to Unavoidable Delays and Tenant Delays (if any). Such construction of the Tenant Improvements and Landlord's Work shall be performed in a neat, good and workmanlike manner, free of defects, using new materials and equipment of good quality, and shall materially conform to all applicable laws, rules, regulations, codes, ordinances, requirements, covenants, conditions and restrictions applicable thereto in force at the time such work is completed. Landlord shall cause Hathaway Dinwiddie (so long as obtaining such bid does not delay the commencement of Landlord's TI Work), Landmark Builders and any other potential general contractors requested by Tenant and reasonably approved by Landlord to bid on general conditions and fee for construction of the Tenant Improvements and provide an estimate for the direct cost of the Tenant Improvements. All bids will be opened together with Landlord selecting the general contractor to construct the Tenant Improvements, subject to the reasonable approval of Tenant. Tenant shall also have the right to approve all subcontractors engaged by the General Contractor, which subcontractors shall be competitively bid and which approval shall not be unreasonably withheld, conditioned or delayed. Landlord shall enter into a stipulated sum or guaranteed maximum price construction contract with the General Contractor in the amount of the construction costs approved by Landlord and Tenant.

(d) **Changes**.

(i) If Landlord determines at any time that changes in the Final TI Working Drawings or in any other aspect of the Approved TI Plans relating to any item of Landlord's TI Work are required as a result of applicable law or governmental requirements, or are required at the insistence of any other third party whose approval may be required with respect to the Tenant Improvements, or are required as a result of unanticipated conditions encountered in the course of construction, then Landlord shall promptly (A) advise Tenant of such circumstances and (B) at Tenant's sole cost and expense, subject to Landlord's payment of the Tenant Improvement Allowance and, to the extent requested by Tenant, the First Additional TI Allowance and Second Additional TI Allowance, cause revised Final TI Working Drawings to be prepared by the Architect and submitted to Tenant, for Tenant's approval, which shall not be unreasonably withheld. Failure of Tenant to deliver to Landlord written notice of disapproval and specification of such required changes on or before any deadline reasonably specified by Landlord (which shall not be less than three (3) business days after delivery thereof to Tenant) shall constitute and be deemed to be a Tenant Delay to the extent Landlord is delayed in completing Landlord's TI Work.

(ii) If Tenant at any time desires any changes, alterations or additions to the Final TI Working Drawings, Tenant shall submit a detailed written request to Landlord specifying such changes, alterations or additions (a "**Tenant Change Request**"). Upon receipt of any such request, Landlord shall promptly notify Tenant of (A) whether the matters proposed in the Tenant Change Request are approved by Landlord (which approval shall not be unreasonably withheld, conditioned or delayed by Landlord), (B) Landlord's estimate of the number of days of delay, if any, which shall be caused in the construction of the Tenant Improvements by such Tenant Change Request if implemented (including, without limitation, delays due to the need to obtain any revised plans or drawings and any governmental approvals), and (C) Landlord's estimate of the increase, if any, which shall occur in the cost of design, permitting, project management and construction of the Tenant Improvements affected by such Tenant Change Request if such Tenant Change

Request is implemented (including, but not limited to, any costs of compliance with laws or governmental regulations that become applicable because of the implementation of the Tenant Change Request). If Landlord approves the Tenant Change Request and Tenant notifies Landlord in writing, within three (3) business days after receipt of such notice from Landlord, of Tenant's approval of the Tenant Change Request (including the estimated delays and cost increases, if any, described in Landlord's notice), then Landlord shall cause such Tenant Change Request to be implemented and Tenant shall be responsible for all actual costs or cost increases resulting from or attributable to the implementation of the Tenant Change Request, and any delays resulting therefrom shall be deemed to be a Tenant Delay (subject to Landlord's payment of the Tenant Improvement Allowance and, to the extent requested by Tenant, the First Additional TI Allowance and Second Additional TI Allowance). If Tenant fails to notify Landlord in writing of Tenant's approval of such Tenant Change Request within said three (3) business day period, then such Tenant Change Request shall be deemed to be withdrawn and shall be of no further effect.

(e) **Project Management**. Unless and until revoked by Landlord by written notice delivered to Tenant, Landlord hereby (i) delegates to Project Manager the authority to exercise all approval rights, supervisory rights and other rights or powers of Landlord under this Tenant Work Letter with respect to the design and construction of the Tenant Improvements, and (ii) requests that Tenant work with Project Manager with respect to any logistical or other coordination matters arising in the course of construction of the Tenant Improvements, including monitoring Tenant's compliance with its obligations under this Tenant Work Letter and under the Lease with respect to the design and construction of the Tenant Improvements. Tenant acknowledges the foregoing delegation and request, and agrees to cooperate reasonably with Project Manager as Landlord's representative pursuant to such delegation and request. Fees and charges of Project Manager for such services shall be at Tenant's sole expense, subject to Landlord's payment of the Tenant Improvement Allowance and, to the extent requested by Tenant, the First Additional TI Allowance and Second Additional TI Allowance. Such fees shall not exceed $3.71 per RSF of the Premises (i.e., $120,092.70); provided that in the event Tenant elects to utilize all or any portion of the First Additional TI Allowance or Second Additional TI Allowance pursuant to the terms of Sections 4(b) and 4(c) below, such fees to the Project Manager shall increase by an amount equal to the product of (A) 2.65% and (B) the amount of the First Additional TI Allowance and Second Additional TI Allowance and/or Tenant Funds which Tenant elects to utilize.

3. **Completion**.

(a) When Landlord receives written certification from Architect that construction of the Tenant Improvements and Landlord's Work has been completed in accordance with the Approved TI Plans and Section 3(e) below (except for Punch List Work), Landlord shall prepare and deliver to Tenant a certificate (or separate certificates for the Tenant Improvements and Landlord's Work) signed by Landlord, Architect and General Contractor (the "**Substantial Completion Certificate**") (i) certifying that the construction of the Tenant Improvements and Landlord's Work has been substantially completed in a good and workmanlike manner in accordance with the Approved TI Plans and Section 3(e) below in all material respects, subject only to completion of Punch List Work, and specifying the date of that completion, and (ii) certifying that the Tenant Improvements and Landlord's Work comply in all material respects with all laws, rules, regulations, codes, ordinances, requirements, covenants, conditions and restrictions applicable thereto at the time of such delivery. Upon receipt by Tenant of the Substantial Completion Certificate and tender of possession of the Premises by Landlord to Tenant, and receipt of any certificate of occupancy or its legal equivalent, or other required sign-offs from any applicable governmental authority, allowing the legal occupancy of the Premises, the Tenant Improvements will be deemed delivered to Tenant and "Ready for Occupancy" for all purposes of the Lease (subject to Landlord's continuing obligations with respect to any Punch List Work, and to any other express obligations of Landlord under the Lease or this Tenant Work Letter with respect to such Tenant Improvements).

(b) Immediately prior to delivery of the Substantial Completion Certificate for the Tenant Improvements, Project Manager or other representatives of Landlord shall conduct one or more "walkthroughs" of the Building with Tenant and Tenant's representatives, to identify any items of Punch List Work that may require correction and to prepare a joint punch list reflecting any such items, following which Landlord shall diligently complete the Punch List Work reflected in such joint punch list. The Punch List Work shall be attached to the Substantial Completion Certificate, and shall not include damage caused by Tenant or any of Tenant's agents in connection with any work performed by Tenant in the Premises, or required as a result of Tenant's move-in to the Premises. At any time within thirty (30) days after delivery of such Substantial Completion Certificate, Tenant shall

be entitled to submit one or more lists to Landlord supplementing such joint punch list by specifying any additional items of Punch List Work to be performed on the applicable Tenant Improvements and Landlord's Work, and upon receipt of such list(s), Landlord shall diligently complete such additional Punch List Work. Promptly after Landlord provides Tenant with the Substantial Completion Certificate and completes all applicable Punch List Work for the Building, Landlord shall cause the recordation of a Notice of Completion (as defined in the California Civil Code) with respect to the Tenant Improvements.

(c) All construction, product and equipment warranties and guaranties obtained by Landlord with respect to the Tenant Improvements and Landlord's Work shall, to the extent reasonably obtainable, include a provision that such warranties and guaranties shall also run to the benefit of Tenant, and Landlord shall cooperate with Tenant in a commercially reasonable manner to assist in enforcing all such warranties and guaranties for the benefit of Tenant.

(d) Notwithstanding any other provisions of this Tenant Work Letter or of the Lease, if Landlord is delayed in substantially completing any of the Tenant Improvements as a result of any Tenant Delay, and if the Lease Commencement Date is being determined under clause (i) of Section 3.2 of the Lease Summary, then notwithstanding any other provision of the Lease to the contrary, then the Premises shall be deemed to have been Ready for Occupancy on the date the Premises would have been Ready for Occupancy absent such Tenant Delay.

(e) Notwithstanding any other provisions of this Tenant Work Letter or of the Lease, Landlord shall be responsible, at Landlord's sole cost and expense, and without deduction from the Tenant Improvement Allowance, to construct and deliver the Base Building and "Warm Shell" components of the Premises ("**Landlord's Work**"), which shall consist of the items set forth on Schedule 1 to this Exhibit B (the "**Warm Shell Schedule**").

(f) **Construction of Additional Base Building Items**. To the extent that the Final TI Working Drawings contain any structural items, or items which would not reasonably be categorized as "normal tenant improvements" under applicable GAAP standards (the "**Additional Base Building Items**"), then such Additional Base Building Items shall not be constructed as a part of the Landlord's TI Work or the Tenant Improvements, but instead will be constructed by Landlord as a part of the Landlord's Work. The cost of construction of the Additional Base Building Items (the "**Additional Base Building Costs**") shall be borne by Landlord. Before commencing construction thereof, Landlord shall obtain a reasonable, good faith bid for the Additional Base Building Items from the General Contractor, which bid shall take into account all reasonable factors, including, without limitation, reasonable contingencies in connection therewith, Landlord shall notify Tenant of the amount of such bid (the "**Estimated Base Building Costs**"), and the amount of the Tenant Improvement Allowance shall be reduced by the amount of the Estimated Base Building Costs. Landlord shall have the right to disapprove any aspect of the Final TI Working Drawing that would result in Additional Base Building Costs in excess of the then remaining Tenant Improvement Allowance, so that, while the Tenant Improvement Allowance may be reduced, under no circumstances would Tenant be required to pay for any Additional Base Building Items with its own funds.

4. **Payment of Costs**.

(a) **Tenant Improvement Allowance**. Subject to any restrictions, conditions or limitations expressly set forth in this Tenant Work Letter or in the Lease or as otherwise expressly provided by mutual written agreement of Landlord and Tenant, the cost of construction of the Tenant Improvements shall be paid or reimbursed by Landlord up to a maximum amount equal to $4,531,800.00 (the "**Tenant Improvement Allowance**"), which amount is being made available by Landlord to be applied towards the Cost of Improvements for the construction of the Tenant Improvements in the Premises. Tenant shall be responsible, at its sole cost and expense, for payment of the entire Cost of Improvements of the Tenant Improvements in excess of the Tenant Improvement Allowance, including (but not limited to) any costs or cost increases incurred as a result of delays (unless caused by Landlord), governmental requirements or unanticipated conditions (unless caused by Landlord), and for payment of any and all costs and expenses relating to any alterations, additions, improvements, furniture, furnishings, equipment, fixtures and personal property items which are not eligible for application of Tenant Improvement Allowance funds under the restrictions expressly set forth below in this paragraph, but Tenant shall be entitled to use or apply the entire Tenant Improvement Allowance toward the Cost of Improvements of the Tenant Improvements (subject to any applicable restrictions, conditions, limitations, reductions or charges set forth in the Lease or in this Tenant Work Letter) prior to being required to expend any of Tenant's own funds for the Tenant Improvements. The funding of the Tenant

Improvement Allowance shall be made on a monthly basis or at other convenient intervals mutually approved by Landlord and Tenant and in all other respects shall be based on such commercially reasonable disbursement conditions and procedures as Landlord, Project Manager and Landlord's lender (if any) may reasonably prescribe. Notwithstanding the foregoing provisions, under no circumstances shall the Tenant Improvement Allowance or any portion thereof be used or useable by Tenant for any moving or relocation expenses of Tenant, or for any Cost of Improvement (or any other cost or expense) associated with any moveable furniture or trade fixtures, personal property or any other item or element which, under the applicable provisions of the Lease, will not become Landlord's property and remain with the Building upon expiration or termination of the Lease; provided, however, Tenant shall be permitted to use the Tenant Improvement Allowance, First Additional TI Allowance and Second Additional TI Allowance toward the purchase of a cagewash, autoclave and glasswash (which shall become Landlord's property upon expiration of the Lease). Notwithstanding anything to the contrary herein, the Tenant Improvements shall not include (and Landlord shall be solely responsible for and the Tenant Improvement Allowance shall not be used for) the following: (a) costs incurred due to the presence of any Hazardous Materials in the Premises, if any, but with respect to removal and remediation of any such Hazardous Materials, only to the extent such removal or remediation is required by Applicable Laws enforced as of the date of this Lease for improvements in the Premises generally (as opposed to the specific Tenant Improvements) and to the extent the same required in order to allow Tenant to obtain a certificate of occupancy or its legal equivalent, for the Premises for the Permitted Use assuming a normal and customary occupancy density; (b) costs to bring the Project into compliance with Applicable Laws to the extent required in order to allow Tenant to obtain a certificate of occupancy or its legal equivalent, for the Premises for the Permitted Use assuming a normal and customary office occupancy density; (c) construction costs in excess of the contract amount stated in the contract with the General Contractor, as approved by Tenant (not to be unreasonably withheld), except for increases set forth in change orders approved by Tenant; (d) wages, labor and overhead for overtime and premium time unless approved by Tenant (which approval shall not be unreasonably withheld, conditioned or delayed); (e) attorneys' fees incurred in connection with negotiation of construction contracts, and attorneys' fees, experts' fees and other costs in connection with disputes with third parties; (f) interest and other costs of financing construction costs; (g) costs incurred as a consequence construction defects or default by a contractor; (h) costs as a consequence of casualties; (i) penalties and late charges attributable to Landlord's failure to pay construction costs, and (j) costs due to compliance with the soil management plan for the Project or its appendices.

(b) **First Additional TI Allowance**. In addition to the Tenant Improvement Allowance, Tenant shall have the right, by written notice to Landlord given on or before the Lease Commencement Date, to use up to $20.00 per RSF of the Premises (i.e., up to $647,400.00) (the "**First Additional TI Allowance**") towards the payment of the costs of the Tenant Improvement Allowance Items. In the event Tenant exercises its right to use all or any portion of the First Additional TI Allowance, Tenant shall be required to pay Landlord, commencing on the date the Tenant Improvements are completed (the "**Additional Payment Commencement Date**"), the "First Additional TI Allowance Payment," as that term is defined below, in consideration of Landlord provision of the First Additional TI Allowance. The "**First Additional TI Allowance Payment**" shall be determined as the missing component of an annuity, which annuity shall have (i) the amount of the First Additional TI Allowance utilized by Tenant as the present value amount, (ii) a number equal to the number of full calendar months then remaining in the Lease Term as the number of payments, (iii) a monthly interest factor equal to eighty-three one-hundredths percent (0.83%), which is equal to ten percent (10%) divided by twelve (12) months per year, and (iv) the First Additional TI Allowance Payment as the missing component of the annuity. Following the calculation of the First Additional TI Allowance Payment, Landlord and Tenant will enter into a lease amendment in the form of **Exhibit G** attached hereto, to confirm the amount thereof.

(c) **Second Additional TI Allowance**. In addition to the Tenant Improvement Allowance, Tenant shall have the right, by written notice to Landlord given on or before the Lease Commencement Date, to use up to $20.00 per RSF of the Premises (i.e., up to $647,400.00) (the "**Second Additional TI Allowance**") towards the payment of the costs of the Tenant Improvement Allowance Items. In the event Tenant exercises its right to use all or any portion of the Second Additional TI Allowance, Tenant shall be required to pay Landlord, commencing on the date the Tenant Improvements are completed (the "**Additional Payment Commencement Date**"), the "Second Additional TI Allowance Payment," as that term is defined below, in consideration of Landlord provision of the Second Additional TI Allowance. The "**Second Additional TI Allowance Payment**" shall be determined as the missing component of an annuity, which annuity shall have (i) the amount of the Second Additional TI Allowance utilized by Tenant as the present value amount, (ii) a number equal to the number of full calendar months then remaining in the Lease Term as the number of payments, (iii) a monthly interest factor equal to ninety-two

one-hundredths percent (0.92%), which is equal to eleven percent (11%) divided by twelve (12) months per year, and (iv) the Second Additional TI Allowance Payment as the missing component of the annuity. Following the calculation of the Second Additional TI Allowance Payment, Landlord and Tenant will enter into a lease amendment in the form of **Exhibit G** attached hereto, to confirm the amount thereof.

(d) **Tenant Funds**. For additional funds required to complete the cost of the work, that are in excess of or elected by the Tenant to be used in place of the Tenant Improvement Allowance, the First Additional TI Allowance, and the Second Additional TI Allowance, these shall be considered "**Tenant Funds**." The total cost to construct the Tenant Improvements as managed by Landlord and the Project Manager under this Work Letter shall be the "**Project Budget**." The Landlord understands that at the time of the agreed upon Guaranteed Maximum Price (GMP), the Tenant Funds amount is an estimate and exact costs will not be known until project closeout. The Tenant is required, at the time of agreement of the GMP, to provide a purchase order to the Landlord for the full estimated amount of the Tenant Funds. In the event the Tenant Funds at project closeout are less than the amount agreed upon within the Project Budget, the Landlord will only bill the Tenant for the Tenant Funds that have been utilized. In the event the Tenant Funds exceed the amount agreed upon within the Project Budget, through added scope changes, the Tenant shall provide additional purchases orders to the Landlord, which will be included in the Tenant Change Request process that the Landlord's representative administers.

5. **No Agency**. Nothing contained in this Tenant Work Letter shall make or constitute Tenant as the agent of Landlord.

6. **Tenant Access**. Provided that Tenant and its agents do not interfere with Contactor's work in the Building and the Premises (including by the use of non-union vendors without prior coordination with Landlord), Contractor and Landlord shall allow Tenant access to the Premises at least thirty (30) days prior to the Substantial Completion of the Landlord's TI Work without payment of Rent for the purpose of Tenant installing equipment or fixtures (including Tenant's data and telephone equipment) in the Premises and preparing the Premises for occupancy. Prior to Tenant's entry into the Premises as permitted by the terms of this Section 6, Tenant shall submit a schedule to Landlord and Contractor, for their approval, which schedule shall detail the timing and purpose of Tenant's entry. Tenant shall hold Landlord harmless from and indemnify, protect and defend Landlord against any loss or damage to the Building or Premises and against injury to any persons caused by Tenant's actions pursuant to this Section 6.

7. **Miscellaneous**. All references in this Tenant Work Letter to a number of days shall be construed to refer to calendar days, unless otherwise specified herein. In all instances where Landlord's or Tenant's approval is required, if no written notice of disapproval is given within the applicable time period, at the end of that period Landlord or Tenant shall be deemed to have given approval (unless the provision requiring Landlord's or Tenant's approval expressly states that non-response is deemed to be a disapproval or withdrawal of the pending action or request, in which event such express statement shall be controlling over the general statement set forth in this sentence) and the next succeeding time period shall commence. If any item requiring approval is disapproved by Landlord or Tenant (as applicable) in a timely manner, the procedure for preparation of that item and approval shall be repeated. Landlord hereby acknowledges that Tenant shall not be required to restore the initial Tenant Improvements constructed in the Premises pursuant to the terms of this Tenant Work Letter upon the termination of the Lease.

8. **Time Deadlines**. Tenant shall use commercially reasonable, good faith, efforts and all due diligence to cooperate with the Architect, General Contractor and Landlord to complete all phases of the construction drawings set forth in this Tenant Work Letter and the permitting process and to receive the permits as soon as possible after the execution of the. The applicable dates for approval of items, plans and drawings as described in this Tenant Work Letter are set forth and further elaborated upon in Schedule 3 to this Exhibit B attached hereto (the "**Time Deadlines**"), attached hereto. Tenant agrees to utilize commercially reasonable efforts to comply with the Time Deadlines.

9. **Rooftop Space**. Tenant hereby acknowledges that to the extent either (i) any portion of the Tenant Improvements, or (ii) any of Tenant's equipment installed in the Premises, requires a portion of the roof to be utilized by Tenant, that Tenant shall only be permitted to utilize that certain portion of the roof designated as "Zone 3" on Schedule 4 to this Exhibit B (the "**Rooftop Space**").

10. **Standard Tenant Improvement Package Specifications**. Tenant hereby acknowledges that the Tenant Improvements are subject to the specifications set forth on Schedule 5 to this **Exhibit B**.

SCHEDULE 1 TO EXHIBIT B

BASE BUILDING "WARM SHELL" DELIVERY CONDITION

DESCRIPTION

SITEWORK

1. Exterior hardscape and landscape, including site lighting, perimeter sidewalks, street curbs, miscellaneous site furnishings, and bio-retention basins
2. Surface parking lot
3. Bike racks in exterior parking lot and bike lockers in podium parking garage for pro rata allocation amongst Tenants
4. Campus electrical vehicle charging stations for pro rata allocation amongst Tenants
5. Exterior amenities space including all hardscape and landscape, lighting, and recreational infrastructure (volleyball/basketball sport court, bocce ball, trellis)
6. Bus stop wind screens for local commuter shuttle service
7. Service yard foundation, structure, covered enclosure, and waterproofing for trash containers and dedicated nitrogen storage area for allocation amongst tenants per lease agreement
8. Foundation and enclosure for Landlord provided diesel powered emergency generator
9. Loading dock with at-grade shipping/receiving area with (2) hydraulic scissor lifts

STRUCTURE

1. Pile supported structural slab-on-grade foundation system consisting of steel-reinforced concrete auger-cast piles, pile caps, and horizontal grade beams
2. Steel superstructure consisting of steel columns, girders, beams, and concrete slab on composite metal deck, with live load capacity of 125 psf (reducible)
3. Type II A construction, code required primary structural fireproofing
4. Slab edge fire safing
5. Lateral seismic system utilizing buckling-restrained braced frames. Importance factor is 1.0
6. Roof deck framing with live load capacity of 20 psf
7. Mechanical platform and roof penthouse with live load capacity of 75 psf
8. Roof screen

9. Floor to floor height of 17’, all floors (podium at 14’)
10. Framed openings for Base Building utility risers
11. Stairs and stair enclosures per code requirements, including enclosure doors, handrails, and guardrails. Roof penthouse access for (1) set of stairs
12. Window washing davit bases and arms
13. Miscellaneous metals items and/or concrete pads for Base Building equipment

ROOFING

1. 60 MIL single-ply thermoplastic polyolefin (TPO) white or gray roof membrane
2. Rigid insulation, flashing, and sealants
3. Roofing penetrations for Base Building equipment/systems
4. Walkway pads along roof perimeter, outside of screened area

EXTERIOR

1. Non load-bearing glazed aluminum curtain wall and glass fiber reinforced concrete (GFRC) panel building enclosure system
2. Building entrances and openings
3. Opening for freight elevator access in Service Yard
4. Service Yard overhead door, serving Base Building Electrical Room
5. Service Yard rolling green screen gate

COMMON AREAS

1. Podium parking area with card reader controlled lift gate and roll-up doors
2. Build-out of Main Lobby
3. Stair enclosures painted at all building levels
4. Two (2) B-Occupancy Chemical Storage Rooms with 1-hour fire rated assembly, depressed pit (18”), and 100% outside air ventilation (900 cfm/room) for allocation amongst tenants per lease agreement.
5. Electrical Room
6. Emergency Electrical Room
7. Domestic Pump Room
8. Fire Booster Pump Room
9. Elevator Control Room
10. Telecommunications Main Point of Entry (MPOE) Room

11. Service Yard/Loading Dock Area, including space for trash enclosure, nitrogen storage, and generator enclosure
12. Usage of Amenities Space including food service, fitness center, and recreational area (located in Building 3)

ELEVATORS

1. Two (2) passenger elevators; 3,500 lbs., 350 fpm
2. One (1) freight elevator; 5,000 lbs., 200 fpm
3. Recessed elevator pits for three (3) elevators

TENANT AREAS

1. Restroom Cores: one (1) set per floor including Men's and Women's Restrooms with (1) ADA shower each with bench and lockers, ceramic tile floors and wet walls, solid surface countertops, floor mounted metal partitions, hard lid ceiling, down lights and ADA low-flow plumbing fixtures
2. Janitor Closet – one (1) per floor
3. Stud wall framing at restroom core to underside of slab
4. Fire-rated assembly at restroom core to 6" above ceiling
5. Electrical Room – one (1) per floor consisting of concrete floor, unfinished drywall and taped walls, no ceiling
6. Intermediate Distribution Frame (IDF) Room – one (1) per floor consisting of concrete floor, unfinished drywall and taped walls, no ceiling
7. Accessible "Patio" – Fifth Floor only. Landlord-maintained retractable davit arms stored in enclosure on Tenant patio.
8. Finishes at common corridors on floors with multiple Tenants
9. Shaft enclosures for Base Building system risers

FIRE PROTECTION

1. Fire booster pump room including fire department connection, alarm valve, and fire sprinkler booster pump
2. Wet fire protection system (risers, Core area risers, distribution piping, and sprinkler heads)
3. Stair risers, distribution piping, and sprinkler heads for core and shell coverage

4. Primary distribution and sprinkler heads adequate for “Ordinary Hazard, Group 2” for core and shell coverage
5. Fire extinguisher cabinets at core areas
6. Fire safing at Base Building vertical penetrations, including penetrations for mechanical, electrical, and plumbing systems

PLUMBING

1. Building storm and overflow drainage system, including site underground storm sewer system and connection to storm sewer mains
2. Sand/Oil separator with connection to street
3. Domestic water service with backflow prevention and Base Building risers to Tenant spaces
4. Domestic water booster pump
5. Building lab waste consisting of underslab piping under podium parking, risers, and stubs in Tenant space
6. Lab waste connection to sanitary sewer, lab waste sampling port at connection
7. Building sanitary sewer service with piping distribution to restroom cores and risers stubbed in Tenant space
8. Domestic sanitary sewer connection to street
9. Main water meter and irrigation meter
10. One (1) roof mounted electric water heater serving all Restrooms
11. Core restroom plumbing fixtures compliant with accessibility requirements

NATURAL GAS

1. Medium pressure natural gas service to Building
2. Natural gas riser to the roof and service to Base Building boilers
3. Natural gas riser to the roof capped for future use

HEATING, VENTILATION, AIR CONDITIONING

1. Two (2) 90,000 cfm 100% outside air roof mounted air handlers serving Tenant lab spaces, allocation to Tenant space: standard 22,500 cfm per unit per floor (connected to standby power)
2. Two (2) 40,000 cfm supply/return roof mounted air handlers serving Tenant office spaces, allocation to Tenant space: standard 10,000 cfm per unit per floor
3. Two (2) 5,000 MBH input gas fired hot water boilers (connected to standby power)

4. Two (2) 500 ton centrifugal chillers
5. Two (2) 500 ton cooling towers
6. Secondary mechanical equipment, including pumps, roof ducting, piping, valves, manifolds, etc. to support Base Building mechanical systems
7. Hot water pipe risers, stubbed in Tenant space
8. Reheat coils within core areas
9. Vertical supply air duct risers
10. Vertical return air duct risers
11. Supply air duct distribution, VAV terminals, equipment connections, insulation, air terminals, dampers, hangers, etc. within core areas
12. Two (2) roof mounted dilution lab exhaust fan systems with 94,000 cfm capacity each, allocation to Tenant space: standard 23,500 cfm per system per floor (connected to standby power)
13. Exhaust air duct distribution, exhaust air valves, equipment connections, insulation, air terminals, dampers, hangers, etc. within core areas
14. Restroom exhaust for Base Building restrooms
15. Ventilation system for Base Building Electrical Room
16. Exhaust fan, side wall grille supply, and fire smoke dampers for ventilation of Base Building Electrical Rooms on each floor
17. Building Management System (BMS) for core area and Landlord infrastructure

ELECTRICAL

1. Site campus medium voltage distribution system with connection to PG&E grid
2. 5,000 amp 480/277V Base Building substation with underground primary feeder to campus main switchgear
3. Standard power bus duct risers providing 400 amps per floor
4. One (1) 1500 kW diesel standby power generator
5. Standby power bus duct risers providing 188 kW per floor
6. Automatic transfer switch for Tenant load
7. Lighting and power distribution for core areas
8. Base Building common area life safety emergency lighting/signage
9. Distributed Antenna System (DAS) consisting of head-end system, roof-mounted antenna, and 2” conduit risers in stair shafts. No coverage within Tenant premises.

DESCRIPTION

FIRE ALARM

1. Base Building fire alarm system with devices in core areas
2. Fire Alarm Termination Cabinet (FATC) within each Electrical Room

TELEPHONE/DATA

1. Underground local fiber optic & telephone conduit only to MPOE Room
2. Two (2) 4” conduit risers from MPOE to Intermediate Distribution Frame (IDF) Room on each floor
3. Sleeves for future conduit riser from IDF Rooms to the roof; Landlord approval required for use
4. Campus telecommunications loop consisting of two (2) 4” conduits, linking existing and future buildings on campus
5. One (1) 4” conduit security communications loop
6. Two (2) 4” conduits connecting Building 3 MPOE Room with Building 4 MPOE Room

SECURITY

1. Card access at Building entries
2. Video surveillance and intercom system at entrance and receiving doors of the Building
3. Main Lobby desk for future security operations. Security guard scope TBD

SCHEDULE 2 TO EXHIBIT B

LEED REQUIREMENTS

The following is a list of LEED prerequisites and credits that all tenants are required to meet compliance for their associated tenant-occupied spaces beyond the current Core & Shell project scope. By signing this lease, tenants are agreeing to comply with all of the outlined requirements.

-Water Efficiency Prerequisite 1 and Credit 3, Water Use Reduction

- All toilets in the core or those that are tenant-installed shall be dual-flush toilets or "high-efficiency," using 1.28 gallons per flush (gpf) or less.
- All urinals shall be waterless or ultra low-flow e.g., 0.125gpf or less.
- Bathroom faucets are required to have flow restrictors limiting flow to .5 gallons per minute (gpm). Kitchen and breakroom faucets to allow 2.0 gpm.

- Energy and Atmosphere Prerequisite 2, Minimum Energy Performance, and Credit 1, Optimize Energy Performance

- Envelope must meet the following requirements:
  - Walls: U = 0.082
  - Roof: U = 0.039
  - Curtain Glazing: U = 0.27, SHGC = 0.29 (Viracon)
- Mechanical (Based on B3) systems must comply with the following:
  - Chiller Efficiency: 0.549 kw/ton
  - Boiler Efficiency: 93%
- Plumbing (Based on B3) must comply with the following:
  - Water heater efficiency: 96%
- Lighting requirements are as follows:
  - Office Spaces > 250 ft^2: 0.75 w/sf
  - Office Spaces <= 250 ft^2: 1.0 w/sf
  - Lab Spaces: 1.4 w/sf

-Energy and Atmosphere Credit 4, Enhanced Refrigerant Management

- Tenants should specify HVAC systems that minimize refrigerant impact by avoiding refrigerants entirely or using systems that reduce their harmful impacts.
- Tenants should not install or retain fire suppression systems with CFCs, HCFCs, or halons.

-Energy and Atmosphere Credit 5, Measurement & Verification

- Tenants will be required to submeter

-Indoor Environmental Quality Prerequisite 1, Minimum Indoor Air Quality (IAQ) Performance

- Tenant-installed mechanical ventilation systems must meet the requirements of ASHRAE 62.1-2007 sections 4-7.

-Indoor Environmental Quality Credit 1, Outdoor Air Delivery Monitoring

- For mechanical ventilation systems that predominantly serve densely occupied spaces (those with a design occupant density greater than or equal to 25 people per 1000 sq. ft), tenants shall install a CO2 sensor within each densely occupied space.
- For all other mechanical ventilation systems, provide an outdoor airflow measurement device capable of measuring the minimum outdoor airflow rate at all expected system operating conditions within 15 percent of the design minimum outdoor air rate.

-Indoor Environmental Quality Credit 5, Indoor Chemical and Pollutant Source Control

- Walk off mats are installed at all building main entrances as part of the core and shell scope.

- All rooms that contain chemicals or pollutants (such as copy rooms, photo labs, laundry, and janitorial rooms) must be built with deck-to-deck full-height walls and self-closing doors, separate ventilation systems with minimum .50 cfm/sqft exhaust fans, and containment drains for appropriate disposal of hazardous liquids
- Tenants must also install MERV – 13 filters for all return and outside air intakes in regularly occupied mechanically ventilated spaces

-Indoor Environmental Quality Credit 6, Controllability of Systems - Thermal Comfort

- Tenants shall provide thermal and ventilation controls for:
    - At least 50 percent of the occupants that enable adjustment to suit individual needs and preferences & all shared multi-occupant spaces where transient groups must share controls.

-Indoor Environmental Quality Credit 7, Thermal Comfort - Design

- HVAC design must meet requirements of ASHRAE 55-2004, specifically in reference to air temperature, radiant temperature, humidity, and air speed

SCHEDULE 3 TO EXHIBIT B

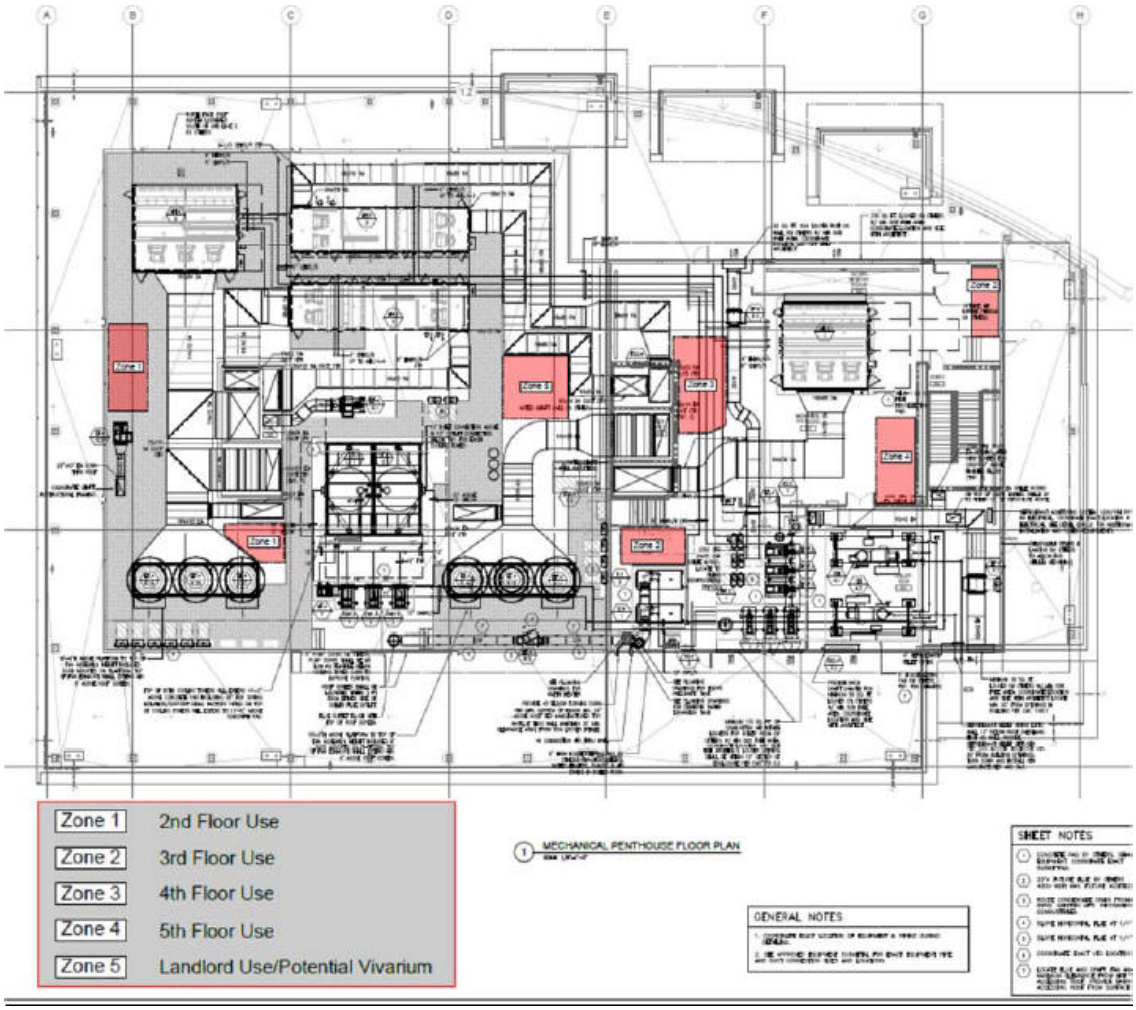
TIME DEADLINES

Tenant Improvement Milestone Schedule

9/12/2016	TI Design Commencement
9/23/2016	Tenant Approval of 100% Schematic Design
9/23/2016	Commence Design Development
10/10/2016	Tenant Submission of Final Equipment List
10/28/2016	Selection of General Contractor
10/28/2016	Tenant Approval of 100% Design Development
10/28/2016	Commence Production of Construction Documents
11/18/2016	Tenant Approval of 100% DD Estimate and Scope
12/2/2016	Tenant Approval of 100% Construction Documents
12/2/2016	Architect Submit for TI Permit
12/16/2016	Release of long lead items (i.e. casework) – Tenant and Landlord Approval
1/23/2017	Tenant Approval of GMP
6/1/2017	Substantial Completion/Temporary Certificate of Occupancy & Rent Commencement
6/30/2017	Complete Punchlist/Final Completion

SCHEDULE 4 TO EXHIBIT B

ROOFTOP SPACE



SCHEDULE 5 TO EXHIBIT B

STANDARD TENANT IMPROVEMENT PACKAGE SPECIFICATIONS

[[ATTACHED]]

THE COVE AT OYSTER POINT
101 OYSTER POINT BOULEVARD
SOUTH SAN FRANCISCO, CALIFORNIA

TABLE OF CONTENTS

APPENDICES

TENANT IMPROVEMENT CONSTRUCTION MANUAL OVERVIEW

The Tenant Improvement (TI) Construction Manual is intended to provide direction to new Tenants and Tenants' Contractors and Consultants during TI construction at The Cove. It serves as an instructive guide on common building systems, procedures, finishes, and campus design and construction requirements.

While every reasonable care has been taken in preparing the information contained in this guide, neither HCP, Inc. nor its appointed consultants are responsible for any inaccuracy or change and any loss or damage (whether direct or consequential) arising therefrom. All information is subject to change as may be approved or required by relevant jurisdictional authorities.

If there are conflicts between the Lease and its other Exhibits, including the Workletter, and the TI Manual, the Lease and its other Exhibits supersede the TI Manual in all cases.

BASE BUILDING WARM SHELL DELIVERY CONDITION

Refer to Appendix B for Landlord delivery conditions and Tenant responsibilities.

TENANT IMPROVEMENT CONSTRUCTION LOGISTICS & COORDINATION

1. LABOR REQUIREMENTS

All labor working on TI projects at The Cove must be unionized. Contracts with non-union labor forces will not be permitted during any active Landlord construction of any portion of the campus.

2. CONSTRUCTION SITE SAFETY

All TI construction personnel are required to take a base building and site safety orientation through the base building General Contractor during any active Landlord construction of any portion of the campus.

3. CONSTRUCTION LOGISTICS

If any portion of TI construction coincides with any portion of the base building construction, the TI Contractor shall coordinate with the base building Contractor regarding construction logistics, including but not limited to: use of elevator, use of man lift and operator during concurrent building construction, parking, removal of debris, insurance requirements, TCRs, and site safety.

DESIGN REFERENCES

1. AS-BUILT DRAWINGS AND 3D BIM MODEL

Resources:

As-built drawings and a 3D BIM model of the base building will be provided by the Landlord. The as-built drawings consist of Architectural, Structural, Mechanical, Electrical, Plumbing, and Civil Drawings for the shell. In situations where there is a conflict between 2D Drawings and the 3D model, the 3D model governs.

List of Reference Documents:

- General Information
- Architectural Drawings
- Structural Drawings
- Mechanical Drawings
- Electrical Drawings
- Plumbing Drawings
- Building Maintenance Drawings (EBM)
- Civil Drawings
- Corrosion Control
- Landscape Drawings
- Security Drawings
- Project Manual
- Basis of Design (BOD) for Shell Mechanical, Electrical, Plumbing, and Fire Protection
- Master Signage Program
- Base Building ERRCS (DAS) Drawings

INTERIOR FINISHES

1. WINDOW TREATMENTS

1a. Window Shades

Window shades shall be chain operated and consist of a roller, brackets to support the roller, a flexible fabric carried by the roller, a means of attaching the material to the roller, a bottom bar, and a chain operator to lift and lower the shade. Refer to Appendix G for the window shade manufacturer's contact information.

Window shade and associated soffit suspension details are provided in Figures 1-4 below:

Fig. 1: Condition 1a: TI ceiling elevation matches exterior window mullion elevation – Single Shade

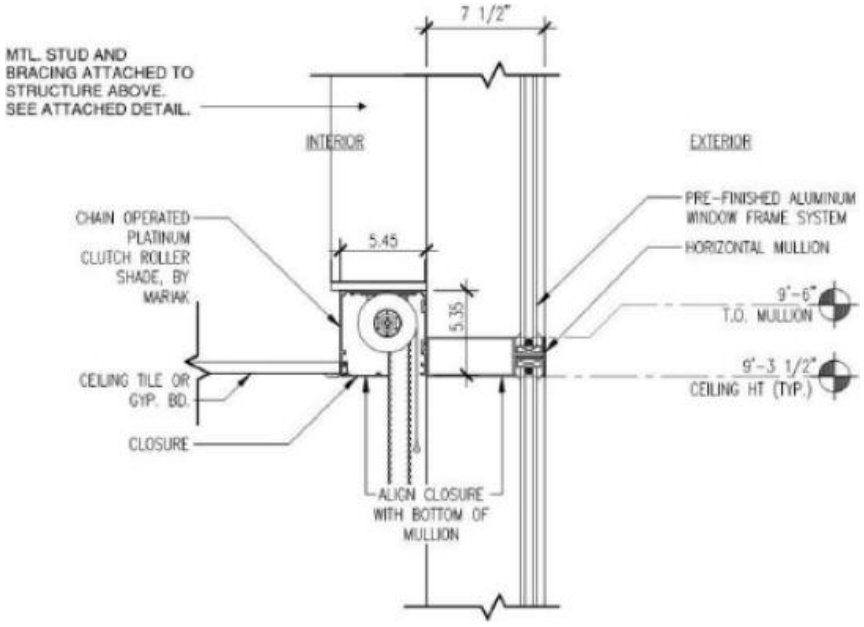


Fig. 2: Condition 1b: TI ceiling elevation matches exterior window mullion elevation – Double Shade

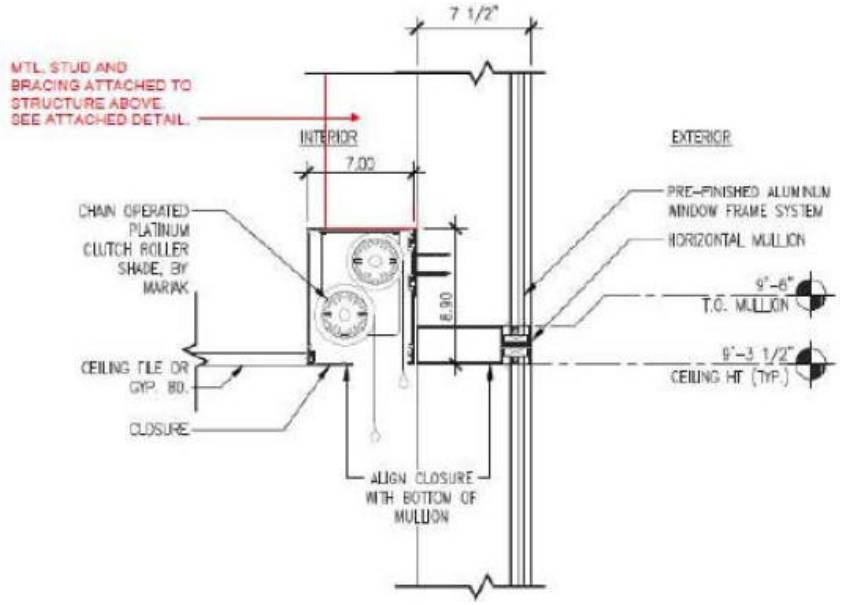


Fig. 3: Condition 2: TI ceiling elevation does not match exterior window mullion elevation

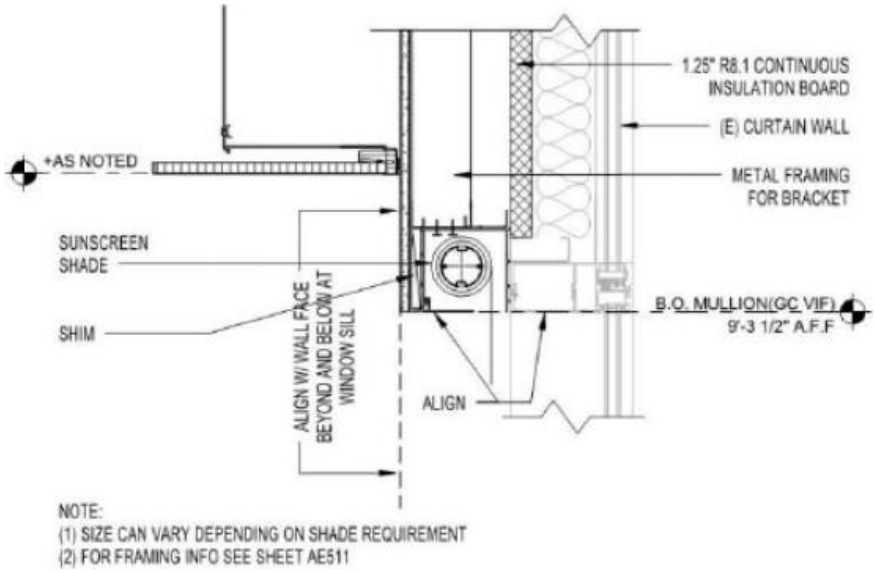
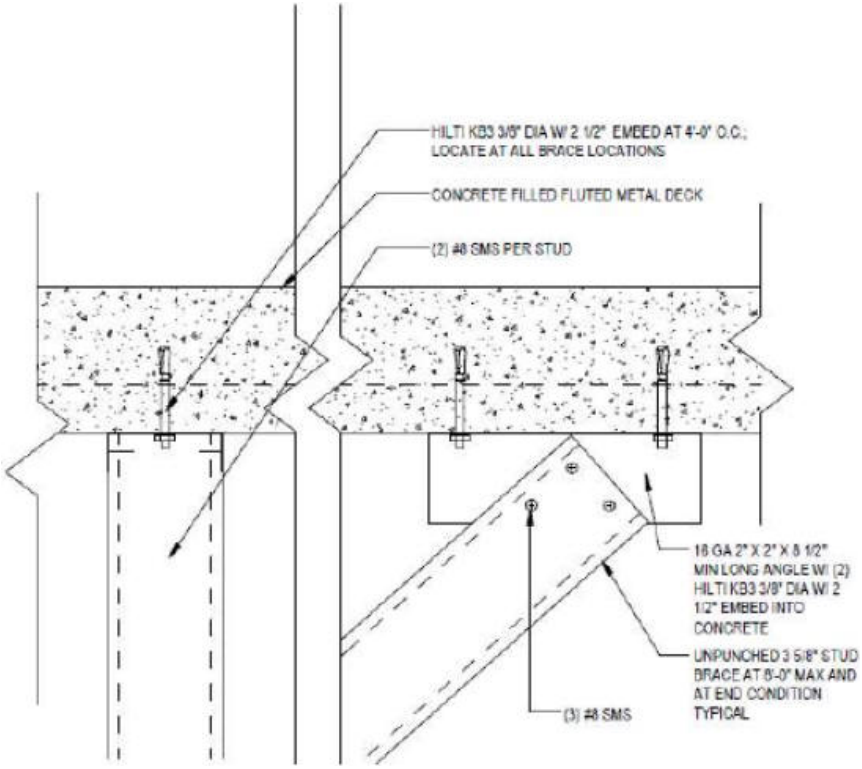


Fig. 4: Soffit Suspension Detail



Window Shade Specifications

- Screening Fabric – Sheer Weave 4903
- Style: SW 700
- Color: V28 Slate
- Material Openness Factor: 3%
- Material UV Blockage: 97%
- Please see attached details

Window Blackout Shade Specifications:

- Blackout Fabric – Sheer Weave 7000 pvc free
- Style: SW 700
- Colors: V40 Onyx (color side facing windows)
- Black Out outboard of sheer fabric

1b. Window Film

Window film as specified below is required where any casework, fixed furniture, new walls, or other solid objects will be located against the window. Refer to Appendix G for the window film manufacturer’s contact information:

Window Film Specifications:

- Window Works Custom Film: The Gray Lady 03-631
- Underlay Custom Film with clear 4 mil Anti-Graffiti film

2. LIGHTING TEMPERATURE

Lighting temperature shall remain between 3500 K and 4000 K for all interior Tenant spaces, unless alternate direction is given and/or approved by the Landlord.

3. PAINT COLOR

All fixed Tenant improvements, including but not limited to braced frames, columns, partitions, etc., within 2 feet of exterior windows shall be painted Dunn Edwards DE6368 Walrus.

4. EMERGENCY EVACUATION SIGNAGE

Emergency evacuation signs shall meet building standards. Refer to Appendix C for details.

BASE BUILDING SYSTEMS & CONDITIONS

1. BASE BUILDING ALTERATIONS

1a. Landlord Approval**:**

Any base building alterations resulting from TI design and construction require written Landlord approval.

1b. Structural Modifications:

Any structural modifications to the base building are a Tenant cost and responsibility. Structural modifications to the base building are subject to review from the shell structural engineering team at the Tenant's cost.

In the event that structural modifications to the base building are needed as part of the TI build-out, including but not limited to alterations to the slab and structural reinforcement, the following process will be observed:

1. TI Structural Engineer will propose design and modifications to existing structure.
2. TI Structural Engineer will provide Landlord with all necessary signed and sealed drawings and calculations required for review.
3. TI Structural design and modifications will be sent to base building Structural Engineer for review and approval.
    - Base building Structural Engineer review rates are as follows:
        - Engineering time: $155-160/hr.
        - Management time: $180/hr.
    - Base building Structural Engineer review turnaround time will generally be one week.
    - The base building Structural Engineer review rates and timeframe provided here are general estimates. Tenants are responsible for all costs associated with the TI.
4. Upon completion of base building team review:
    a. If approved: No further action required, construction may proceed.
    b. If not approved: TI Structural Engineer shall address and respond to base building Structural Engineer comments. Construction may not proceed until both engineering parties have reviewed and approved of structural modifications.

1c. Roofing Modifications:

Any and all roofing alterations must be completed by the base building Roofing Subcontractor—refer to Appendix G for contact information.

Modifications outside of Tenant's designated roof zone shall require written Landlord approval. **Under no circumstance shall penetrations to the building's penthouse roof be permitted.**

Base building roof zone designations are shown in the attached Appendix D for reference. The depicted zones are designated areas for any Tenant-installed equipment serving the respective Tenant spaces. Spaces designated for Landlord use or a potential vivarium can be utilized as overflow for Tenant space allocations pending Landlord approval.

1d. Temporary Opening of Building Envelope:

The building envelope can be opened to allow for access and material delivery as described below:

Individual glass lites can be removed from the exterior for replacement glass in the event of breakage or to create a small opening for building access. Individual curtain wall units and perimeter caulking can be removed and re-installed if a larger opening is needed for hoist-bay access to deliver materials into the building, at the Tenant's cost, pending the Landlord's written approval. Any enclosure openings require Landlord approval and coordination with ongoing construction and campus operations. All building enclosure work must be performed by the base building envelope subcontractor; refer to Appendix G for contact information.

2. BASE BUILDING SYSTEMS ACCESS

TI design and construction shall provide access to base building systems (ex. fire smoke damper) with Landlord approval for access point locations.

3. TENANT SUB-METERING

Tenants shall provide sub-metering for utilities as described below:

- BTU Meter: ONICON Model F-1200

  Every floor and/or Tenant is required to install a BTU meter for tracking usage of the heating water system.

- Natural Gas Meter: ONICON Model F5100

  Every Tenant requiring specific natural gas must install a meter to track their usage.

- Water Meter(s): ONICON Model F1200

  Every Tenant requiring water (domestic or industrial) must install a meter to track their usage.

- Electrical Meter (Standard & Standby Power): Power Logic PM5000 series meter

  Every Tenant who requires electrical power must install a meter on each floor where they derive power at or near each buss tap (two (2) per floor for standard and standby power). Each meter will require an enclosure, CTs per phase, 120V power, and a network connection back to the head end system. Square D, who is furnishing the front end panel, will visit the site to program the system and add the Tenant onto the system. The TI Controls Contractor will be required to coordinate with the Square D representative to pull their points in and include them in the graphics. Refer to Appendix G for contact information for the supplier and for Square D.

Tenant sub-metering must tie into the base building BMS system.

4. BUILDING MANAGEMENT SYSTEM (BMS)

Each warm-shell delivered Cove building is equipped with a Controls Building Management System (BMS). Tenants may have their own systems, but must also connect to the base building system. The BMS system is Distech Controls. The TI Contractor must use Distech Controls on any build outs or upgrades to maintain proper connection to the system, ensure consistent programming, and simplify maintenance of the BMS control system. The communication protocol for the BMS is BACNet.

Distech uses Tridium-based ECnet-Ax software to use in a PC/Server Building Supervisor. The Ax software provides graphical interface, trending, alarms, and alarm notification, with storage and archiving on the PC/Supervisor. The Distech GFX programming plug-in is used in device level controllers for creating and modifying equipment control sequences.

Hardware Standards:

1. Supervisor Controller: JACE EC-BOS 6 (minimum size Tridium JACE with extended memory)

2. VAV (Variable Air Volume): ECV-VAV Controller

3. CV (Constant Volume): ECB-VAV Controller

4. EV (Exhaust Valve): ECB-VAV Controller

5. Reheat Valve: Bellimo valve with modulating actuator (2-10 vdc.)

6. Thermostats

   a. Thermostat with display: Distech EC-Smart-Vue

   b. Thermostat with CO2 sensor (for high occupancy rooms): Distech EC-Smart-Vue-C

   c. Thermostat with motion sensor: Distech EC-Smart-Vue-M

7. Temperature Sensors: BAPI 10K type 2 or equal

Graphics to be Coordinated by TI Contractor:

1. Graphics Pages: All new equipment to have its own graphics page; miscellaneous meters to have their own graphics pages; trending and alarming to have their own graphics pages.

2. Zoning Plan: Each floor to have a color-coded zoning plan showing thermostat locations, space temperature/set point, zone number, and CO2 read outs.

5. EMERGENCY SYSTEMS

5a. Fire Alarm System:

The fire alarm system manufacturer is Honeywell Fire-Lite. The Tenant is responsible for fire alarm installation in Tenant spaces and connection to the base building fire alarm system. Refer to Appendix G for the base building emergency system Subcontractor’s contact information.

The base building fire alarm system is for code-required life safety use only. Tenant use of system for non-life safety purposes is not permitted.

5b. Sprinkler System:

The base building includes an interior sprinkler system for shell coverage. The base building sprinkler system shall be signed off by South San Francisco Fire Department prior to TI tie-in.

The sprinkler systems shall be monitored by the fire alarm system by both waterflow switches and tamper switches on the control valves. Prior to connecting to the base building sprinkler system, the Tenant’s Contractor must notify the fire alarm company that the system will be out of service and back in service by the end of day. The Tenant’s Contractor must notify the fire alarm company prior to performing any filling of pipes, whether during the day, night, or weekend.

5c. Standby Generator & Power:

Refer to Appendix F, attached, for Generator & Automatic Transfer Switch Description.

5d. Emergency Responder Radio Coverage System (ERRCS) / DAS First Responder System:

The Emergency Responder Radio Coverage System (ERRCS), also known as the Distributed Antenna System (DAS), is a building wide system, consisting of dedicated conduit and multiple antennae and repeaters per floor that serve to provide amplified wireless service for communication amongst emergency first responders.

Please note that this system will NOT be used to amplify personal cellular services within the building.

The base building is equipped with an ERRCS as required by the City of South San Francisco. The base building installation consists of the head-end system, roof mounted antenna, and conduit risers in stair shafts. The Tenant must coordinate the design and installation of the horizontal ERRCS within Tenant spaces. This scope includes but is not limited to: antenna repeaters, rated conduit, tie-in to base building system, programming, and jurisdictional required system testing. All ERRCS work must be coordinated using Cupertino Electric, Inc.; refer to Appendix G for contact information.

The base building ERRCS is for code-required life safety use only. Tenant use or tie-in are not permitted.

6. LABORATORY WASTE

Labs are required to connect to the lab waste system, separate from the domestic waste system, to prevent contamination. A sampling manhole is provided on the lab waste line exterior to the building, prior to the connection of the lab waste line to the sanitary sewer line directed to the municipal sewer system. Refer to the plumbing drawings for location.

7. SECURITY SYSTEMS

The base building security program includes the following:

1. Card access control system with card reader locations at all building entry/exit points, base building stairwells, and all passenger and freight elevator carriages. See base building security drawings for reference.
2. Video surveillance at the entrance and receiving doors of the buildings. See base building security drawings for reference.
3. Intercom at the entrance and receiving doors of the buildings. See base building security drawings for reference.

The Tenant should consider the following security options to incorporate the base building systems into a Tenant security program:

1. Access Control System

Base Building Security Information:

- Base building access card system reads both older proximity cards in 125kHz format and newer high frequency cards in the HID iClass format.
    - Base building access card reader model: HID RP40
- Base building access card format: HID Corporate 1000 Format
    - Part Number: 1386LGGMN MC-1000 Format# H2004333 (*Base building cards are ordered by property management)
    - Assigned to HCP Oyster Point III, LLC
- Base building system is manufactured by Lenel and uses the OnGuard software application. The Tenant may choose to install a suite-specific card access control system at the Tenant's own responsibility and cost. The Tenant may be able to use their own security access card for access into the base building system depending on compatibility with the base building system outlined above.

Elevator (both passenger and freight) access can be programmed according to Tenant preferences during business hours. The Tenant may program elevators to be open-access to the Tenant floors, allowing deliveries to access the Tenant space, or require security card access to floors, which would require a Tenant representative to escort deliveries in the elevator. After-hours operation will require a Tenant representative to escort non-Tenant personnel up from building perimeter areas to Tenant areas.

Tenant security card readers will not be allowed on the base building system; the Tenant may instead install a supplemental card access system within the Tenant space. The Tenant has the option of making Tenant access cards compatible with the base building access system in order that employees use a single access card throughout the base building and interior tenant spaces. Should the Tenant exercise this option, the Tenant's responsibilities would include:

- Providing the Property Manager with the current Tenant access card format and facility code along with three (3) numbered sequential test cards in order to verify compatibility with the base building system.
- Providing the Property Manager with the name and contact information of the Administrator for the system.
- Coordinating with the Property Manager the protocol for adding and deleting users from the base building system cardholder database.
    - If the Tenant chooses not to provide their existing access card information to the Landlord, the Tenant can use a base building-issued card for parking and perimeter building access only.

2. Video Surveillance System:

   The Tenant may choose to install in-suite video surveillance systems at the Tenant's own responsibility and cost. The base building video surveillance system is provided at critical common entry areas on the first floor. Forensic incident information in those areas may be obtained when requested through Property Management. See base building security drawings for reference. Additional Tenant-installed exterior surveillance is subject to Landlord written approval.

3. Intrusion Alarm System:

   The Tenant may choose to install in-suite intrusion alarm system at the Tenant's own responsibility and cost. The Tenant shall provide the name and contact information of the monitoring firm to the Property Manager in case of alarm activation. In addition, all licensing and permits are the responsibility of the Tenant. For integration of a base building stairwell access card reader with the Tenant space intrusion alarm system, the Tenant security vendor shall install a double pole double throw (DPDT) contact that allows for dual compatibility with the base building system and the Tenant intrusion panel.

4. Intercom System:

   The Tenant may choose to have the building intercom systems connected to their suite at the Tenant's own responsibility and cost. The Tenant has two options for intercom system connectivity as outlined below.

   Intercom System Operation:

   - Visitors contact the Tenant's suite master intercom directly from the perimeter intercom locations.
   - Direct voice communication and video authentication of the visitor through the intercom application.
   - Remote activation to the unlock feature allows the visitor to enter the building at the Tenant's discretion. Please note that a pre-determined schedule with Property Management will limit the hours that the remote unlock feature will be functional.

     Option A – Hardwired Intercom System:

     If selected, the Tenant shall consider the following information as it relates to construction and operation of the Tenant space:

- Intercom devices will be hardwire connected to the base building network
- Number of devices required per Tenant's desires and device locations in-suite
- See product data sheets for compatible models of hardwired video intercom stations, listed below:
  - SNOM 760 IP Master station
  - Stentofon IP Master station

Option B – Wireless Intercom Device:

The Tenant may choose to have a wireless intercom device via a suite specific Wireless Access Point (WAP). The master intercom station software application shall run on Apple Mini-iPads. The wireless intercom device is functional within the constraints of the wireless communication signal area provided through the WAP. Please note, that due to the WAP being on the house security network, the device will need to be dedicated to security and cannot be installed on private devices.

If selected, the Tenant shall consider the following information as it relates to construction and operation of the Tenant space:

- Devices will be connected to the base building network
- Type of wall mount (if desired) and quantity of mini iPads required for the desk charging station
- Anticipated intercom locations (Required for WAP installation locations as part of the TI build-out)

8. IDF AND UTILITIES

8a. IDF Rooms:

IDF rooms are vertically stacked above the ground floor main point of utility entry MPOE Room. Conduit risers are provided within IDF rooms on each floor for Tenants to tie into the MPOE (two (2) 4" conduits per floor) and are allotted per the lease agreement. Sleeves are provided between floors and require Landlord approval prior to Tenant use. Any roof penetrations for conduit is the responsibility of the TI Contractor. The Tenant is responsible for providing the required ventilation in IDF rooms.

8b. Campus Interconnecting Conduit:

A campus interconnecting conduit loop connecting all Cove buildings is available for Tenant use subject to Landlord approval. Refer to the site utility drawings for routing layout.

8c. Utilities Provided:

1. Telephone/Data:

   Infrastructure provided via two (2) 4” conduits with pull string. Tenant must coordinate pulling cable with phone/data service provider in order to receive service. The provided conduits are designed to AT&T requirements.

2. Natural Gas & Electric: PG&E

   Refer to base building drawings for electric and gas stub locations.

3. Internet & Cable:

   Infrastructure provided via one (1) 2” conduit and one (1) 4” conduit with pull string. Tenant must coordinate pulling cable with internet and cable service provider in order to receive service. The provided conduits are designed to Comcast requirements.

4. Water: Calwater

LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED)

1. BASE BUILDING LEED CERTIFICATION

The following is a list of LEED pre-requisites and credits that all Tenants are required to meet for their associated Tenant-occupied spaces beyond the current Core and Shell project scope, to maintain the Core and Shell LEED Silver Certification. By signing the Lease, Tenants are agreeing to comply with all of the outlined requirements.

- Water Efficiency Prerequisite 1 and Credit 3, Water Use Reduction
    - All toilets in the core or those that are Tenant-installed shall be dual-flush toilets or “high-efficiency,” using 1.28 gallons per flush (gpf) or less.
    - All urinals shall be waterless or ultra low-flow e.g., 0.125 gpf or less.
    - Bathroom faucets are required to have flow restrictors limiting flow to .5 gallons per minute (gpm).
    - Kitchen and breakroom faucets to allow 1.8 gpm.
- Energy and Atmosphere Prerequisite 2, Minimum Energy Performance, and Credit 1, Optimize Energy Performance
    - Envelope must meet the following requirements:
        - Walls: U = 0.082
        - Roof: U = 0.039
        - Curtain Glazing: U = 0.27, SHGC = 0.29 (Viracon)
    - Mechanical (Based on B3) systems must comply with the following:
        - Chiller Efficiency: 0.549 kw/ton
        - Boiler Efficiency: 93%
    - Plumbing (Based on B3) must comply with the following:
        - Water heater efficiency: 96%
    - Lighting requirements are as follows:
        - Office Spaces > 250 ft2: 0.75 w/sf
        - Office Spaces £ 250 ft2: 1.0 w/sf
        - Lab Spaces: 1.4 w/sf
- Energy and Atmosphere Credit 4, Enhanced Refrigerant Management
    - Tenants should specify HVAC systems that minimize refrigerant impact by avoiding refrigerants entirely or using systems that reduce their harmful impacts.
    - Tenants should not install or retain fire suppression systems with CFCs, HCFCs, or halons.
- Energy and Atmosphere Credit 5, Measurement & Verification
    - Tenants will be required to sub-meter
- Indoor Environmental Quality Prerequisite 1, Minimum Indoor Air Quality (IAQ) Performance
    - Tenant-installed mechanical ventilation systems must meet the requirements of ASHRAE 62.1-2007
    - sections 4-7.
- Indoor Environmental Quality Credit 1, Outdoor Air Delivery Monitoring
    - For mechanical ventilation systems that predominantly serve densely occupied spaces (those with a design occupant density greater than or equal to 25 people per 1000 sq. ft), Tenants shall install a CO2 sensor within each densely occupied space.
    - For all other mechanical ventilation systems, provide an outdoor airflow measurement device capable of measuring the minimum outdoor airflow rate at all expected system operating conditions within 15 percent of the design minimum outdoor air rate.
- Indoor Environmental Quality Credit 5, Indoor Chemical and Pollutant Source Control

- Walk off mats are installed at all building main entrances as part of the core and shell scope.
- 744331.07/WLA
- 375072-00001/12-9-15/gjn/gjn
- All rooms that contain chemicals or pollutants (such as copy rooms, photo labs, laundry, and janitorial rooms) must be built with deck-to-deck full-height walls and self-closing doors, separate ventilation systems with minimum .50 cfm/sqft exhaust fans, and containment drains for appropriate disposal of hazardous liquids
- Tenants must also install MERV – 13 filters for all return and outside air intakes in regularly occupied
- mechanically ventilated spaces

- Indoor Environmental Quality Credit 7, Thermal Comfort - Design
  - HVAC design must meet requirements of ASHRAE 55-2004, specifically in reference to air temperature, radiant temperature, humidity, and air speed

2. TENANT IMPROVEMENT LEED CERTIFICATION

All TIs are required to achieve and obtain ID+C LEED Silver certification.

CLIMATE ACTION PLAN

The Tenant shall fully comply with all present or future programs addressing the City of South San Francisco Climate Action Plan (CAP), as required by the City.

IDENTIFICATION SIGNAGE

Refer to the Master Sign Program for detailed information.

- Campus Monument Signage:
  Campus monument signage is provided at various locations on the site. Tenant names/logo are not permitted on the campus monuments.
- Building-Specific Monument Signage:
  Building-specific monument signage is provided in front of each building. Tenant will have a dedicated space for name/logo. Logos for all Tenants will be monochrome per Landlord color scheme.
- Directional Monument Signs:
  Campus directional signage is provided at various locations on the site. Signs include building addresses and Landlord directional text. Tenant names/logo are not permitted on the campus directional monument signs.
- Interior Lobby Signage:
  Each Tenant has dedicated space for signage in the building's common lobby.

If the Tenant has explicit rights to building façade signage per the Lease, the following sections apply:

- Exterior Building Façade Signage:
  Tenant must abide by the Master Sign Program for location, size, and design of exterior building façade signage.
- Refer to Appendix E for required exterior façade signage installation details. Building envelop penetrations must be completed by the base building envelope subcontractor; refer to Appendix G for contact information.
- Façade Signage Illumination:
  If illuminated, exterior façade signage must be halo-illuminated or internally illuminated per the Master Signage Program. There are provisions within the curtain wall allowing power to reach exterior façade signage, however the Tenant will be responsible for all costs and responsibilities associated with implementing exterior signage and any power requirements.
- Recommended Vendor: Arrow Signs
  All signage must be approved in writing by Landlord prior to installation. Refer to Appendix G for Arrow Signs' contact information.

APPENDIX A

The Cove Master Campus Site Plan


THE COVE
MASTER SITE PLAN PHASE 3
SAN FRANCISCO BAY
101 FREEWAY
CALTRAIN TRACKS
proposed hotel
B1
B2
B3
B4
B5
B6
B7
retail
parking structure
OYSTER POINT BLVD.
VETERANS BLVD.

APPENDIX B

Base Building Warm Shell Delivery Condition: Building 4

The Cove at Oyster Point
Building 4
Oyster Point Boulevard
South San Francisco, CA 94080
Warm Shell Landlord Delivery Condition

DESCRIPTION	Landlord	Tenant	Landlord at Tenant's Expense
SITEWORK			
1. Exterior hardscape and landscape, including site lighting, perimeter sidewalks, street curbs, miscellaneous site furnishings, and bio-retention basins	X		
2. Surface parking lot	X		
3. Bike racks in exterior parking lot and bike lockers in podium parking garage for pro rata allocation amongst Tenants	X		
4. Campus electrical vehicle charging stations for pro rata allocation amongst Tenants	X		
5. Electric vehicle charging fees		X	
6. Exterior amenities space including all hardscape and landscape, lighting, and recreational infrastructure (volleyball/basketball sport court, bocce ball, trellis)	X		
7. Bus stop wind screens for local commuter shuttle service	X		
8. Service yard foundation, structure, covered enclosure, and waterproofing for trash containers and dedicated nitrogen storage area for allocation amongst tenants per lease agreement	X		
9. Nitrogen sources and all associated infrastructure/systems (tanks, generator, piping, etc.)		X	
10. Foundation and enclosure for Landlord provided diesel powered emergency generator	X		
11. Loading dock with at-grade shipping/receiving area with (2) hydraulic scissor lifts	X		
STRUCTURE			
1. Pile supported structural slab-on-grade foundation system consisting of steel-reinforced concrete auger- cast piles, pile caps, and horizontal grade beams	X		

DESCRIPTION	Landlord	Tenant	Landlord at Tenant's Expense
2. Steel superstructure consisting of steel columns, girders, beams, and concrete slab on composite metal deck, with live load capacity of 125 psf (reducible)	X		
3. Type II A construction, code required primary structural fireproofing	X		
4. Slab edge fire safing	X		
5. Cover to conceal slab edge fire safing		X	
6. Supplemental structural members for additional tenant loads, vibration criteria, or tenant standards		X	
7. Lateral seismic system utilizing buckling-restrained braced frames. Importance factor is 1.0	X		
8. Roof deck framing with live load capacity of 20 psf	X		
9. Mechanical platform and roof penthouse with live load capacity of 75 psf	X		
10. Supplemental structural support for tenant roof equipment, including but not limited to galvanized beams on platform, grating, rails, and all associated fireproofing		X	
11. Roof screen	X		
12. Floor to floor height of 17', all floors (podium at 14')	X		
13. Framed openings for Base Building utility risers	X		
14. Framed openings for Tenant utility risers in predetermined spaces		X	
15. Stairs and stair enclosures per code requirements, including enclosure doors, handrails, and guardrails. Roof penthouse access for (1) set of stairs	X		
16. Column furring		X	
17. Window washing davit basis and arms	X		
18. Miscellaneous metals items and/or concrete pads for Base Building equipment	X		
19. Miscellaneous metals items and/or concrete pads for Tenant equipment		X	
ROOFING			
1. 60 MIL single-ply thermoplastic polyolefin (TPO) white or gray roof membrane	X		
2. Rigid insulation, flashing, and sealants	X		
3. Roofing penetrations for Base Building equipment/systems	X		
4. Roofing penetrations for Tenant equipment/systems		X	

DESCRIPTION	Landlord	Tenant	Landlord at Tenant's Expense
5. Walkway pads along roof perimeter, outside of screened area	X		
6. Walkway pads to Tenant equipment		X	
7. Roofing alterations due to Tenant changes		X	
8. Penthouse roof penetrations – not allowed	N/A	N/A	N/A
EXTERIOR			
1. Non load-bearing glazed aluminum curtain wall and glass fiber reinforced concrete (GFRC) panel building enclosure system	X		
2. Building entrances and openings	X		
3. Opening for freight elevator access in Service Yard	X		
4. Service Yard overhead door, serving Base Building Electrical Room	X		
5. Service Yard rolling green screen gate	X		
COMMON AREAS			
1. Podium parking area with card reader controlled lift gate and roll-up doors	X		
2. Build-out of Main Lobby	X		
3. Stair enclosures painted at all building levels	X		
4. Two (2) B-Occupancy Chemical Storage Rooms with 1- hour fire rated assembly, depressed pit (18"), and 100% outside air ventilation (900 cfm/room) for allocation amongst tenants per lease agreement.	X		
5. Improvements to Chemical Storage Room, including changes in occupancy, installation of grating, ramping, self-contained bunkers, exhaust, exhaust risers, etc. The total exhaust for the room is not to exceed 900 cfm without prior written Landlord approval.		X	
6. Electrical Room	X		
7. Emergency Electrical Room	X		
8. Domestic Pump Room	X		
9. Fire Booster Pump Room	X		
10. Elevator Control Room	X		
11. Telecommunications Main Point of Entry (MPOE) Room	X		
12. Service Yard/Loading Dock Area, including space for trash enclosure, nitrogen storage, and generator enclosure	X		

DESCRIPTION	Landlord	Tenant	Landlord at Tenant's Expense
13. Usage of Amenities Space including food service, fitness center, and recreational area (located in Building 3)	X		
ELEVATORS			
1. Two (2) passenger elevators; 3,500 lbs., 350 fpm	X		
2. One (1) freight elevator; 5,000 lbs., 200 fpm	X		
3. Recessed elevator pits for three (3) elevators	X		
4. No elevator access to roof	N/A	N/A	N/A
5. Smoke guards at elevators on Tenant floors, if required		X	
WINDOW TREATMENT			
1. Furnish and install Building Standard shades for all windows per Tenant Improvement Construction Manual		X	
2. Window treatment at vision glass windows/curtain wall to address perimeter lab bench/casework installation. Treatment to adhere to Building Standards per Tenant Improvement Construction Manual.		X	
TENANT AREAS			
1. Restroom Cores: one (1) set per floor including Men's and Women's Restrooms with (1) ADA shower each with bench and lockers, ceramic tile floors and wet walls, solid surface countertops, floor mounted metal partitions, hard lid ceiling, down lights and ADA low-flow plumbing fixtures	X		
2. Janitor Closet – one (1) per floor	X		
3. Stud wall framing at restroom core to underside of slab	X		
4. Fire-rated assembly at restroom core to 6" above ceiling	X		
5. Wall assembly at restroom core to underside of slab (fire-rating as required)		X	
6. Electrical Room – one (1) per floor consisting of concrete floor, unfinished drywall and taped walls, no ceiling	X		
7. Future Electrical Room		X	
8. Intermediate Distribution Frame (IDF) Room – one (1) per floor consisting of concrete floor, unfinished drywall and taped walls, no ceiling	X		

DESCRIPTION	Landlord	Tenant	Landlord at Tenant's Expense
9. Future IDF Room		X	
10. Finish (wall finish, flooring, ceiling) IDF and Electrical Rooms		X	
11. Accessible "Patio" – Fifth Floor only. Landlord-maintained retractable davit arms stored in enclosure on Tenant patio.	X		
12. Finishes of inside face at Tenant side of core partitions		X	
13. Modifications to core areas to accommodate Tenant requirements		X	
14. Partitions, ceilings, flooring, painting, finishes, doors, frames, hardware, millwork, casework, and tenant improvement build-out		X	
15. Fixed or movable casework		X	
16. Laboratory Equipment		X	
17. Chemical Fume Hoods and Bio Safety Cabinets		X	
18. Finishes at common corridors on floors with multiple Tenants	X		
19. Shaft enclosures for Base Building system risers	X		
20. Shaft enclosures for Tenant risers		X	
FIRE PROTECTION			
1. Fire booster pump room including fire department connection, alarm valve, and fire sprinkler booster pump	X		
2. Wet fire protection system (risers, Core area risers, distribution piping, and sprinkler heads)	X		
3. Stair risers, distribution piping, and sprinkler heads for core and shell coverage	X		
4. Primary distribution and sprinkler heads adequate for "Ordinary Hazard, Group 2" for core and shell coverage	X		
5. All additional distribution piping, drop heads, and related equipment within Tenant premises		X	
6. Modification of sprinkler piping and head locations to suit Tenant layout and occupancy type alterations		X	
7. Specialized extinguishing systems		X	
8. Pre-action dry pipe systems		X	
9. Fire extinguisher cabinets at core areas	X		
10. Fire extinguisher cabinets in Tenant Premises		X	

DESCRIPTION	Landlord	Tenant	Landlord at Tenant's Expense
11. Fire safing at Base Building vertical penetrations, including penetrations for mechanical, electrical, and plumbing systems	X		
12. Fire safing at Tenant vertical penetrations, including penetrations for mechanical, electrical, and plumbing systems		X	
PLUMBING			
1. Building storm and overflow drainage system, including site underground storm sewer system and connection to storm sewer mains	X		
2. Sand/Oil separator with connection to street	X		
3. Domestic water service with backflow prevention and Base Building risers to Tenant spaces	X		
4. Domestic water booster pump	X		
5. Domestic water distribution within Tenant Premises		X	
6. Domestic water service sub meters at Tenant tie-ins		X	
7. Building lab waste consisting of underslab piping under podium parking, risers, and stubs in Tenant space	X		
8. Lab waste distribution within Tenant space		X	
9. Lab waste connection to sanitary sewer, lab waste sampling port at connection	X		
10. Building sanitary sewer service with piping distribution to restroom cores and risers stubbed in Tenant space	X		
11. Domestic sanitary sewer connection to street	X		
12. Sanitary sewer distribution servicing Tenant space		X	
13. Main water meter and irrigation meter	X		
14. One (1) roof mounted electric water heater serving all Restrooms	X		
15. Core restroom plumbing fixtures compliant with accessibility requirements	X		
16. Tenant restroom plumbing fixtures compliant with accessibility requirements		X	
17. Process equipment and piping		X	
NATURAL GAS			
1. Medium pressure natural gas service to Building	X		
2. Natural gas riser to the roof and service to Base Building boilers	X		
3. Natural gas riser to the roof capped for future use	X		

DESCRIPTION	Landlord	Tenant	Landlord at Tenant's Expense
4. Natural gas service, pressure regulator, and meter for Tenant equipment		X	
5. Natural gas piping from Base Building stub at roof to Tenant equipment area		X	
6. Natural gas pipe distribution within Tenant Premises		X	
HEATING, VENTILATION, AIR CONDITIONING			
1. Two (2) 90,000 cfm 100% outside air roof mounted air handlers serving Tenant lab spaces, allocation to Tenant space: standard 22,500 cfm per unit per floor (connected to standby power)	X		
2. Two (2) 40,000 cfm supply/return roof mounted air handlers serving Tenant office spaces, allocation to Tenant space: standard 10,000 cfm per unit per floor	X		
3. Two (2) 5,000 MBH input gas fired hot water boilers (connected to standby power)	X		
4. Two (2) 500 ton centrifugal chillers	X		
5. Two (2) 500 ton cooling towers	X		
6. Secondary mechanical equipment, including pumps, roof ducting, piping, valves, manifolds, etc. to support Base Building mechanical systems	X		
7. Hot water pipe risers, stubbed in Tenant space	X		
8. Hot water pipe distribution within Tenant Premises		X	
9. Reheat coils within Tenant Premises		X	
10. Reheat coils within core areas	X		
11. Vertical supply air duct risers	X		
12. Vertical return air duct risers	X		
13. Supply air duct distribution, VAV terminals, equipment connections, insulation, air terminals, dampers, hangers, etc. within Tenant Premises.		X	
14. Supply air duct distribution, VAV terminals, equipment connections, insulation, air terminals, dampers, hangers, etc. within core areas	X		
15. Two (2) roof mounted dilution lab exhaust fan systems with 94,000 cfm capacity each, allocation to Tenant space: standard 23,500 cfm per system per floor (connected to standby power)	X		
16. Exhaust air duct distribution, exhaust air valves, equipment connections, insulation, air terminals, dampers, hangers, etc. within Tenant Premises		X	

DESCRIPTION	Landlord	Tenant	Landlord at Tenant's Expense
17. Exhaust air duct distribution, exhaust air valves, equipment connections, insulation, air terminals, dampers, hangers, etc. within core areas	X		
18. Restroom exhaust for Base Building restrooms	X		
19. Specialty exhaust for tenant needs, including "H" & "L" Occupancy zones		X	
20. Specialty cooling for tenant needs		X	
21. Ventilation system for Base Building Electrical Room	X		
22. Exhaust fan, side wall grille supply, and fire smoke dampers for ventilation of Base Building Electrical Rooms on each floor	X		
23. Ventilation of IDF Rooms		X	
24. Building Management System (BMS) for core area and Landlord infrastructure	X		
25. BMS (compatible with Landlord's system) within Tenant Premises monitoring Tenant infrastructure		X	
ELECTRICAL			
1. Site campus medium voltage distribution system with connection to PG&E grid	X		
2. 5,000 amp 480/277V Base Building substation with underground primary feeder to campus main switchgear	X		
3. Standard power bus duct risers providing 400 amps per floor	X		
4. One (1) 1500 kW diesel standby power generator	X		
5. Standby power bus duct risers providing 188 kW per floor	X		
6. Automatic transfer switch for Tenant load	X		
7. Standby power distribution within Tenant Premises		X	
8. Uninterrupted power supply (UPS) for tenant systems		X	
9. Lighting and power distribution for core areas	X		
10. Lighting and power distribution for Tenant Premises		X	
11. Electrical sub-metering for Tenant power at standard and standby duct risers		X	
12. Base Building common area life safety emergency lighting/signage	X		
13. Tenant Premises life safety emergency lighting/signage		X	
14. Tenant panels, transformers, etc. in addition to Base Building		X	

DESCRIPTION	Landlord	Tenant	Landlord at Tenant's Expense
15. Distributed Antenna System (DAS) consisting of head-end system, roof-mounted antenna, and 2" conduit risers in stair shafts. No coverage within Tenant premises.	X		
16. Supplementary Distributed Antenna System (DAS) design & construction as required to achieve city-required DAS signal coverage within Tenant premises, consisting of (but not limited to) antenna repeaters, rated conduit, tie-in to Base Building System, programming, and jurisdictional required system testing		X	
FIRE ALARM			
1. Base Building fire alarm system with devices in core areas	X		
2. Fire Alarm Termination Cabinet (FATC) within each Electrical Room	X		
3. Fire alarm sub panels and devices for Tenant Premises with integration into Base Building system		X	
4. Alteration to fire alarm system to facilitate Tenant program		X	
TELEPHONE/DATA			
1. Underground local fiber optic & telephone conduit only to MPOE Room	X		
2. Underground local fiber optic & telephone carrier service to MPOE Room for Tenant Services		X	
3. Two (2) 4" conduit risers from MPOE to Intermediate Distribution Frame (IDF) Room on each floor	X		
4. Sleeves for future conduit riser from IDF Rooms to the roof; Landlord approval required for use	X		
5. Conduit from IDF to the roof		X	
6. Tel/Data cabling from MPOE to IDF Rooms		X	
7. Tel/data infrastructure including, but not limited to, servers, computers, phone systems, switches, routers, equipment racks, ladder racks, etc.		X	
8. Audio visual systems and support		X	
9. Cabling from Tenant IDF Room to all Tenant locations, within the suite and exterior to the suite, if needed		X	
10. Campus telecommunications loop consisting of two (2) 4" conduits, linking existing and future buildings on campus	X		

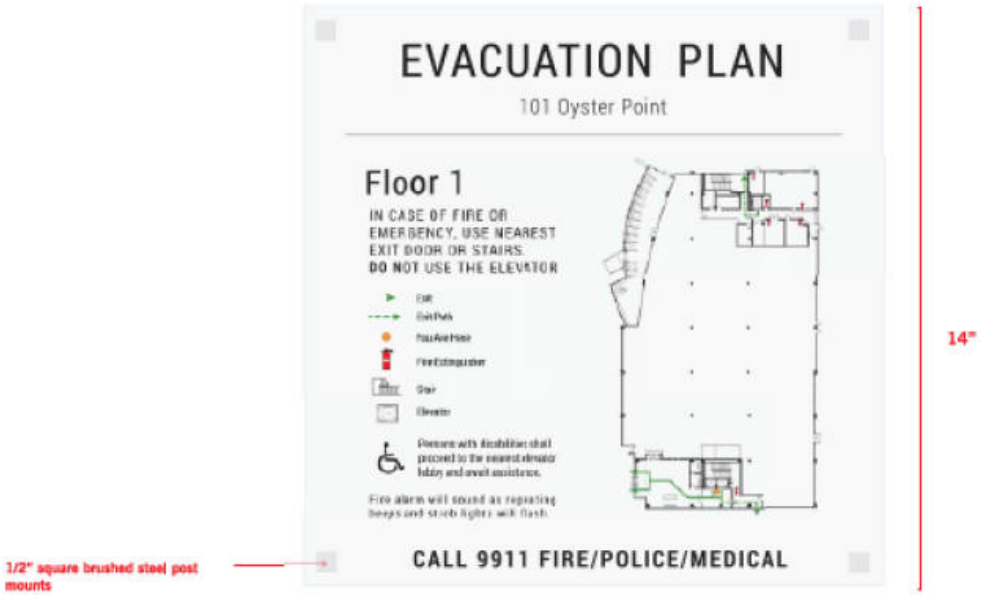
DESCRIPTION	Landlord	Tenant	Landlord at Tenant's Expense
11. One (1) 4" conduit security communications loop	X		
12. Two (2) 4" conduits connecting Building 3 MPOE Room with Building 4 MPOE Room	X		
SECURITY			
1. Card access at Building entries	X		
2. Card access into or within Tenant Premises on separate Tenant installed and managed system		X	
3. Video surveillance and intercom system at entrance and receiving doors of the Building	X		
4. Main Lobby desk for future security operations. Security guard scope TBD	X		

APPENDIX C

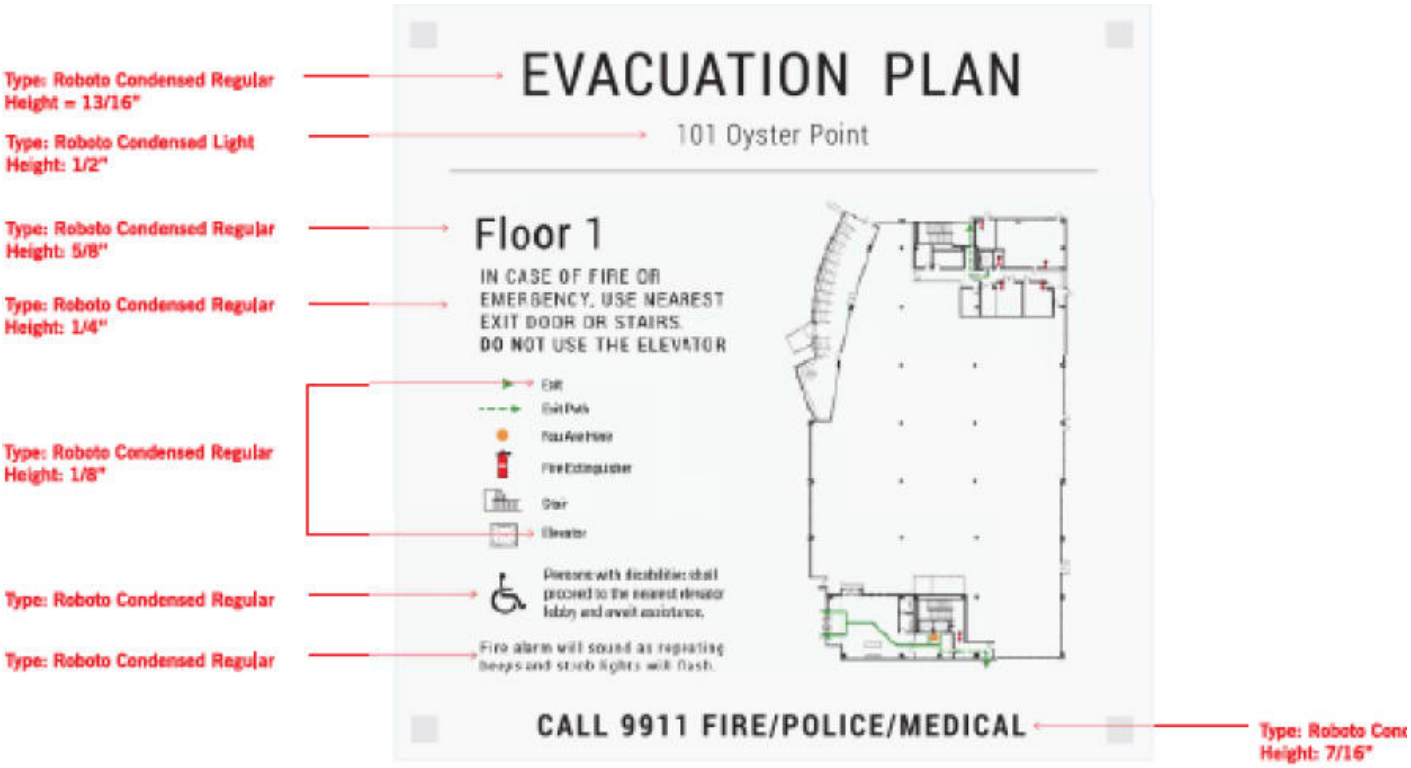
Evacuation Signage Details: Building 4

Material: Non-glare Plexi Glass with 5 color screen printed graphics.

DES
ARCHITECTS
ENGINEERS



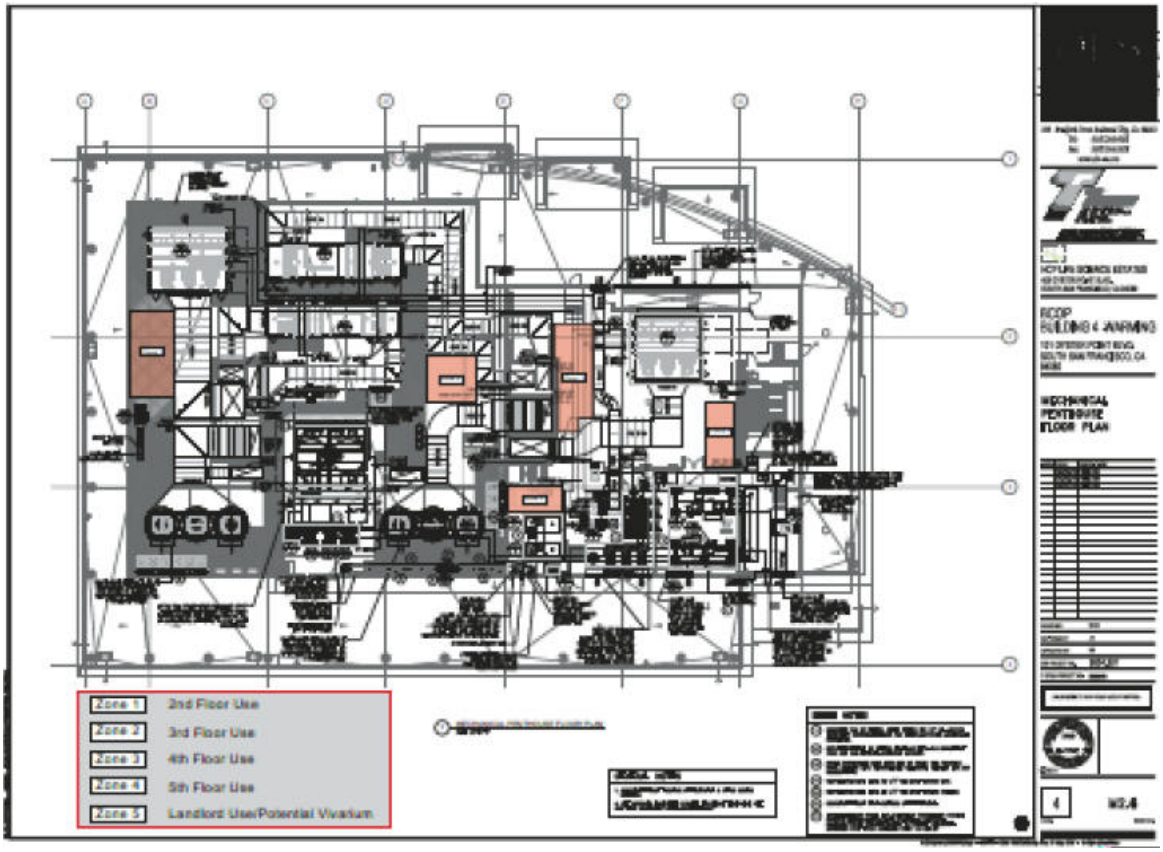
Material: Non-glare Plexi Glass with 5 color screen printed graphics.



Material: Non-glare Plexi Glass with 5 color screen printed graphics.

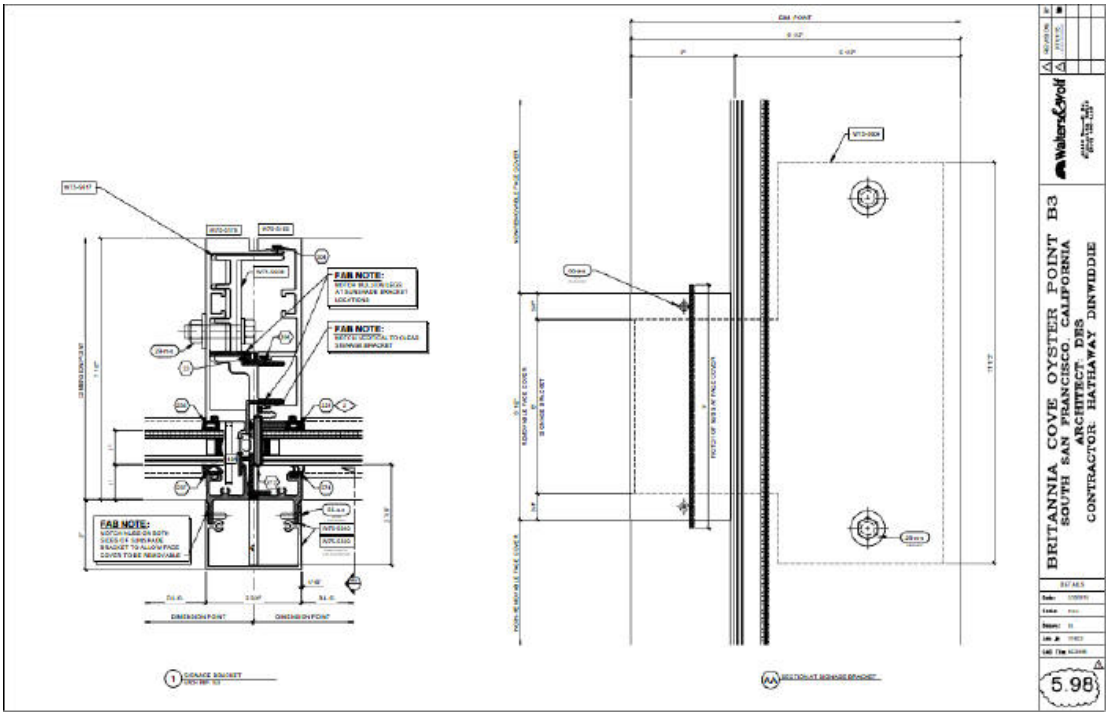
APPENDIX D

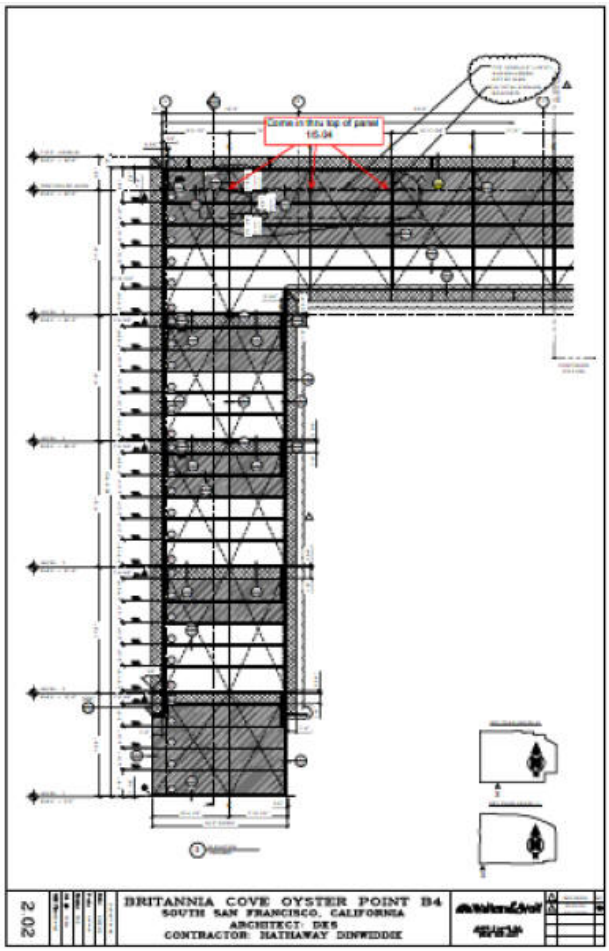
Roof Zone Designations: Building 4


Zone 1 2nd Floor Use
Zone 2 3rd Floor Use
Zone 3 4th Floor Use
Zone 4 5th Floor Use
Zone 5 Landlord Use/Potential Vivarium

APPENDIX E

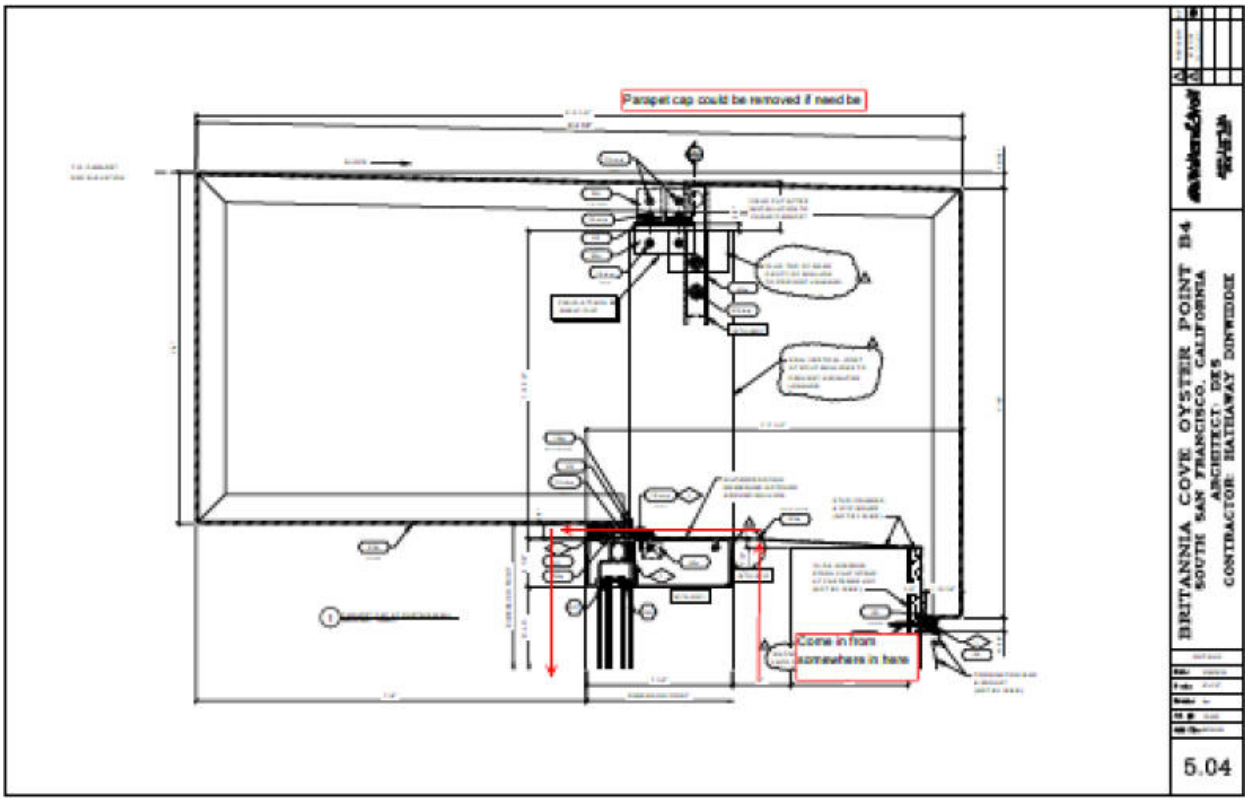
Exterior Façade Signage Installation Details: Building 4


FAB NOTE:
FAB NOTE:
FAB NOTE:
DIMENSION POINT
DIMENSION POINT
1 SIGNAGE BRACKET
AA SECTION AT SIGNAGE BRACKET
BRITANNIA COVE OYSTER POINT B3
SOUTH SAN FRANCISCO, CALIFORNIA
ARCHITECT: DES
CONTRACTOR: HATHAWAY DINWIDDIE
Walters&Cohol
DETAILS
5.98



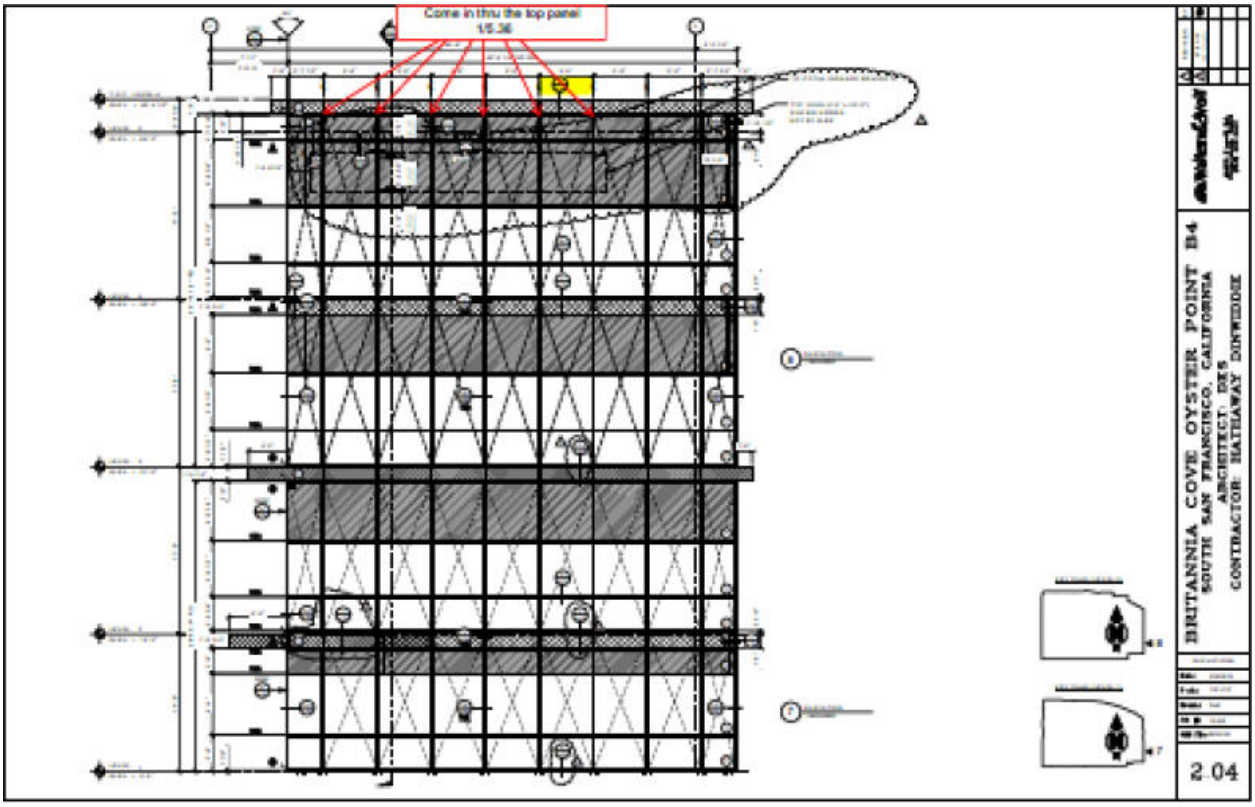
2 of 2

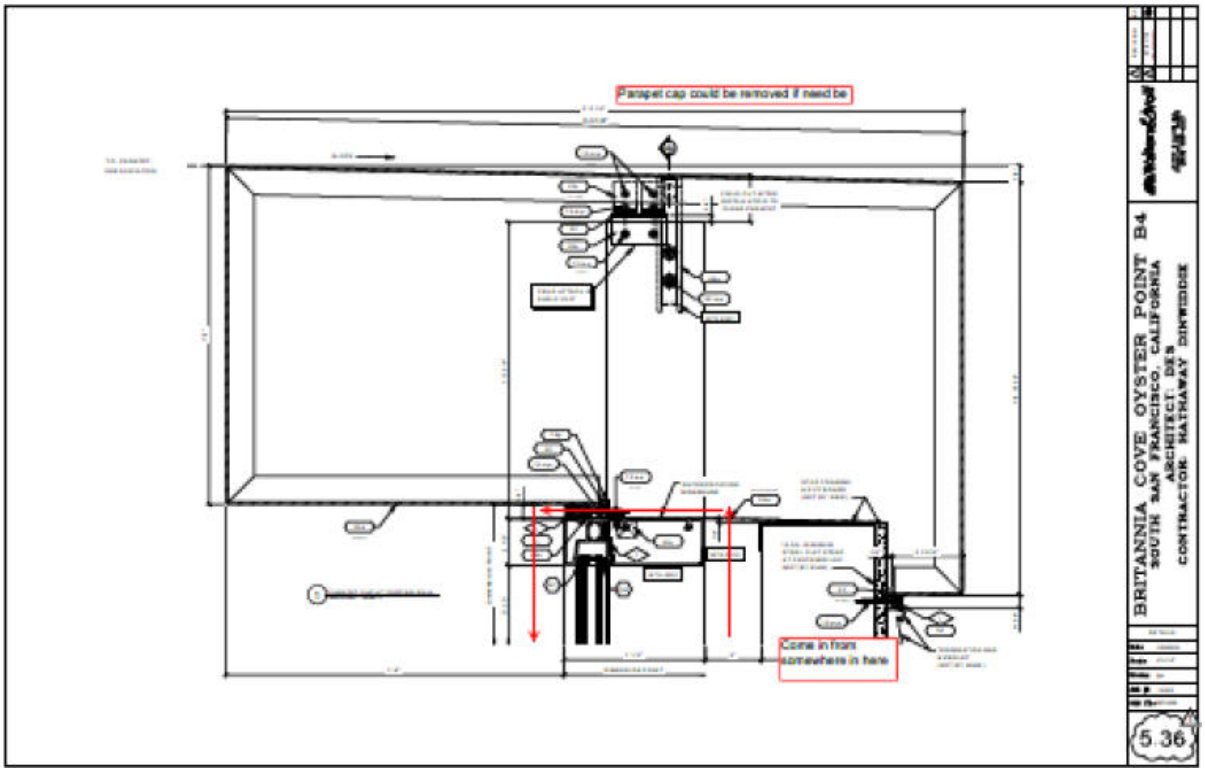
BRITANNIA COVE OYSTER POINT B4
SOUTH SAN FRANCISCO, CALIFORNIA
ARCHITECT: DES
CONTRACTOR: HATHAWAY DINWIDDIE



BRITANNIA COVE OYSTER POINT B4
SOUTH SAN FRANCISCO, CALIFORNIA
ARCHITECT: DES
CONTRACTOR: HATTEAWAY DIVINEDGE

5.04


Come in thru the top panel
1/8.36
BRITANNIA COVE OYSTER POINT B4
SOUTH SAN FRANCISCO, CALIFORNIA
ARCHITECT: DES
CONTRACTOR: HATTAWAY DUNWIDDIE
2.04



BRITANNIA COVE OYSTER POINT B4
SOUTH SAN FRANCISCO, CALIFORNIA
ARCHITECT: DES
CONTRACTOR: HATHAWAY DINWIDDIE

5.36

APPENDIX F

Generator & Automatic Transfer Switch Description: Building 4

February 19, 2015

Reference: Britannia Cove, So San Francisco

Collicutt Energy would like to quote the standby generator, generator set accessories and automatic transfer switches.

Outdoor Application: Bldg #4

Engine Generator Description: EPA CERTIFIED TIER II: UL2200 RATED Diesel packaged generator set rated for 1500kW standby duty, 277/480 VAC, 3 Phase, 60Hz, and included the accessories shown below:

130 degree C, rated alternator, with voltage regulator, and permanent magnet
excitation for 300% current protection
Alternator strip heater, 120/240V

Air cleaner with service indicator
Lubricating oil cooler
Lube oil
Factory mounted fuel filter assembly
Lubricating oil filters
Pumps, fuel priming, jacket water, and lube oil
Coolant thermostats and housing
Unit mounted radiator, rated 122 degrees
Engine coolant and antifreeze
Electronic isochronous governor system
Formed steel base
Exhaust manifold

Electric starter motor, 24 VDC
Lead cadmium-starting batteries with rack and cables
Engine charging alternator, 24 VDC
Battery heater, 120V
Battery charger, 24 VDC, 10 amps with low voltage, high voltage and charge
failure alarm relays
Jacket coolant heater, 240 VAC

Sound Attenuated Weather Protective Enclosure rated 75 dba @ 23'
Heavy-duty gauge steel metal construction, powder coated baked paint Fixed intake & outlet louver, lockable gasketed doors, rust free door hinges and locks

AC load center, single phase 120/240 w/ incandescent lights and wiring of heaters and battery charger Lube oil, coolant and fumes disposal lines terminated on the base frame

Load tap box mounted to exterior of generator set enclosure wired to generator addl 2500AT protective breaker

Critical grade silencer mounted within enclosure

1350 Gallon UL142 sub base tank mounted below generator enclosure

12 Hour rating @ 100% load conditions
Five gallon spill/fill w/ 95% overfill prevention valve
Dual wall construction/ rupture basin w/leak alarm wired to control panel
2’ manual fill — internal located with normal and emergency relief venting
High/low fuel alarms, leak alarm sensor wired to control panel
(UL2085 protected tank not provided or requested in electrical narrative)

Vibration spring isolators with anchorage calculations.

Kohler Control Panel, Unit mounted: Decision Maker 550 Digital

Unit mounted
Generator control/instrument panel includes:
Control & Monitoring

Digital ammeter, voltmeter and frequency meter
Ammeter/voltmeter phase selector switch
Voltage adjust rheostat
Automatic/manual start-stop control
Engine Control switch for off/reset, auto start, manual start, and stop
Cycle cranking
Cool down timer
Emergency Stop push button
Safety shutdown protection and LED indicators for:

Low oil pressure, high coolant temp., over crank, over speed, emergency stop, spare alarms, spare shutdowns

NFPA 110 alarm module to include flashing LEDs and horn to annunciate:

High coolant temperature alarm, low coolant temperature alarm, low oil pressure alarm, low DC volts alarms, system not in automatic model, low fuel level, battery charger malfunction

Digital display for:

Coolant temp., oil pressure, service hours, engine RPM, system DC volts, system diagnostic codes

Panel light with on/off switch
3000-amp, 100% rated main line circuit breaker, LSI, 3 poles, mounted in generator extension box (standard lugs supplied)

2500-amp, 100% rated load bank circuit breaker, LSI, 3 poles, mounted in generator extension box

AUTOMATIC TRANSFER SWITCHES/BYPASS ISOLATION: KOHLER

Location	Qty	Size
ATS	1	1200 amp, three poles, four wire
ATS	1	1000 amp, four poles, four wire
ATS	1	260 amp, four poles, four wire

Programmed (1000A & 1200A) & Open transition (260A) rated automatic transfer switch consisting of the following:

Under voltage sensing of normal source
Under voltage sensing of emergency source
Time delay to override momentary normal source

Time delay on retransfers to normal
Time delay to control contact transition time on transfer to either source
Programmable voltage and frequency sensing
Programmable load test function to simulate normal power failure
Contact to close on failure to normal source to initial engine starting
Auxiliary contacts closed in normal position
Auxiliary contacts closed in emergency position
UL1008 listed
Nema 1 enclosure

GENERATOR TESTING

Kohler factory prototype test reports provided for verification of testing requirements.

Collicutt Energy shall perform demonstration of system functions; start up assistance, verification of interface of generator set and automatic transfer switch and building load transfer tests.

Engine generator load testing for two hours at unity power factor with recording of electrical functions. *Kohler service dept to provide load banks and 50' cable for testing purposes. Installation contractor must provide drayage if area is beyond provided cable run.* End user training provided.

Kohler five year limited warranty

APPENDIX G
Project Directory

Landlord
HCP, Inc.
HCP Oyster Point III LLC
950 Tower Lane, Suite 1650
Foster City, CA 94404
Contact: Scott Bohn

Project Management
Project Management Advisors, Inc.
1 Tower Place, Suite 200
South San Francisco, CA 94080
Contact: Jerry Colomb

Base Building General Contractor
Hathaway Dinwiddie Construction
250 East Grand, Suite 40
South San Francisco, CA 94080
Contact: Sara Carmody

Base Building Architect
DES Architects + Engineers, Inc.
399 Bradford Street
Redwood City, CA 94063
Contact: Kevin Norman

Base Building Structural Engineer
DES Architects + Engineers, Inc.
399 Bradford Street
Redwood City, CA 94063
Contact: Kevin Norman

Window Shade Manufacturer
Mariak
575 West Manville Street
Rancho Dominguez, CA 90220
Contact: Greg Sison

Window Film Manufacturer
Window Works
400 Reed Street
Santa Clara, CA 95050
Contact: Asia Bautista

Roof Installer
Alcal Specialty Contracting, Inc.
42950 Osgood Road
Fremont, CA 94539
Contact: Jaime Arellano

Electric Meter Supplier
Graybar
Contact: Robert Menzies

Electric Meter Programming
Square D
Contact: Joe Kneiss

Building Envelope
Walters & Wolf
2990 3rd Street
San Francisco, CA 94107

Base Building Emergency Systems
Cupertino Electric, Inc.
1132 North 7th Street
San Jose, CA 95112
Contact: Tony Locatelli

Signage
Arrow Sign Company
1051 46th Avenue
Oakland, CA 94601
Contact: Jeremy Blackburn

EXHIBIT C

THE COVE AT OYSTER POINT

NOTICE OF LEASE TERM DATES

TENAYA THERAPEUTICS
171 Oyster Point, 5TH Floor
South San Francisco, CA 94080

Re: That certain Lease dated September 6, 2016 by and between **HCP OYSTER POINT III, LLC**, a Delaware limited liability company ("**Landlord**") and **TENAYA THERAPEUTICS**, a Delaware corporation ("**Tenant**"), as successor by assignment from **THE COLUMN GROUP, LLC** for a certain premises located at 171 Oyster Point Boulevard, 5th Floor, South San Francisco, California 94080.

In accordance with the Lease (the "**Lease**"), we wish to advise you and/or confirm as follows:

1. The Lease Term shall commence on or has commenced on **June 1, 2017** for a term of **ninety-six (96) months** ending on **May 31, 2025**.

2. Base Rent commenced to accrue on **June 1, 2017**, in the amount of **$78,497.25**.

3. Your rent checks should be made payable to:

   HCP Life Science Reit
   File 55142
   Los Angeles, California 90074-1142

4. The exact number of rentable/usable square feet within the Premises is **32,370** square feet.

5. Tenant's Share based upon the number of usable square feet within the Premises is **24.38**%.

"LANDLORD":

HCP OYSTER POINT III, LLC,
a Delaware limited liability company

By: /s/ Jonathan M. Bergschneider
Its: Senior Managing Director

Agreed to and Accepted as
of _____, 20 ____.

"TENANT":

TENAYA THERAPEUTICS
A Delaware corporation

By: /s/ JeenJoo S. Kang
Its: President

EXHIBIT D

FORM OF TENANT'S ESTOPPEL CERTIFICATE

The undersigned as Tenant under that certain Lease (the "**Lease**") made and entered into as of _____, 20__ by and between _____ as Landlord, and the undersigned as Tenant, for Premises consisting of a portion of the building located at _____, California, certifies as follows:

1. Attached hereto as **Exhibit A** is a true and correct copy of the Lease and all amendments and modifications thereto. The documents contained in **Exhibit A** represent the entire agreement between the parties as to the Premises.

2. The undersigned currently occupies the Premises described in the Lease, the Lease Term commenced on _____, and the Lease Term expires on _____, and the undersigned has no option to terminate or cancel the Lease or to purchase all or any part of the Premises, the Building and/or the Project, except as expressly set forth in the Lease.

3. Base Rent became payable on _____.

4. The Lease is in full force and effect and has not been modified, supplemented or amended in any way except as provided in **Exhibit A**.

5. Tenant has not transferred, assigned, or sublet any portion of the Premises nor entered into any license or concession agreements with respect thereto except as follows:

6. Tenant shall not modify the documents contained in **Exhibit A** without the prior written consent of Landlord's mortgagee.

7. All monthly installments of Base Rent, all Additional Rent and all monthly installments of estimated Additional Rent have been paid when due through _____. The current monthly installment of Base Rent is $_____.

8. To Tenant's actual knowledge, without inquiry, all conditions of the Lease to be performed by Landlord necessary to the enforceability of the Lease have been satisfied and Landlord is not in default thereunder. In addition, the undersigned has not delivered any notice to Landlord regarding a default by Landlord thereunder. The Lease does not require Landlord to provide any rental concessions or to pay any leasing brokerage commissions except as expressly set forth therein.

9. No rental has been paid more than thirty (30) days in advance and no security has been deposited with Landlord except as provided in the Lease. Neither Landlord, nor its successors or assigns, shall in any event be liable or responsible for, or with respect to, the retention, application and/or return to Tenant of any security deposit paid to any prior landlord of the Premises, whether or not still held by any such prior landlord, unless and until the party from whom the security deposit is being sought, whether it be a lender, or any of its successors or assigns, has actually received for its own account, as landlord, the full amount of such security deposit.

10. To Tenant's actual knowledge, without inquiry, as of the date hereof, there are no existing defenses or offsets, or, to the undersigned's knowledge, claims or any basis for a claim, that the undersigned has against Landlord.

11. If Tenant is a corporation or partnership, Tenant hereby represents and warrants that Tenant is a duly formed and existing entity qualified to do business in California and that Tenant has full right and authority to execute and deliver this Estoppel Certificate and that each person signing on behalf of Tenant is authorized to do so.

12. There are no actions pending against the undersigned under the bankruptcy or similar laws of the United States or any state.

13. Tenant is in full compliance with all federal, state and local laws, ordinances, rules and regulations affecting its use of the Premises, including, but not limited to, those laws, ordinances, rules or regulations relating to hazardous or toxic materials. Tenant has never permitted its agents, employees or contractors to engage in the generation, manufacture, treatment, use, storage, disposal or discharge of any hazardous, toxic or dangerous waste, substance or material in, on, under or about the Project or the Premises or any adjacent premises or property in violation of any federal, state or local law, ordinance, rule or regulation.

14. To the undersigned's knowledge, all tenant improvement work to be performed by Landlord under the Lease has been completed in accordance with the Lease and has been accepted by the undersigned and all reimbursements and allowances due to the undersigned under the Lease in connection with any tenant improvement work have been paid in full. All work (if any) in the common areas required by the Lease to be completed by Landlord has been completed and all parking spaces required by the Lease have been furnished and/or all parking ratios required by the Lease have been met.

The undersigned acknowledges that this Estoppel Certificate may be delivered to Landlord or to a prospective mortgagee or prospective purchaser, and acknowledges that said prospective mortgagee or prospective purchaser will be relying upon the statements contained herein in making the loan or acquiring the property of which the Premises are a part and that receipt by it of this certificate is a condition of making such loan or acquiring such property.

Executed at _____ on the ____ day of _____, 20____.

"Tenant":

_____,
a _____

By: _____
Its: _____

By: _____
Its: _____

EXHIBIT E

ENVIRONMENTAL QUESTIONNAIRE

ENVIRONMENTAL QUESTIONNAIRE
FOR COMMERCIAL AND INDUSTRIAL PROPERTIES

Property Name: _____

Property Address: _____

Instructions: The following questionnaire is to be completed by the Lessee representative with knowledge of the planned operations for the specified building/location. Please print clearly and attach additional sheets as necessary.

1.0 PROCESS INFORMATION

Describe planned use, and include brief description of manufacturing processes employed.

_____

_____

_____

2.0 HAZARDOUS MATERIALS

Are hazardous materials used or stored? If so, continue with the next question. If not, go to Section 3.0.

2.1 Are any of the following materials handled on the Property? Yes ☐ No ☐

(A material is handled if it is used, generated, processed, produced, packaged, treated, stored, emitted, discharged, or disposed.) If so, complete this section. If this question is not applicable, skip this section and go on to Section 5.0.

☐ Explosives
☐ Solvents
☐ Acids
☐ Gases
☐ Other (please specify)
☐ Fuels
☐ Oxidizers
☐ Bases
☐ PCBs
☐ Oils
☐ Organics/Inorganics
☐ Pesticides
☐ Radioactive Materials

2-2. If any of the groups of materials checked in Section 2.1, please list the specific material(s), use(s), and quantity of each chemical used or stored on the site in the Table below. If convenient, you may substitute a chemical inventory and list the uses of each of the chemicals in each category separately.

Material	Physical State (Solid, Liquid, or Gas)	Usage	Container Size	Number of Containers	Total Quantity

2-3. Describe the planned storage area location(s) for these materials. Please include site maps and drawings as appropriate.

_____

_____

_____

3.0 HAZARDOUS WASTES

Are hazardous wastes generated? Yes ☐ No ☐

If yes, continue with the next question. If not, skip this section and go to section 4.0.

3.1 Are any of the following wastes generated, handled, or disposed of (where applicable) on the Property?

☐ Hazardous wastes ☐ Industrial Wastewater
☐ Waste oils ☐ PCBs
☐ Air emissions ☐ Sludges
☐ Regulated Wastes ☐ Other (please specify)

3-2. List and quantify the materials identified in Question 3-1 of this section.

WASTE GENERATED	RCRA listed Waste?	SOURCE	APPROXIMATE MONTHLY QUANTITY	WASTE CHARACTERIZATION	DISPOSITION

3-3. Please include name, location, and permit number (e.g. EPA ID No.) for transporter and disposal facility, if applicable). Attach separate pages as necessary.

Transporter/Disposal Facility Name	Facility Location	Transporter (I) or Disposal (D) Facility	Permit Number

3-4. Are pollution controls or monitoring employed in the process to prevent or minimize the release of wastes into the environment? Yes ☐ No ☐

3-5. If so, please describe.

4.0 USTS/ASTS

4.1 Are underground storage tanks (USTs), aboveground storage tanks (ASTs), or associated pipelines used for the storage of petroleum products, chemicals, or liquid wastes present on site (lease renewals) or required for planned operations (new tenants)? Yes___No___

If not, continue with section 5.0. If yes, please describe capacity, contents, age, type of the USTs or ASTs, as well any associated leak detection/spill prevention measures. Please attach additional pages if necessary.

Capacity	Contents	Year Installed	Type (Steel, Fiberglass, etc)	Associated Leak Detection / Spill Prevention Measures*

*Note: The following are examples of leak detection / spill prevention measures:

Integrity testing	Inventory reconciliation	Leak detection system
Overfill spill protection	Secondary containment	Cathodic protection

4-2. Please provide copies of written tank integrity test results and/or monitoring documentation, if available.

4-3. Is the UST/AST registered and permitted with the appropriate regulatory agencies? Yes ☐ No ☐
If so, please attach a copy of the required permits.

4-4. If this Questionnaire is being completed for a lease renewal, and if any of the USTs/ASTs have leaked, please state the substance released, the media(s) impacted (e.g., soil, water, asphalt, etc.), the actions taken, and all remedial responses to the incident.

4-5. If this Questionnaire is being completed for a lease renewal, have USTs/ASTs been removed from the Property? Yes ☐ No ☐

If yes, please provide any official closure letters or reports and supporting documentation (e.g., analytical test results, remediation report results, etc.).

4-6. For Lease renewals, are there any above or below ground pipelines on site used to transfer chemicals or wastes? Yes ☐ No ☐

For new tenants, are installations of this type required for the planned operations?

Yes ☐ No ☐

If yes to either question, please describe.

5.0 ASBESTOS CONTAINING BUILDING MATERIALS

Please be advised that an asbestos survey may have been performed at the Property. If provided, please review the information that identifies the locations of known asbestos containing material or presumed asbestos containing material. All personnel and appropriate subcontractors should be notified of the presence of these materials, and informed not to disturb these materials. Any activity that involves the disturbance or removal of these materials must be done by an appropriately trained individual/contractor.

6.0 REGULATORY

6-1. Does the operation have or require a National Pollutant Discharge Elimination System (NPDES) or equivalent permit? Yes ☐ No ☐
If so, please attach a copy of this permit.

6-2. Has a Hazardous Materials Business Plan been developed for the site? Yes ☐ No ☐
If so, please attach a copy.

CERTIFICATION

I am familiar with the real property described in this questionnaire. By signing below, I represent and warrant that the answers to the above questions are complete and accurate to the best of my knowledge. I also understand that Lessor will rely on the completeness and accuracy of my answers in assessing any environmental liability risks associated with the property.

Signature: _____

Name: _____

Title: _____

Date: _____

Telephone: _____

EXHIBIT F

TENANT'S PROPERTY

The following items, to the extent (i) not purchased with the Tenant Improvement Allowance or Additional Improvement Allowance, and (ii) not tied into the Base Building systems, shall be deemed "Tenant's Property":

1. All moveable furniture and equipment that is not "built-in".
2. Moveable lab casework (other than "built-in" lab casework), including moveable lab benches.
3. Servers, server racks and back-up batteries.
4. Furniture.
5. Portable fume hoods.
6. Biosafety cabinets.

EXHIBIT G

FORM OF AGREEMENT FOR ADDITIONAL MONTHLY BASE RENT

FIRST AMENDMENT TO LEASE

This FIRST AMENDMENT TO LEASE ("**Amendment**") is made and entered into as of _____, 2017, by and between HCP OYSTER POINT III LLC, a Delaware limited partner ("**Landlord**"), and THE COLUMN GROUP, LLC, a Delaware limited liability company ("**Tenant**").

R E C I T A L S :

A. Landlord and Tenant are parties to that certain Lease dated August ____, 2016, (the "**Lease**"), pursuant to which Tenant leases the fifth (5th) floor (the "**Premises**") containing approximately 32,370 rentable square feet of space in the building located at 171 Oyster Point Boulevard, South San Francisco, California (the "**Building**").

B. Landlord and Tenant desire to amend the Lease on the terms and conditions set forth in this Amendment.

A G R E E M E N T :

NOW, THEREFORE, in consideration of the foregoing recitals and the mutual covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto hereby agree as follows:

1. Terms. All capitalized terms when used herein shall have the same respective meanings as are given such terms in the Lease unless expressly provided otherwise in this Amendment.

2. Additional TI Allowance. Pursuant to the terms of Section 4 of the Tenant Work Letter attached to the Lease as **Exhibit B**, Tenant was entitled to a First Additional TI Allowance and a Second Additional TI Allowance of up to $647,400.00 each. Notwithstanding any provision to the contrary contained in the Lease, Landlord and Tenant hereby acknowledge and agree that Tenant has utilized _____ and __/100 Dollars ($_____.____) of the First Additional TI Allowance and _____ and __/100 Dollars ($_____.____) of the Second Additional TI Allowance (collectively, the "Utilized Additional TI Allowance").

4. Additional Monthly Base Rent. As a result of Tenant's use of the Utilized Additional TI Allowance, Tenant is required to pay additional monthly Base Rent calculated as provided in Section 4 of the Tenant Work Letter, which additional monthly Base Rent shall be equal to $_____ per month, payable on or before the first (1st) day of each month commencing as of _____, and continuing through the expiration of the initial Lease Term.

5. No Further Modification. Except as specifically set forth in this Amendment, all of the terms and provisions of the Lease shall remain unmodified and in full force and effect.

IN WITNESS WHEREOF, this Amendment has been executed as of the day and year first above written.

LANDLORD:

HCP OYSTER POINT III LLC, a Delaware limited liability company

By: HCP-Pointe Grand, Incorporated
its general partner

By: _____
Jonathan M. Bergschneider
Executive Vice President

TENANT:

THE COLUMN GROUP, LLC,
a Delaware limited liability company

By: _____

Name: _____

Its: _____

By: _____

Name: _____

Its: _____

EXHIBIT H

FORM OF LETTER OF CREDIT

(Letterhead of a money center bank acceptable to the Landlord)

FAX NO. [(___) ___-____]
SWIFT: [Insert No., if any]

[Insert Bank Name And Address]

DATE OF ISSUE: _____

BENEFICIARY:
[Insert Beneficiary Name And Address]

APPLICANT:
[Insert Applicant Name And Address]

LETTER OF CREDIT NO. _____

EXPIRATION DATE:
_____ AT OUR COUNTERS

AMOUNT AVAILABLE:
USD[Insert Dollar Amount]
(U.S. DOLLARS [Insert Dollar Amount])

LADIES AND GENTLEMEN:

WE HEREBY ESTABLISH OUR IRREVOCABLE STANDBY LETTER OF CREDIT NO. _____ IN YOUR FAVOR FOR THE ACCOUNT OF [Insert Tenant's Name], A [Insert Entity Type], UP TO THE AGGREGATE AMOUNT OF USD[Insert Dollar Amount] ([Insert Dollar Amount] U.S. DOLLARS) EFFECTIVE IMMEDIATELY AND EXPIRING ON ___(Expiration Date)___ AVAILABLE BY PAYMENT UPON PRESENTATION OF YOUR DRAFT AT SIGHT DRAWN ON [Insert Bank Name] WHEN ACCOMPANIED BY THE FOLLOWING DOCUMENT(S):

1. THE ORIGINAL OF THIS IRREVOCABLE STANDBY LETTER OF CREDIT AND AMENDMENT(S), IF ANY.

2. BENEFICIARY'S SIGNED STATEMENT PURPORTEDLY SIGNED BY AN AUTHORIZED REPRESENTATIVE OF [Insert Landlord's Name], A [Insert Entity Type] ("LANDLORD") STATING THE FOLLOWING:

"THE UNDERSIGNED HEREBY CERTIFIES THAT THE LANDLORD, EITHER (A) UNDER THE LEASE (DEFINED BELOW), OR (B) AS A RESULT OF THE TERMINATION OF SUCH LEASE, HAS THE RIGHT TO DRAW DOWN THE AMOUNT OF USD _____ IN ACCORDANCE WITH THE TERMS OF THAT CERTAIN OFFICE LEASE DATED [Insert Lease Date], AS AMENDED (COLLECTIVELY, THE "LEASE"), OR SUCH AMOUNT CONSTITUTES DAMAGES OWING BY THE TENANT TO BENEFICIARY RESULTING FROM THE BREACH OF SUCH LEASE BY THE TENANT THEREUNDER, OR THE TERMINATION OF SUCH LEASE, AND SUCH AMOUNT REMAINS UNPAID AT THE TIME OF THIS DRAWING."

OR

"THE UNDERSIGNED HEREBY CERTIFIES THAT WE HAVE RECEIVED A WRITTEN NOTICE OF [Insert Bank Name]'S ELECTION NOT TO EXTEND ITS STANDBY LETTER OF CREDIT NO. _____ AND HAVE NOT RECEIVED A REPLACEMENT LETTER OF CREDIT WITHIN AT LEAST THIRTY (30) DAYS PRIOR TO THE PRESENT EXPIRATION DATE."

OR

"THE UNDERSIGNED HEREBY CERTIFIES THAT BENEFICIARY IS ENTITLED TO DRAW DOWN THE FULL AMOUNT OF LETTER OF CREDIT NO. _____ AS THE RESULT OF THE FILING OF A VOLUNTARY PETITION UNDER THE U.S. BANKRUPTCY CODE OR A STATE BANKRUPTCY CODE BY THE TENANT UNDER THAT CERTAIN OFFICE LEASE DATED [Insert Lease Date], AS AMENDED (COLLECTIVELY, THE "LEASE"), WHICH FILING HAS NOT BEEN DISMISSED AT THE TIME OF THIS DRAWING."

OR

"THE UNDERSIGNED HEREBY CERTIFIES THAT BENEFICIARY IS ENTITLED TO DRAW DOWN THE FULL AMOUNT OF LETTER OF CREDIT NO. _____ AS THE RESULT OF AN INVOLUNTARY PETITION HAVING BEEN FILED UNDER THE U.S. BANKRUPTCY CODE OR A STATE BANKRUPTCY CODE AGAINST THE TENANT UNDER THAT CERTAIN OFFICE LEASE DATED [Insert Lease Date], AS AMENDED (COLLECTIVELY, THE "LEASE"), WHICH FILING HAS NOT BEEN DISMISSED AT THE TIME OF THIS DRAWING."

OR

"THE UNDERSIGNED HEREBY CERTIFIES THAT BENEFICIARY IS ENTITLED TO DRAW DOWN THE FULL AMOUNT OF LETTER OF CREDIT NO. _____ AS THE RESULT OF THE REJECTION, OR DEEMED REJECTION, OF THAT CERTAIN OFFICE LEASE DATED [Insert Lease Date], AS AMENDED, UNDER SECTION 365 OF THE U.S. BANKRUPTCY CODE."

SPECIAL CONDITIONS:

PARTIAL DRAWINGS AND MULTIPLE PRESENTATIONS MAY BE MADE UNDER THIS STANDBY LETTER OF CREDIT, PROVIDED, HOWEVER, THAT EACH SUCH DEMAND THAT IS PAID BY US SHALL REDUCE THE AMOUNT AVAILABLE UNDER THIS STANDBY LETTER OF CREDIT.

ALL INFORMATION REQUIRED WHETHER INDICATED BY BLANKS, BRACKETS OR OTHERWISE, MUST BE COMPLETED AT THE TIME OF DRAWING. [Please Provide The Required Forms For Review, And Attach As Schedules To The Letter Of Credit.]

ALL SIGNATURES MUST BE MANUALLY EXECUTED IN ORIGINALS.

ALL BANKING CHARGES ARE FOR THE APPLICANT'S ACCOUNT.

IT IS A CONDITION OF THIS STANDBY LETTER OF CREDIT THAT IT SHALL BE DEEMED AUTOMATICALLY EXTENDED WITHOUT AMENDMENT FOR A PERIOD OF ONE YEAR FROM THE PRESENT OR ANY FUTURE EXPIRATION DATE, UNLESS AT LEAST SIXTY (60) DAYS PRIOR TO THE EXPIRATION DATE WE SEND YOU NOTICE BY NATIONALLY RECOGNIZED OVERNIGHT COURIER SERVICE THAT WE ELECT NOT TO EXTEND THIS LETTER OF CREDIT FOR ANY SUCH ADDITIONAL PERIOD. SAID NOTICE WILL BE SENT TO THE ADDRESS INDICATED ABOVE, UNLESS A CHANGE OF ADDRESS IS OTHERWISE NOTIFIED BY YOU TO US IN WRITING BY RECEIPTED MAIL OR COURIER. ANY NOTICE TO US WILL BE DEEMED EFFECTIVE ONLY UPON ACTUAL RECEIPT BY US AT OUR DESIGNATED OFFICE. IN NO EVENT, AND WITHOUT FURTHER NOTICE FROM OURSELVES, SHALL THE EXPIRATION DATE BE EXTENDED BEYOND A FINAL EXPIRATION DATE OF ___ (60 days from the Lease Expiration Date).

THIS LETTER OF CREDIT MAY BE TRANSFERRED SUCCESSIVELY IN WHOLE OR IN PART ONLY UP TO THE THEN AVAILABLE AMOUNT IN FAVOR OF A NOMINATED TRANSFEREE ("TRANSFEREE"), ASSUMING SUCH TRANSFER TO SUCH TRANSFEREE IS IN COMPLIANCE WITH ALL APPLICABLE U.S. LAWS AND REGULATIONS. AT THE TIME OF TRANSFER, THE ORIGINAL LETTER OF CREDIT AND ORIGINAL AMENDMENT(S) IF ANY, MUST BE SURRENDERED TO US TOGETHER WITH OUR TRANSFER FORM (AVAILABLE UPON REQUEST) AND PAYMENT OF OUR CUSTOMARY TRANSFER FEES, WHICH FEES SHALL BE PAYABLE BY APPLICANT (PROVIDED THAT BENEFICIARY MAY, BUT SHALL NOT BE OBLIGATED TO, PAY SUCH FEES TO US ON BEHALF OF APPLICANT, AND SEEK REIMBURSEMENT THEREOF FROM APPLICANT). IN CASE OF ANY TRANSFER UNDER THIS LETTER OF CREDIT, THE DRAFT AND ANY REQUIRED STATEMENT MUST BE EXECUTED BY THE TRANSFEREE AND WHERE THE BENEFICIARY'S NAME APPEARS WITHIN THIS STANDBY LETTER OF CREDIT, THE TRANSFEREE'S NAME IS AUTOMATICALLY SUBSTITUTED THEREFOR.

ALL DRAFTS REQUIRED UNDER THIS STANDBY LETTER OF CREDIT MUST BE MARKED: "DRAWN UNDER [Insert Bank Name] STANDBY LETTER OF CREDIT NO. _____."

WE HEREBY AGREE WITH YOU THAT IF DRAFTS ARE PRESENTED TO [Insert Bank Name] UNDER THIS LETTER OF CREDIT AT OR PRIOR TO [Insert Time – (*e.g.*, 11:00 AM)], ON A BUSINESS DAY, AND PROVIDED THAT SUCH DRAFTS PRESENTED CONFORM TO THE TERMS AND CONDITIONS OF THIS LETTER OF CREDIT, PAYMENT SHALL BE INITIATED BY US IN IMMEDIATELY AVAILABLE FUNDS BY OUR CLOSE OF BUSINESS ON THE SUCCEEDING BUSINESS DAY. IF DRAFTS ARE PRESENTED TO [Insert Bank Name] UNDER THIS LETTER OF CREDIT AFTER [Insert Time – (*e.g.*, 11:00 AM)], ON A BUSINESS DAY, AND PROVIDED THAT SUCH DRAFTS CONFORM WITH THE TERMS AND CONDITIONS OF THIS LETTER OF CREDIT, PAYMENT SHALL BE INITIATED BY US IN IMMEDIATELY AVAILABLE FUNDS BY OUR CLOSE OF BUSINESS ON THE SECOND SUCCEEDING BUSINESS DAY. AS USED IN THIS LETTER OF CREDIT, "BUSINESS DAY" SHALL MEAN ANY DAY OTHER THAN A SATURDAY, SUNDAY OR A DAY ON WHICH BANKING INSTITUTIONS IN THE STATE OF CALIFORNIA ARE AUTHORIZED OR REQUIRED BY LAW TO CLOSE. IF THE EXPIRATION DATE FOR THIS LETTER OF CREDIT SHALL EVER FALL ON A DAY WHICH IS NOT A BUSINESS DAY THEN SUCH EXPIRATION DATE SHALL AUTOMATICALLY BE EXTENDED TO THE DATE WHICH IS THE NEXT BUSINESS DAY.

PRESENTATION OF A DRAWING UNDER THIS LETTER OF CREDIT MAY BE MADE ON OR PRIOR TO THE THEN CURRENT EXPIRATION DATE HEREOF BY HAND DELIVERY, COURIER SERVICE, OVERNIGHT MAIL, OR FACSIMILE. PRESENTATION BY FACSIMILE TRANSMISSION SHALL BE BY TRANSMISSION OF THE ABOVE REQUIRED SIGHT DRAFT DRAWN ON US TOGETHER WITH THIS LETTER OF CREDIT TO OUR FACSIMILE NUMBER, [Insert Fax Number – (___) ___-____], ATTENTION: [Insert Appropriate Recipient], WITH TELEPHONIC CONFIRMATION OF OUR RECEIPT OF SUCH FACSIMILE TRANSMISSION AT OUR TELEPHONE NUMBER [Insert Telephone Number – (___) ___-____] OR TO SUCH OTHER FACSIMILE OR TELEPHONE NUMBERS, AS TO WHICH YOU HAVE RECEIVED WRITTEN NOTICE FROM US AS BEING THE APPLICABLE SUCH NUMBER. WE AGREE TO NOTIFY YOU IN WRITING, BY NATIONALLY RECOGNIZED OVERNIGHT COURIER SERVICE, OF ANY CHANGE IN SUCH DIRECTION. ANY FACSIMILE PRESENTATION PURSUANT TO THIS PARAGRAPH SHALL ALSO STATE THEREON THAT THE ORIGINAL OF SUCH SIGHT DRAFT AND LETTER OF CREDIT ARE BEING REMITTED, FOR DELIVERY ON THE NEXT BUSINESS DAY, TO [Insert Bank Name] AT THE APPLICABLE ADDRESS FOR PRESENTMENT PURSUANT TO THE PARAGRAPH FOLLOWING THIS ONE.

WE HEREBY ENGAGE WITH YOU THAT ALL DOCUMENT(S) DRAWN UNDER AND IN COMPLIANCE WITH THE TERMS OF THIS STANDBY LETTER OF CREDIT WILL BE DULY HONORED IF DRAWN AND PRESENTED FOR PAYMENT AT OUR OFFICE LOCATED AT [Insert Bank Name], [Insert Bank Address], ATTN: [Insert Appropriate Recipient], ON OR BEFORE THE EXPIRATION DATE OF THIS CREDIT, ___(Expiration Date)___.

IN THE EVENT THAT THE ORIGINAL OF THIS STANDBY LETTER OF CREDIT IS LOST, STOLEN, MUTILATED, OR OTHERWISE DESTROYED, WE HEREBY AGREE TO ISSUE A DUPLICATE ORIGINAL HEREOF UPON RECEIPT OF A WRITTEN REQUEST FROM YOU AND A CERTIFICATION BY YOU (PURPORTEDLY SIGNED BY YOUR AUTHORIZED REPRESENTATIVE) OF THE LOSS, THEFT, MUTILATION, OR OTHER DESTRUCTION OF THE ORIGINAL HEREOF.

EXCEPT SO FAR AS OTHERWISE EXPRESSLY STATED HEREIN, THIS STANDBY LETTER OF CREDIT IS SUBJECT TO THE "INTERNATIONAL STANDBY PRACTICES" (ISP 98) INTERNATIONAL CHAMBER OF COMMERCE (PUBLICATION NO. 590).

Very truly yours,

(Name of Issuing Bank)

By: _____

EXHIBIT I

FORM OF ASSIGNMENT OF LEASE

ASSIGNMENT OF LEASE

THIS ASSIGNMENT OF LEASE (this "Agreement") is made as of this _____ day of _____, 20__ by and between THE COLUMN GROUP, LLC, a Delaware limited liability company ("Assignor") and _____ ("Assignee").

RECITALS

A. HCP OYSTER POINT III LLC, as landlord, and Assignor, as tenant, executed a lease dated _____, 2016, for the lease of premises known as Fifth Floor, 171 Oyster Point Boulevard, South San Francisco, California (the "Lease").

B. Assignor owns at least fifty percent (50%) of the preferred shares of Assignee, and Assignee has closed on an equity financing with a commitment of not less than Thirty Million Dollars ($30,000,000).

C. Assignor desires to assign its interest in the Lease to Assignee in accordance with the terms of Section 14.9 of the Lease, and Assignee desires to assume the obligations of Assignor under the Lease accruing after such assignment.

NOW, THEREFORE, for and in consideration of the foregoing premises, the Lease and the mutual covenants and agreements set forth herein, Assignor and Assignee agree as follows:

1. Effective Date of Assignment. The assignment in this Agreement shall take effect on the date first set forth above (the "Effective Date").

2. Assignment and Assumption of Lease. Assignor does by these presents grant, bargain and sell, convey, transfer and assign unto Assignee all of Assignor's right, title and interest in and to the Lease. Assignee does hereby accept the assignment of Assignor's right, title and interest in the Lease and assumes and agrees to pay and perform all of the terms, covenants, conditions, agreements and obligations of Assignor under the Lease accruing from and after the Effective Date.

3. Indemnification. Assignee shall defend, indemnify, protect and hold Assignor harmless from any and all losses, damages, claims, demands, liabilities, costs and expenses, including reasonable attorneys' fees, arising from or based upon Assignee's violation of the Lease or the negligence or willful misconduct of Assignee or its contractors, concessionaires, licensees, agents, servants, invitees, employees or anyone else for whom Assignee may be responsible after the Effective Date.

IN WITNESS WHEREOF, Assignor and Assignee have executed this Agreement as of the day and year first above written.

ASSIGNOR:	ASSIGNEE:
THE COLUMN GROUP, LLC, a Delaware limited liability company	_____
By: _____	By: _____
Name: _____ Title: _____	Name: _____ Title: _____

LEASE

THE COVE AT OYSTER POINT

HCP OYSTER POINT III LLC,

a Delaware limited liability company

as Landlord,

and

THE COLUMN GROUP, LLC,

a Delaware limited liability company,

as Tenant.

EXHIBITS

INDUSTRIAL LEASE – MULTI-TENANT

by and between

TERRENO PARK UNION CITY LLC
"LANDLORD"

and

TENAYA THERAPEUTICS, INC.
"TENANT"

Dated: February 12, 2021

TERRENO REALTY CORPORATION
INDUSTRIAL LEASE

1. Basic Provisions ("Basic Provisions").

1.1 Parties: This Lease ("Lease") dated February 12, 2021, is made by and between Terreno Park Union City LLC, a Delaware limited liability company ("Landlord") and Tenaya Therapeutics, Inc., a Delaware corporation ("Tenant") (collectively, the "Parties" or individually, a "Party").

1.2 Premises The premises ("Premises"), which are the subject of this Lease, are commonly known as 33498 Central Avenue, Union City, CA 94587 and are located in the industrial center known as Central Pacific Business Park ("Industrial Center"). The Premises are:

Approximately 94,046 rentable square feet of space as depicted on Exhibit A. This space is a part of the building ("Building") which is also identified on Exhibit A.

If the Premises are all of the Building, there shall, for purposes of this Lease, be no distinction between the words "Premises" or "Building." Tenant shall have nonexclusive rights to the Common Areas (as defined in Paragraph 2.2 below) but shall not have any rights to the roof, exterior walls, or utility raceways of the Building without prior notice to Landlord or to any other buildings in the Industrial Center. The Industrial Center consists of the Premises, the Building, the Common Areas, the land upon which they are located, and all other buildings and improvements within the boundaries of the Industrial Center. Parking for automobiles for the Premises shall be on an unassigned and unreserved basis in locations in the Industrial Center determined by Landlord. No overnight truck parking shall be allowed except to the extent that the Premises include truck loading doors in which event one truck may be parked overnight in front of each loading door. Notwithstanding the foregoing, Tenant shall have the right to park passenger vehicles overnight as required in connection with its normal operations.

1.3 Term: Ten (10) years and Three (3) months ("Term") commencing on the later of (i) May 1, 2021, and (ii) the date by which the Premises is delivered to Tenant in the required condition ("Commencement Date") and ending ten (10) years and three (3) months after the Commencement Date ("Expiration Date"). Notwithstanding the foregoing, Tenant acknowledges and agrees that (i) there is an existing tenant ("Existing Tenant") in the Premises whose lease expires March 31, 2021, (ii) Landlord shall use commercially reasonable efforts to recover possession of the Premises prior to May 1, 2021, and (iii) if Landlord is unable to recover possession of the Premises prior to May 1, 2021, as set forth above, and deliver the Premises to Tenant in the required condition, the Commencement Date shall be the date on which the Premises is delivered to Tenant in the required condition.

1.4 Base Rent: $100,629.22 per month plus, if applicable, sales, use or rental tax ("Base Rent"). $125,081.18 plus, if applicable, sales, use or rental tax, is payable on execution of this Lease for Base Rent for the period which is the fourth (4th) month of the Term and Additional Rent (per Paragraph 1.6(b) below) for the period which is the first (1st) month of the Term. On and after the thirteenth (13th) month of the Term Base Rent shall increase as follows:

13th Month through 24th Month	—	$103,648.10
25th Month through 36th Month	—	$106,757.54
37th Month through 48th Month	—	$109,960.27
49th Month through 60th Month	—	$113,259.08
61st Month through 72nd Month	—	$116,656.85
73rd Month through 84th Month	—	$120,156.56
85th Month through 96th Month	—	$123,761.26
97th Month through 108th Month	—	$127,474.10
109th Month through 120th Month	—	$131,298.32
121st Month through 123rd Month	—	$135,237.27

Notwithstanding the foregoing, Base Rent only for the period from May 1, 2021 through and including July 31, 2021 shall be abated ("Abated Rent") provided if Tenant is in Default under this Lease at any time, the unamortized amount of the Abated Rent shall become immediately due and payable without further notice from Landlord and pursuant to the Early Possession and Inducement Recapture Addendum to this Lease.

1.5 Tenant's Share of Operating Expenses: Tenant's percentage share of the Operating Expenses set forth in Paragraph 4.2 shall be as follows ("Tenant's Share"):

(a)	Industrial Center and Common Area 31.28%	31.28%
(b)	Building	100%

1.6 Tenant's Estimated Monthly Rent Payment: Following is the estimated monthly Rent payment to Landlord pursuant to the provisions of this Lease. This estimate is made at the inception of the Lease and is subject to adjustment pursuant to the provisions of this Lease:

(a)	Base Rent (Paragraph 4.1)	$100,629.22
(b)	Operating Expenses (Paragraph 4.2)	$ 24,451.96
	Landlord Insurance (Paragraph 8.3)	
	Real Property Taxes (Paragraph 10)	
	Estimated Monthly Payment	$125,081.18

1.7 Security Deposit: $3,250,000.00 (“Security Deposit”) payable on execution. Notwithstanding the foregoing, provided Tenant has made all payments of Base Rent and Additional Rent and has not been otherwise in Default under the Lease as of each of the following dates, May 1, 2024, May 1, 2025, May 1, 2026 and May 1, 2027, Landlord shall refund to Tenant $500,000.00 on each occasion. Any remaining portion of the Security Deposit shall be the Security Deposit for the remainder of the Term.

1.8 Permitted Use (“Permitted Use”): General office, laboratory, research and development, manufacturing, and all other uses permitted by the City of Union City and all agencies and governmental authorities having jurisdiction thereof.

1.9 Guarantor: Not applicable

1.10 Addenda: Attached hereto are the following Addenda, all of which constitute a part of this Lease:

(a) Addendum 1: Landlord’s Remedies in the Event of Tenant Default
(b) Addendum 2: Tenant Improvement Addendum
(c) Addendum 3: Intentionally Deleted
(d) Addendum 4: Option to Extend Addendum
(e) Addendum 5: Early Possession and Inducement Recapture Addendum

1.11 Exhibits: Attached hereto are the following Exhibits, all of which constitute a part of this Lease:

Exhibit A: Description of Premises.
Exhibit B: Commencement Date Certificate.
Exhibit C: Tenant Move-in and Lease Renewal Environmental Questionnaire
Exhibit D: Move-Out Standards
Exhibit E: Rules and Regulations

1.12 Address for Rent Payments: All amounts payable by Tenant to Landlord shall, until further notice from Landlord, be paid to Terreno Park Union City LLC at the following address:

Terreno Park Union City LLC
c/o Colliers International
1850 Mt. Diablo Blvd., Ste. 200
Walnut Creek, CA 94596

2. Premises and Common Areas.

2.1 Letting. Landlord hereby leases to Tenant and Tenant hereby leases from Landlord the Premises upon all of the terms, covenants, and conditions, set forth in this Lease. In addition, Tenant shall have the exclusive right to use the outdoor area located immediately adjacent to the loading dock serving the Premises (the “Storage Area”) for the installation, storage, maintenance and repair of Tenant’s personal property and equipment including, without limitation, emergency generator(s) and chiller(s), subject to Landlord’s prior written consent. Tenant shall have the right to take all actions reasonably necessary to ensure its use of the Storage Area is not subject to unreasonable interference including, without limitation, installing fencing, making pavement markings, and implementing access control measures. All provisions of this Lease relating to use, insurance, repair, maintenance and surrender shall apply to the Storage Area as if it were part of the Premises. Any statement of square footage set forth in this Lease or that may have been used in calculating Base Rent and/or Operating Expenses is an approximation which Landlord and Tenant agree is reasonable, and the Base Rent and Tenant’s Share based thereon is not subject to revision whether or not the actual square footage is more or less.

2.2 Common Areas - Definition. “Common Areas” are all areas and facilities outside the Premises and within the exterior boundary line of the Industrial Center that are provided and designated by the Landlord from time to time for the general nonexclusive use of Landlord, Tenant, and other tenants of the Industrial Center and their respective employees, suppliers, shippers, tenants, contractors, and invitees.

2.3 Common Areas - Tenant’s Rights. Landlord hereby grants to Tenant, for the benefit of Tenant and its employees, suppliers, shippers, contractors, customers, and invitees, during the term of this Lease, the nonexclusive right to use, in common with others entitled to such use, the Common Areas as they exist from time to time, subject to any rights, powers, and privileges reserved by Landlord under the terms hereof or under the terms of any rules and regulations or covenants, conditions, and restrictions governing the use of the Industrial Center.

2.4 Common Areas - Rules and Regulations. Landlord shall have the exclusive control and management of the Common Areas and shall have the right, from time to time, to establish, modify, amend, and enforce reasonable Rules and Regulations with respect thereto in accordance with Paragraph 16.19.

2.5 Common Area Changes. Provided the same do not materially impair access to the Premises or the Storage Area and do not reduce Tenant’s parking rights, Landlord shall have the right, in Landlord’s sole discretion, from time to time:

(a) To make changes to the Common Areas, including, without limitation, changes in the locations, size, shape, and number of driveways, entrances, parking spaces, parking areas, loading and unloading areas, ingress, egress, direction of traffic, landscaped areas, walkways, and utility raceways;

(b) To close temporarily any of the Common Areas for maintenance purposes so long as reasonable access to the Premises remains available;

(c) To designate other land outside the boundaries of the Industrial Center to be a part of the Common Areas;

(d) To add additional buildings and improvements to the Common Areas;

(e) To use the Common Areas while engaged in making additional improvements, repairs, or alterations to the Industrial Center, or any portion thereof; and

(f) To do and perform such other acts and make such other changes in, to, or with respect to the Common Areas and Industrial Center as Landlord may, in the exercise of sound business judgment, deem to be appropriate.

3. Term.

3.1 Term. The Commencement Date, Expiration Date, and Term of this Lease are as specified in Paragraph 1.3.

3.2 Delay in Possession. Landlord shall use commercially reasonable efforts to deliver possession of the Premises to Tenant on May 1, 2021. Landlord shall deliver possession of the Premises to Tenant in good, vacant condition, with the roof water-tight, and in compliance with all Applicable Requirements. If for any reason Landlord cannot deliver possession of the Premises to Tenant by the Commencement Date, Landlord shall not be subject to any liability therefor, nor shall such failure affect the validity of this Lease or the obligations of Tenant hereunder. In such case, Tenant shall not, except as otherwise provided herein, be obligated to pay Rent or perform any other obligation of Tenant under the terms of this Lease until Landlord delivers possession of the Premises to Tenant. The term of the Lease shall commence on the Commencement Date. Notwithstanding anything to the contrary herein, if the Commencement Date has not occurred for any reason whatsoever on or before May 1, 2021, then, in addition to Tenant's other rights or remedies, the date Tenant is otherwise obliged to commence payment of Rent shall be delayed by one day for each day that the Commencement Date is delayed beyond such date, and if the Commencement Date has not occurred for any reason whatsoever on or before July 1, 2021, Tenant may terminate this Lease by written notice to Landlord, whereupon any monies previously paid by Tenant to Landlord shall be reimbursed to Tenant.

3.3 Commencement Date Certificate. At the request of Landlord, Tenant shall execute and deliver to Landlord a completed certificate ("Commencement Date Certificate") in the form attached hereto as Exhibit B.

4. Rent.

4.1 Base Rent. Tenant shall pay to Landlord Base Rent plus, if applicable sales, use or rental tax and other monetary obligations of Tenant to Landlord under the terms of this Lease (such other monetary obligations are herein referred to as "Additional Rent") in lawful money of the United States, without offset or deduction, in advance on or before the first day of each month. Base Rent and Additional Rent for any period during the term hereof which is for less than one full month shall be prorated based upon the actual number of days of the month involved. Payment of Base Rent and Additional Rent shall be made to Landlord at its address stated herein or to such other persons or at such other addresses as Landlord may from time to time designate in writing to Tenant. Base Rent and Additional Rent are collectively referred to as "Rent." All monetary obligations of Tenant to Landlord under the terms of this Lease are deemed to be Rent.

4.2 Operating Expenses. Tenant shall pay to Landlord on the first day of each month during the term hereof, in addition to the Base Rent, Tenant's Share of all Operating Expenses in accordance with the following provisions:

(a) "Operating Expenses" are all costs incurred by Landlord relating to the ownership and operation of the Industrial Center, Building, and Premises including, but not limited to, the following:

(i) Expenses relating to the operation, repair, maintenance, and replacement of the Common Areas in a neat, clean, good order, and condition, including parking areas, loading and unloading areas, trash areas, roadways, sidewalks, walkways, parkways, driveways, rail spurs, landscaped areas, striping, bumpers, irrigation systems, drainage systems, lighting facilities, fences and gates, exterior signs, and tenant directories.

(ii) Water, gas, electricity, telephone, and other utilities servicing the Common Areas or not paid for directly by other tenants of the Industrial Center.

(iii) Trash disposal (except within the Premises), janitorial services, snow removal, property management, and security services.

(iv) Intentionally deleted.

(v) Real Property Taxes.

(vi) Premiums for the insurance policies maintained by Landlord under Paragraph 8 hereof including, but not limited to any environmental monitoring and insurance programs.

(vii) Monthly amortization of capital improvements to the Common Areas and the Building. The monthly amortization of any given capital improvement shall be the sum of the (a) quotient obtained by dividing the cost of the capital improvement by Landlord's reasonable estimate of the number of months of useful life of such improvement plus (b) an amount equal to the cost of the capital improvement times 1/12 of the lesser of 8% or the maximum annual interest rate permitted by law.

(viii) Maintenance of the Building including, but not limited to, painting, caulking, and repair and replacement of Building components, including, but not limited to, roof membrane, elevators, and fire detection and sprinkler systems.

(ix) Heating, ventilating, and air conditioning systems ("HVAC").

(x) If Tenant fails to maintain the Premises, any expense incurred by Landlord for such maintenance.

Notwithstanding anything to the contrary herein, Operating Expenses shall not include and Tenant shall in no event have any obligation to perform or to pay directly, or to reimburse Landlord for, all or any portion of the following: (a) costs occasioned by casualties or condemnation (which costs are addressed in Paragraph 9.2); (b) costs to correct any construction defect in the Industrial Center or to comply with any Applicable Requirement applicable to the Industrial Center on the Commencement Date except for those costs arising from Tenant's specific use of the Premises or any improvements made by or for Tenant; (c) increases in insurance costs caused by the activities of another occupant of the Industrial Center; (d) costs incurred in connection with the presence of any Hazardous Substance, except to the extent caused by the release or emission of the Hazardous Substance in question by Tenant or the exacerbation of any condition caused by the activities of Tenant or any improvements installed by or for Tenant; (e) interest, charges and fees incurred on debt and rent under any lease that is superior to this Lease; (f) expense reserves; (g) costs which could properly be capitalized under generally accepted accounting principles (including insurance deductibles), except to the extent amortized as set forth in subpart (vii) above; (h) costs for services not provided to Tenant under this Lease or of a nature that are payable directly by Tenant under this Lease; (i) co-insurance payments; (j) profit or compensation retained by Landlord or its affiliates for management and administration of the Industrial Center in excess of amounts charged by other institutional landlords leasing comparable space in the vicinity of the Premises; and (k) costs to construct new buildings or facilities at the Industrial Center.

(b) Tenant's Share of Operating Expenses that are not specifically attributed to the Premises or Building ("Common Area Operating Expenses") shall be that percentage shown in Paragraph 1.5(a). Tenant's Share of Operating Expenses that are attributable to the Building ("Building Operating Expenses") shall be that percentage shown in Paragraph 1.5(b). Landlord in its reasonable discretion shall determine which Operating Expenses are Common Area Operating Expenses, Building Operating Expenses, or expenses to be entirely borne by Tenant.

(c) The inclusion of the improvements, facilities, and services set forth in Subparagraph 4.2(a) shall not impose any obligation upon Landlord either to have said improvements or facilities or to provide those services.

(d) Tenant shall pay monthly in advance, on the same day that the Base Rent is due, Tenant's Share of estimated Operating Expenses in the amount set forth in Paragraph 1.6. Landlord shall deliver to Tenant within 90 days after the expiration of each calendar year a reasonably detailed statement showing Tenant's Share of the actual Operating Expenses incurred during the preceding year. If Tenant's estimated payments under this Paragraph 4.2(d) during the preceding year exceed Tenant's Share as indicated on said statement, Tenant shall be credited the amount of such overpayment against Tenant's Share of Operating Expenses next becoming due or, if the Term has expired, Landlord shall refund such amount to Tenant within thirty (30) days. If Tenant's estimated payments under this Paragraph 4.2(d) during said preceding year were less than Tenant's Share as indicated on said statement, Tenant shall pay to Landlord the amount of the deficiency within 30 days after delivery by Landlord to Tenant of said statement. At any time Landlord may adjust the amount of the estimated Tenant's Share of Operating Expenses to reflect Landlord's estimate of such expenses for the year. Tenant or its authorized representative shall have the right to inspect the books of Landlord, for the purpose of verifying the information contained in the statement.

5. Security Deposit. Tenant shall deposit with Landlord upon Tenant's execution hereof the Security Deposit set forth in Paragraph 1.7 as security for Tenant's faithful performance of Tenant's obligations under this Lease. If Tenant fails to pay Base Rent or Additional Rent within any applicable notice and cure period or otherwise Defaults under this Lease (as defined in Paragraph 13.1), Landlord may use the Security Deposit for the payment of any amount due Landlord or to reimburse or compensate Landlord for any liability, cost, expense, loss, or damage (including attorneys' fees) which Landlord may suffer or incur by reason thereof. Tenant shall on demand pay Landlord the amount so used or applied so as to restore the Security Deposit to the amount set forth in Paragraph 1.7. Landlord shall not be required to keep all or any part of the Security Deposit separate from its general accounts. Landlord shall, at the expiration or earlier termination of the term hereof and after Tenant has vacated the Premises return to Tenant that portion of the Security Deposit not used or applied by Landlord. No part of the Security Deposit shall be considered to be held in trust, to bear interest, or to be prepayment for any monies to be paid by Tenant under this Lease. Notwithstanding anything to the contrary, Tenant hereby specifically acknowledges and agrees that Landlord may hold and apply the Security Deposit against future rent damages incurred by Landlord in the event of a default by Tenant under this Lease and Tenant specifically waives the provisions of California Civil Code Section 1950.7 or any statute which would prevent Landlord from making such application.

6. Use.

6.1 Permitted Use. Tenant shall use and occupy the Premises only for the Permitted Use set forth in Paragraph 1.8. Tenant shall not commit any nuisance, permit the emission of any objectionable noise or odor, suffer any waste, make any use of the Premises which is contrary to any law or ordinance, or which will invalidate or increase the premiums for any of Landlord's insurance. For the avoidance of doubt, the Permitted Use will not invalidate or increase the premiums for any of Landlord's insurance. Tenant shall not service, maintain, or repair vehicles on the Premises, Building, or Common Areas. Tenant shall not store foods, pallets, drums, or any other materials outside the Premises.

6.2 Hazardous Substances.

(a) Reportable Uses Require Consent. The term, "Hazardous Substance," as used in this Lease, shall mean any product, substance, chemical, material, or waste whose presence, nature,

quantity, and/or intensity of existence, use, manufacture, disposal, transportation, spill, release, or effect, either by itself or in combination with other materials expected to be on the Premises, is either: (i) potentially injurious to the public health, safety or welfare, the environment, or the Premises; (ii) regulated or monitored by any governmental authority; or (iii) a basis for potential liability of Landlord to any governmental agency or third party under any applicable statute or common law theory. Hazardous Substance shall include, but not be limited to, hydrocarbons, petroleum, gasoline, crude oil, or any products or by-products thereof and per- and polyfluoroalkyl substances (PFAS) which are a group of stable man-made chemicals that allow them to repel both water and oil including perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). Tenant shall not engage in any activity in or about the Premises which constitutes a Reportable Use (as hereinafter defined) of Hazardous Substances without the express prior written consent of Landlord and compliance in a timely manner (at Tenant's sole cost and expense) with all Applicable Requirements (as defined in Paragraph 6.3). "Reportable Use" shall mean (i) the installation or use of any above or below ground storage tank, (ii) the generation, possession, storage, use, transportation, or disposal of a Hazardous Substance that requires a permit from, or with respect to which a report, notice, registration, or business plan is required to be filed with, any governmental authority, and (iii) the presence in, on, or about the Premises of a Hazardous Substance with respect to which any Applicable Requirements require that a notice be given to persons entering or occupying the Premises or neighboring properties. Notwithstanding the foregoing, Tenant may, without Landlord's prior consent, in compliance with all Applicable Requirements, use any ordinary and customary materials reasonably required to be used by Tenant in the normal course of the Permitted Use, so long as such use does not expose the Premises or neighboring properties to any meaningful risk of contamination or damage, or expose Landlord to any liability therefor.

(b) Duty to Inform Landlord. If Tenant knows, or has reasonable cause to believe, that a Hazardous Substance is located in, under, or about the Premises or the Building in violation of Applicable Requirements, Tenant shall immediately give Landlord written notice thereof, together with a copy of any statement, report, notice, registration, application, permit, business plan, license, claim, action, or proceeding given to, or received from, any governmental authority or private party concerning the presence, spill, release, discharge of, or exposure to such Hazardous Substance. Tenant shall not cause or permit any Hazardous Substance to be spilled or released in, on, under, or about the Premises (including, without limitation, through the plumbing or sanitary sewer system) in violation of Applicable Requirements.

(c) Indemnification. Tenant shall indemnify, protect, defend, and hold Landlord, Landlord's affiliates, Lenders, and the officers, directors, shareholders, partners, employees, managers, independent contractors, attorneys, and agents of the foregoing ("Landlord Entities") and the Premises harmless from and against any and all damages, liabilities, judgments, costs, claims, liens, expenses, penalties, loss of permits, and attorneys' and consultants' fees arising out of or involving any Hazardous Substance on or brought onto the Premises by or for Tenant or by any of Tenant's employees, agents, contractors, servants, visitors, suppliers, or invitees (such employees, agents, contractors, servants, visitors, suppliers, and invitees as herein collectively referred to as "Tenant Entities") in violation of Applicable Requirements. Tenant's obligations under this Paragraph 6.2(c) shall include, but not be limited to, the effects of any contamination or injury to person, property, or the environment created or suffered by Tenant, and the cost of investigation (including consultants' and attorneys' fees and testing), removal, remediation, restoration and/or abatement thereof, or of any contamination therein involved. Tenant's obligations under this Paragraph 6.2(c) shall survive the Expiration Date or earlier termination of this Lease.

6.3 Tenant's Compliance with Requirements. Tenant shall, at Tenant's sole cost and expense, fully, diligently, and in a timely manner comply with all "Applicable Requirements," which term is used in this Lease to mean all laws, rules, regulations, ordinances, directives, covenants, easements, and restrictions of record, permits, and the requirements of any applicable fire insurance underwriter or rating bureau, relating in any manner to the Premises (including but not limited to matters pertaining to (a) industrial hygiene, (b) environmental conditions on, in, under, or about the Premises, including soil and groundwater conditions, caused by or for Tenant and (c) the use, generation, manufacture, production, installation, maintenance, removal, transportation, storage, spill, or release of any Hazardous Substance by or for Tenant), now in effect or which may hereafter come into effect. Tenant shall, within 5 days after receipt of Landlord's written request, provide Landlord with copies of all documents and information evidencing Tenant's compliance with any Applicable Requirements, and shall immediately upon receipt notify Landlord in writing (with copies of any documents involved) of any threatened or actual claim, notice, citation, warning, complaint, or report pertaining to or involving failure by Tenant or the Premises to comply with any Applicable Requirements. Notwithstanding anything to the contrary herein, Tenant shall not be required to comply with or cause the Premises to comply with any Applicable Requirements requiring the construction of alterations unless such compliance is necessitated due to Tenant's particular use of the Premises or any alterations or improvements to the Premises made by or for Tenant.

6.4 Inspection; Compliance with Law. In addition to Landlord's environmental monitoring and insurance program, the cost of which is included in Operating Expenses, Landlord and the holders of any mortgages, deeds of trust, or ground leases on the Premises ("Lenders") shall have the right to enter the Premises at any time in the case of an emergency, and otherwise at reasonable times and in accordance with Paragraph 16.14, for the purpose of inspecting the condition of the Premises and for verifying compliance by Tenant with this Lease and all Applicable Requirements. Landlord shall be entitled to employ experts and/or consultants in connection therewith to advise Landlord with respect to Tenant's installation, operation, use, monitoring, maintenance, or removal of any Hazardous Substance

on or from the Premises. The cost and expenses of any such inspections shall be paid by the party requesting same unless a violation of Applicable Requirements by or for Tenant exists or is imminent in which case Tenant shall, upon request, reimburse Landlord or Landlord's Lender, as the case may be, for the costs and expenses of such inspections. Within fifteen (15) days of Landlord's written request, Tenant agrees to deliver to Landlord such information and/or documents as Landlord requires for Landlord to comply with California Public Resources Code Section 25402.10, or successor statute(s), and California Energy Commission adopted regulations set forth in California Code of Regulations, Title 20, Division 2, Chapter 4, Article 9, Sections 1680-1685, and successor and related California Code of Regulations, relating to commercial building energy ratings. Landlord makes the following statement based on Landlord's actual knowledge in order to comply with California Civil Code Section 1938: The Building and Premises have not undergone an inspection by a Certified Access Specialist (CASp). A CASp can inspect the Premises and determine whether the Premises comply with all of the applicable construction-related accessibility standards under state law. Although state law does not require a CASp inspection of the Premises, the commercial property owner or lessor may not prohibit the lessee or tenant from obtaining a CASp inspection of the Premises for the occupancy or potential occupancy of the lessee or tenant, if requested by the lessee or tenant. The parties shall mutually agree on the arrangements for the time and manner of the CASp inspection, the payment of the fee for the CASp inspection, and the cost of making any repairs necessary to correct violations of construction-related accessibility standards within the Premises.

7. Maintenance, Repairs, Trade Fixtures and Alterations.

7.1 Tenant's Obligations. Subject to the provisions of Paragraph 7.2 (Landlord's Obligations), Paragraph 9 (Damage or Destruction), and Paragraph 14 (Condemnation), Tenant shall, at Tenant's sole cost and expense and at all times, keep the Premises and every part thereof in good order, condition, and repair (whether or not such portion of the Premises requiring repair, or the means of repairing the same, are reasonably or readily accessible to Tenant and whether or not the need for such repairs occurs as a result of Tenant's use, any prior use, the elements, or the age of such portion of the Premises) including, without limiting the generality of the foregoing, all equipment or facilities specifically serving the Premises, such as plumbing, heating, ventilating and air conditioning systems, electrical, lighting facilities, boilers, fired or unfired pressure vessels, fire hose connectors if within the Premises, fixtures, interior walls, interior surfaces of exterior walls, ceilings, floors, windows, doors, plate glass, and skylights, but excluding any items which are the responsibility of Landlord pursuant to Paragraph 7.2 below. Tenant's obligations shall include restorations, replacements, or renewals when necessary to keep the Premises and all improvements thereon or a part thereof in good order, condition, and state of repair including, but not limited to a obtaining and maintaining, at Tenant's sole cost and expense, a service contract ("HVAC Contract"), with a licensed HVAC contractor ("HVAC Contractor") approved by Landlord in advance, providing for the maintenance and repair of the HVAC and providing for at least quarterly maintenance of the HVAC by the HVAC Contractor. If Tenant fails to obtain or maintain the HVAC Contract, fails to perform any maintenance or repairs suggested or required by the HVAC Contractor, or fails to perform any of Tenant's Obligations under this Paragraph 7.1, after five (5) days written notice from Landlord to Tenant, Landlord may, at Tenant's sole cost and expense plus an administrative fee payable by Tenant to Landlord, as Rent, equal to fifteen percent (15%) of such cost and expense, obtain and maintain the HVAC Contract, authorize or perform any repairs or maintenance suggested or required by the HVAC Contractor, perform such Tenant's Obligations or authorize or perform any repairs, replacements or maintenance which would be Tenant's Obligations as deemed reasonably necessary by Landlord.

7.2 Landlord's Obligations. Subject to the provisions of Paragraph 6 (Use), Paragraph 7.1 (Tenant's Obligations), Paragraph 9 (Damage or Destruction), and Paragraph 14 (Condemnation), Landlord, at its expense and not subject to the reimbursement requirements of Paragraph 4.2, shall keep in good order, condition, and repair the roof structure, foundations and exterior walls of the Building and utility systems within the Industrial Center, except to the extent that any repair was caused by the negligent or intentional acts or omissions of Tenant or its agents and Landlord is unable to collect on any insurance coverage which would reimburse Landlord for such repair; provided, that, Landlord shall be responsible for such repair if Landlord's inability to collect on such insurance coverage is caused by Landlord's failure to maintain the insurance required hereunder. Landlord, subject to reimbursement pursuant to Paragraph 4.2, shall keep in good order, condition, and repair the Building roof membrane and Common Areas. Notwithstanding anything to the contrary herein, all capital improvements, repairs and replacements to the Building or the Common Areas shall be performed by Landlord and amortized in the manner set forth in Paragraph 4.2(a)(vii) of this Lease.

7.3 Alterations. Tenant shall not make nor cause to be made any alterations or installations in, on, under, or about the Premises without Landlord's prior written consent, which shall not be unreasonably withheld, conditioned, or delayed. Notwithstanding anything to the contrary herein, Tenant's trade fixtures, furniture, equipment and other personal property installed in the Premises including, without limitation, any programmable oligonucleotide delivery systems (collectively, "Tenant's Property") shall at all times be and remain Tenant's property. At any time Tenant may remove Tenant's Property from the Premises, provided that Tenant repairs all damage caused by such removal.

7.4 Surrender/Restoration. Tenant shall surrender the Premises by the end of the last day of the Lease term or any earlier termination date, clean and free of debris and in good operating order, condition, and state of repair, ordinary wear and tear, casualty, condemnation, and repairs that Tenant is not responsible for hereunder excepted and in accordance with the Move-Out Standards, Exhibit D to this Lease. Without limiting the generality of the above, Tenant shall remove all tenant improvements designated by Landlord in Landlord's sole discretion at the time it provides its consent thereto), personal

property, trade fixtures, and floor bolts, patch all floors, and cause all lights to be in good operating condition. Further, pursuant to Tenant's maintenance, repair and replacement obligations under Section 7.1 of this Lease and subject to the foregoing limitations in this Section 7.4, on surrender of the Premises, the Storage Area shall be in good order and condition with all improvements removed to the extent specifically set forth in this Lease and all damage repaired.

8. Insurance; Indemnity.

8.1 Payment of Premiums. The cost of the premiums for the insurance policies maintained by Landlord under this Paragraph 8 shall be a Common Area Operating Expense reimbursable pursuant to Paragraph 4.2 hereof. Premiums for policy periods commencing prior to, or extending beyond, the term of this Lease shall be prorated to coincide with the corresponding Commencement Date and Expiration Date.

8.2 Tenant's Insurance.

(a) At its sole cost and expense, Tenant shall maintain in full force and effect during the Term of the Lease the following insurance coverages insuring against claims which may arise from or in connection with the Tenant's operation and use of the Premises.

(i) Commercial General Liability insurance with minimum limits of $2,000,000 per occurrence and $4,000,000 general aggregate for bodily injury, personal injury, and property damage. Such insurance shall be endorsed to include Landlord and Landlord Entities as additional insureds, shall be primary and noncontributory with any Landlord insurance, and shall provide severability of interests between or among insureds.

(ii) Workers' Compensation insurance with statutory limits and Employers Liability with a $1,000,000 per accident limit for bodily injury or disease.

(iii) Automobile liability insurance covering all owned, nonowned, and hired vehicles with a $1,000,000 per accident limit for bodily injury and property damage.

(iv) Property insurance against "all risks" at least as broad as the current ISO Special Form policy, for loss to any tenant improvements or betterments installed by or for Tenant, floor and wall coverings, and business personal property on a full insurable replacement cost basis with no coinsurance clause, and Business Income insurance covering at least six months of loss of income and continuing expense.

(b) Tenant shall deliver to Landlord certificates of all insurance reflecting evidence of required coverages prior to initial occupancy, and annually thereafter.

(c) If, in the reasonable opinion of Landlord's insurance advisor, the amount or scope of such coverage is deemed inadequate at any time during the Term, Tenant shall increase such coverage to such reasonable amounts or scope as Landlord's advisor deems adequate; provided that such increase is consistent with the requirements of other institutional landlords leasing industrial space in the vicinity of the Premises.

(d) All insurance required under Paragraph 8.2 (i) shall be issued by insurers licensed to do business in the state in which the Premises are located and which are rated A:VII or better by Best's Key Rating Guide and (ii) Tenant shall provide at least 30-days prior notification of cancellation or material reduction in coverage to said additional insureds.

8.3 Landlord's Insurance. Landlord shall be obligated to, maintain "all risks" coverage as broad as the current ISO Special Form policy, including earthquake and flood, covering the buildings within the Industrial Center, Commercial General Liability insurance, and such other insurance in such amounts and covering such other liability or hazards as deemed appropriate by Landlord. The amount and scope of coverage of Landlord's insurance shall be determined by Landlord from time to time in its sole discretion and shall be subject to such deductible amounts as Landlord may elect. Landlord shall have the right to reduce or terminate any insurance or coverage not otherwise required herein.

8.4 Waiver of Subrogation. Notwithstanding anything to the contrary herein, to the extent permitted by law and with permission of their insurance carriers, Landlord and Tenant each waive and release any right to recover against the other on account of any and all claims Landlord or Tenant may have against the other that arise from a risk that is covered by property insurance actually carried, required to be carried hereunder, or which would normally be covered by "all risk" property insurance. All of Landlord's and Tenant's repair and indemnity obligations under this Lease shall be subject to the waiver and release contained in this paragraph.

8.5 Indemnity. Except to the extent caused by Landlord's or the Landlord Entities' negligence, willful misconduct, or violation of this Lease, Tenant shall protect, defend, indemnify, and hold Landlord and Landlord Entities harmless from and against any and all loss, claims, liability, or costs (including court costs and attorneys' fees) incurred by reason of:

(a) any damage to any property (including but not limited to property of any Landlord Entity) or death, bodily, or personal injury to any person occurring in or about the Premises, the Building, or the Industrial Center to the extent that such injury or damage shall be caused by or arise from any actual or alleged act, neglect, fault, or omission by or of Tenant, its agents, servants, employees, invitees, contractors, suppliers, subtenants, or visitors;

(b) the conduct or management of any work or anything whatsoever done by the Tenant on or about the Premises or from transactions of the Tenant concerning the Premises;

(c) Tenant's failure to comply with any and all governmental laws, ordinances, and regulations applicable to the condition or use of the Premises or its occupancy; or

(d) any breach or default on the part of Tenant in the performance of any covenant or agreement to be performed pursuant to this Lease.

The provisions of this Paragraph 8.5 shall, with respect to any claims or liability accruing prior to such termination, survive the Expiration Date or earlier termination of this Lease.

8.6 Exemption of Landlord from Liability. Except to the extent caused by the gross negligence or willful misconduct of Landlord or Landlord's violation of this Lease, neither Landlord nor Landlord Entities shall be liable for and Tenant waives any claims against Landlord and Landlord Entities for injury or damage to the person or the property of Tenant, Tenant's employees, contractors, invitees, customers or any other person in or about the Premises, Building or Industrial Center from any cause whatsoever, including, but not limited to, damage or injury which is caused by or results from (i) fire, steam, electricity, gas, water or rain, or from the breakage, leakage, obstruction or other defects of pipes, fire sprinklers, wires, appliances, plumbing, heating, ventilating, air conditioning or lighting fixtures or (ii) from the condition of the Premises, other portions of the Building or Industrial Center. Landlord shall not be liable for any damages arising from any act or neglect of any other tenants of Landlord or any subtenant or assignee of such other tenants nor from the failure by Landlord to enforce the provisions of any other lease in the Industrial Center. Notwithstanding Landlord's negligence, gross negligence, or breach of this Lease, Landlord shall under no circumstances be liable for (a) injury to Tenant's business, for any loss of income or profit therefrom or any indirect, consequential or punitive damages or (b) any damage to property or injury to persons arising from any act of God or war, violence or insurrection including, but not limited to, those caused by earthquakes, hurricanes, storms, drought, floods, acts of terrorism, and/or riots.

9. Damage or Destruction.

9.1 Termination Right. Tenant shall give Landlord immediate written notice of any damage to the Premises. Subject to the provisions of Paragraph 9.2, if the Premises or the Building shall be damaged to such an extent that there is substantial interference for a period exceeding 270 consecutive days with the conduct by Tenant of its business at the Premises, Tenant, at any time prior to commencement of repair of the Premises and following 10 days written notice to Landlord, may terminate this Lease effective 30 days after delivery of such notice to Landlord. Such termination shall not excuse the performance by Tenant of those covenants which under the terms hereof survive termination. Rent shall be abated in proportion to the degree of interference during the period that there is such substantial interference with the conduct of Tenant's business at the Premises. Abatement of rent and Tenant's right of termination pursuant to this provision shall be Tenant's sole remedy for failure of Landlord to keep in good order, condition, and repair the foundations and exterior walls of the Building, Building roof, utility systems outside the Building, the Common Areas, and HVAC. In the event Tenant does not terminate the Lease pursuant to this Paragraph 9.1, Landlord shall restore the Premises to the condition existing prior to the damage as soon as reasonably practicable. Notwithstanding the foregoing, to the extent insurance proceeds actually received by Landlord are insufficient to restore such damage and such insufficiency is not caused by Landlord's failure to maintain the insurance required under this Lease, Landlord shall have the right to terminate this Lease upon notice to Tenant unless Tenant agrees to pay such deficiency.

9.2 Damage Caused by Tenant. Tenant's termination rights under Paragraph 9.1 shall not apply if the damage to the Premises or Building is the result of the willful misconduct of Tenant or of any of Tenant's agents, employees, customers, invitees, or contractors ("Tenant Acts"). Any damage resulting from a Tenant Act shall be promptly repaired by Tenant. Landlord at its option may at Tenant's expense repair any damage caused by Tenant Acts. Tenant shall continue to pay all rent and other sums due hereunder and shall be liable to Landlord for all damages that Landlord may sustain resulting from a Tenant Act.

10. Real Property Taxes.

10.1 Payment of Real Property Taxes. Landlord shall pay the Real Property Taxes due and payable during the term of this Lease and, except as otherwise provided in Paragraph 10.3, such payments shall be a Common Area Operating Expense reimbursable pursuant to Paragraph 4.2.

10.2 Real Property Tax Definition. As used herein, the term "Real Property Taxes" is any form of tax or assessment, general, special, ordinary, or extraordinary, imposed or levied upon (a) the Industrial Center or Building, (b) any interest of Landlord in the Industrial Center or Building, (c) Landlord's right to rent or other income from the Industrial Center or Building, and/or (d) Landlord's business of leasing the Premises including, but not limited to, any tax on receipts or rent. Real Property Taxes include (a) any license fee, commercial rental tax, excise tax, improvement bond or bonds, levy, or tax; (b) any tax or charge which replaces or is in addition to any of such above-described "Real Property Taxes," and (c) any fees, expenses, or costs (including attorneys' fees, expert fees, and the like) incurred by Landlord in protesting or contesting any assessments levied or any tax rate. Real Property Taxes for tax years commencing prior to, or extending beyond, the term of this Lease shall be prorated to coincide with the corresponding Commencement Date and Expiration Date.

10.3 Additional Improvements. Operating Expenses shall not include Real Property Taxes attributable to improvements placed upon the Industrial Center by other tenants or by Landlord for the exclusive enjoyment of such other tenants. Tenant shall, however, pay to Landlord at the time Operating Expenses are payable under Paragraph 4.2, the entirety of any increase in Real Property Taxes if assessed by reason of improvements placed upon the Premises by Tenant or at Tenant's request.

10.4 Joint Assessment. If the Building is not separately assessed, Real Property Taxes allocated to the Building shall be an equitable proportion of the Real Property Taxes for all of the land and improvements included within the tax parcel assessed.

10.5 Tenant's Property Taxes. Tenant shall pay prior to delinquency all taxes assessed against and levied upon Tenant's improvements, fixtures, furnishings, equipment, and all personal property of Tenant contained in the Premises or stored within the Industrial Center.

11. Utilities. Tenant shall pay directly to any public utility provider or to Landlord, if Landlord provides such services, for all utilities and services supplied to the Premises, including but not limited to electricity, telephone, security, gas, and cleaning of the Premises, together with any taxes thereon.

12. Assignment and Subletting

12.1 Landlord's Consent Required.

(a) Tenant shall not assign, transfer, mortgage, or otherwise transfer or encumber (collectively, "assign") or sublet all or any part of Tenant's interest in this Lease or in the Premises without Landlord's prior written consent, which consent shall not be unreasonably withheld, conditioned or delayed. Relevant criteria in determining reasonability of consent include, but are not limited to, credit history of a proposed assignee or sublessee, references from prior landlords, any change or intensification of use of the Premises or the Common Areas, and any limitations imposed by the Internal Revenue Code and the Regulations promulgated thereunder relating to Real Estate Investment Trusts. Assignment or sublet shall not release Tenant from its obligations hereunder. Tenant shall not (i) sublet, assign, or enter into other arrangements in which the amounts to be paid by the sublessee or assignee thereunder would be based, in whole or in part, on the income or profits derived by the business activities of the sublessee or assignee; (ii) sublet the Premises or assign this Lease to any person or entity in which Landlord owns an interest, directly or indirectly (by applying constructive ownership rules set forth in Section 856(d)(5) of the Internal Revenue Code (the "Code"); or (iii) sublet the Premises or assign this Lease in any other manner which could cause any portion of the amounts received by Landlord pursuant to this Lease or any sublease to fail to qualify as "rents from real property" within the meaning of Section 856(d) of the Code, or which could cause any other income received by Landlord to fail to qualify as income described in Section 856(c)(2) of the Code. The requirements of this Section 12.1 shall apply to any further subleasing by any subtenant. Notwithstanding the foregoing, in the event of any assignment or subletting to which Landlord consents, Landlord shall receive fifty percent (50%), in the event of a sublease, of any rent received by Tenant above the rent then being paid by Tenant to Landlord less any legal fees, tenant improvement costs, commissions or marketing expense paid by Tenant for such sublease. In addition, Landlord shall receive fifty percent (50%), in the event of an assignment, of any profit derived by Tenant from such assignment less any legal fees, tenant improvements costs, commissions or marketing expense paid by Tenant for such assignment.

(b) A change in the control of Tenant shall constitute an assignment requiring Landlord's consent. The transfer, on a cumulative basis, of 50% or more of the voting control of Tenant shall constitute a change in control for this purpose.

(c) Notwithstanding anything to the contrary herein, Tenant may, without Landlord's prior written consent but with not less than 20 days' prior written notice detailing the nature of the transaction, without constituting an assignment or sublease hereunder, and without being subject to Landlord's profit sharing rights, (1) undergo a change of control, or (2) sublet the Premises or assign this Lease to (a) an entity controlling, controlled by or under common control with Tenant, (b) an entity related to Tenant by merger, consolidation or reorganization, or (c) a purchaser of a substantial portion of Tenant's assets provided such transferee has an equity valuation equal to or greater than $200,000,000.

13. Default; Remedies.

13.1 Default. The occurrence of any one of the following events shall constitute an event of default on the part of Tenant ("Default"):

(a) The abandonment of the Premises by Tenant;

(b) Failure to pay any installment of Base Rent, Additional Rent, or any other monies due and payable hereunder, said failure continuing for a period of 3 days after notice from Landlord that the same is delinquent;

(c) A general assignment by Tenant or any guarantor for the benefit of creditors;

(d) The filing of a voluntary petition of bankruptcy by Tenant or any guarantor; the filing of a voluntary petition for an arrangement; the filing of a petition, voluntary or involuntary, for reorganization; or the filing of an involuntary petition by Tenant's creditors or guarantors to the extent the same is not dismissed within sixty (60) days;

(e) Receivership, attachment, or other judicial seizure of the Premises or all or substantially all of Tenant's assets on the Premises to the extent the same is not dismissed within sixty (60) days;

(f) Failure of Tenant to maintain insurance as required by Paragraph 8.2;

(g) Any breach by Tenant of its covenants under Paragraph 6.2, if such breach continues for a period of 10 days after notice from Landlord of the same;

(h) Failure in the performance of any of Tenant's covenants, agreements, or obligations hereunder (except those failures specified as events of Default in other Paragraphs of this Paragraph 13.1 which shall be governed by such other Paragraphs), which failure continues for 20 days after written notice thereof from Landlord to Tenant; provided that, if Tenant has exercised reasonable diligence to cure such failure and such failure cannot be cured within such 20-day period despite reasonable diligence, Tenant shall not be in default under this subparagraph unless Tenant fails thereafter diligently and continuously to prosecute the cure to completion;

(i) intentionally deleted; and

(j) The default of any guarantors of Tenant's obligations hereunder under any guaranty of this Lease, or the attempted repudiation or revocation of any such guaranty.

13.2 In the event of any Default by Tenant, Landlord shall have the remedies set forth in the Addendum attached hereto entitled "Landlord's Remedies in Event of Tenant Default."

13.3 Late Charges. Tenant hereby acknowledges that late payment by Tenant to Landlord of Rent and other sums due hereunder will cause Landlord to incur costs not contemplated by this Lease, the exact amount of which will be extremely difficult to ascertain. Such costs include, but are not limited to, processing and accounting charges. Accordingly, if any installment of Rent or other sum due from Tenant shall not be received by Landlord or Landlord's designee within 4 days after such amount shall be due, then, without any requirement for notice to Tenant, Tenant shall pay to Landlord a late charge equal to 5% of such overdue amount. The parties hereby agree that such late charge represents a fair and reasonable estimate of the costs Landlord will incur by reason of late payment by Tenant. Acceptance of such late charge by Landlord shall in no event constitute a waiver of Tenant's Default with respect to such overdue amount, nor prevent Landlord from exercising any of the other rights and remedies granted hereunder. In addition, should Landlord be unable to negotiate any payment made by Tenant on the first attempt by Landlord and without any notice to Tenant, Tenant shall pay to Landlord a fee of $50.00 per item which the parties hereby agree represents a fair and reasonable estimate of the costs Landlord will incur by reason of Landlord's inability to negotiate such item(s). Notwithstanding anything to the contrary herein, before assessing a late charge, fee or interest for the first time in any thirty-six (36) month period, Landlord shall provide Tenant written notice of the delinquency, and shall waive such late charge if Tenant pays such delinquency within five (5) days thereafter.

13.4 Landlord's Default. If Landlord fails to perform any of its obligations under this Lease and (except in case of emergency posing an immediate threat to persons or property, in which case no prior notice shall be required) fails to cure such default within thirty (30) days after written notice from Tenant specifying the nature of such default where such default could reasonably be cured within said thirty (30) day period, or fails to commence such cure within said thirty (30) day period and thereafter continuously with due diligence prosecute such cure to completion where such default could not reasonably be cured within said thirty (30) day period, then Landlord shall be in default under this Lease.

14. Condemnation. If the Premises or any portion thereof are taken under the power of eminent domain or sold under the threat of exercise of said power (all of which are herein called "condemnation"), this Lease shall terminate as to the part so taken as of the date the condemning authority takes title or possession, whichever first occurs. If more than 10% of the floor area of the Premises, or more than 25% of the portion of the Common Areas designated for Tenant's parking, is taken by condemnation, Tenant may, at Tenant's option, to be exercised in writing within 10 days after Landlord shall have given Tenant written notice of such taking (or in the absence of such notice, within 10 days after the condemning authority shall have taken possession), terminate this Lease as of the date the condemning authority takes such possession. If Tenant does not terminate this Lease in accordance with the foregoing, this Lease shall remain in full force and effect as to the portion of the Premises remaining, except that the Base Rent shall be reduced in the same proportion as the rentable floor area of the Premises taken bears to the total rentable floor area of the Premises. No reduction of Base Rent shall occur if the condemnation does not apply to any portion of the Premises. Any award for the taking of all or any part of the Premises under the power of eminent domain or any payment made under threat of the exercise of such power shall be the property of Landlord; provided, however, that Tenant shall be entitled to any compensation, separately awarded to Tenant, for Tenant's relocation expenses and/or loss of Tenant's trade fixtures and improvements. In the event that this Lease is not terminated by reason of such condemnation, Landlord shall to the extent of its net severance damages in the condemnation matter, repair any damage to the Premises caused by such condemnation authority.

15. Estoppel Certificate and Financial Statements.

15.1 Estoppel Certificate. Each party (herein referred to as "Responding Party") shall within 10 days after written notice from the other Party (the "Requesting Party") execute, acknowledge, and deliver to the Requesting Party, to the extent it can truthfully do so, an estoppel certificate in a form reasonably acceptable to the Requesting Party, or any of Landlord's lenders or any prospective purchasers of the Premises or the Industrial Center as the case may be, plus such additional information, confirmation, and statements as be reasonably requested by the Requesting Party. Should Tenant fail to deliver an executed and acknowledged estoppel certificate to Landlord as prescribed herein, Tenant hereby authorizes Landlord to act as Tenant's attorney-in-fact in executing such estoppel certificate or, at Landlord's option, Tenant shall pay a fee of $100.00 per day ("Estoppel Delay Fee") for each day after the 10 days' written notice in which Tenant fails to comply with this requirement.

15.2 Financial Statement. If Landlord desires to finance, refinance, or sell the Building, Industrial Center, or any part thereof, Tenant and all Guarantors shall deliver to any potential lender or purchaser designated by Landlord the most recently prepared financial statements of Tenant and such Guarantors as may be reasonably required by such lender or purchaser, including but not limited to Tenant's financial statements for the past 3 years. All such financial statements shall be received by Landlord and such lender or purchaser in confidence and shall be used only for the purposes herein set forth. Notwithstanding anything to the contrary, Tenant acknowledges and agrees that any financial statements submitted by Tenant to Landlord are being relied upon by Landlord in entering into this Lease and extending any credit to Tenant and to the extent that such financial statements are materially false or incorrect and Tenant submitted such statements with knowledge of such false or incorrect information, Landlord, upon such discovery, may terminate this Lease. Further, Landlord specifically reserves all rights it may have to object to a discharge or reorganization by Tenant in any bankruptcy proceeding filed by or against Tenant based upon such materially false or incorrect financial statements.

16. Additional Covenants and Provisions.

16.1 Severability. The invalidity of any provision of this Lease, as determined by a court of competent jurisdiction, shall not affect the validity of any other provision hereof.

16.2 Interest on Past-Due Obligations. Any monetary payment due Landlord hereunder not received by Landlord within 10 days following the date on which it was due shall bear interest from the date due at 12% per annum, but not exceeding the maximum rate allowed by law in addition to the late charge provided for in Paragraph 13.3.

16.3 Time of Essence. Time is of the essence with respect to the performance of all obligations to be performed or observed by the Parties under this Lease.

16.4 Landlord Liability. Tenant, its successors, and assigns shall not assert nor seek to enforce any claim for breach of this Lease against any of Landlord's assets other than Landlord's interest in the Industrial Center. Tenant agrees to look solely to such interest for the satisfaction of any liability or claim against Landlord under this Lease. In no event whatsoever shall Landlord (which term shall include, without limitation, any general or limited partner, trustees, beneficiaries, officers, directors, or stockholders of Landlord) ever be personally liable for any such liability.

16.5 No Prior or Other Agreements. This Lease contains all agreements between the Parties with respect to any matter mentioned herein, and supersedes all prior or contemporaneous oral or written agreements or understandings.

16.6 Notice Requirements. All notices required or permitted by this Lease shall be in writing and may be delivered in person (by hand, messenger, or courier service) or may be sent by regular, certified, or registered mail or by any nationally recognized overnight courier that guarantee next-day delivery, with postage prepaid. The addresses noted adjacent to a Party's signature on this Lease shall be that Party's address for delivery or mailing of notice purposes. Either Party may by written notice to the other specify a different address for notice purposes. A copy of all notices required or permitted to be given to Landlord hereunder shall be concurrently transmitted to such party or parties at such addresses as Landlord may from time to time hereafter designate by written notice to Tenant.

16.7 Date of Notice. Any notice sent by registered or certified mail, return receipt requested, shall be deemed given on the date of delivery shown on the receipt card, or if no delivery date is shown, the postmark thereon. If sent by regular mail, the notice shall be deemed given 48 hours after the same is addressed as required herein and mailed with postage prepaid. Notices delivered by an overnight courier that guarantees next-day delivery shall be deemed given 24 hours after delivery of the same to the courier. If notice is received or deemed received on a Saturday, Sunday, or legal holiday, it shall be deemed received on the next business day.

16.8 Waivers. No waiver by Landlord of a Default by Tenant shall be deemed a waiver of any other term, covenant, or condition hereof, or of any subsequent Default by Tenant of the same or any other term, covenant, or condition hereof. In addition the acceptance by Landlord of any rent or other payment after it is due, whether or not a notice of default has been served or any action has been filed by Landlord thereon, shall not be deemed a waiver of Landlord's rights to proceed on any notice of default or action which has been filed against Tenant based upon Tenant's breach of the Lease.

16.9 Holdover. Tenant has no right to retain possession of the Premises or any part thereof beyond the expiration or earlier termination of this Lease. If Tenant holds over with or without the consent of Landlord: (a) the Base Rent payable shall be increased to 150% of the Base Rent applicable during the month immediately preceding such expiration or earlier termination; and (b) all other terms and conditions of this Lease shall continue to apply. Nothing contained herein shall be construed as consent by Landlord to any holding over by Tenant. Tenant shall indemnify, defend, and hold Landlord harmless from and against any and all claims, demands, actions, losses, damages, obligations, costs, and expenses, including, without limitation, attorneys' fees incurred or suffered by Landlord by reason of Tenant's failure to surrender the Premises on the expiration or earlier termination of this Lease in accordance with the provisions of this Lease.

16.10 Cumulative Remedies. No remedy or election hereunder shall be deemed exclusive but shall, wherever possible, be cumulative with all other remedies in law or in equity.

16.11 Binding Effect: Choice of Law. This Lease shall be binding upon the Parties, their personal representatives, successors, and assigns, and be governed by the laws of the State in which the Premises are located. Any litigation between the Parties hereto concerning this Lease shall be initiated in the county in which the Premises are located.

16.12 Landlord. The covenants and obligations contained in this Lease on the part of Landlord are binding on Landlord, its successors, and assigns only during their respective period of ownership of an interest in the Building. In the event of any transfer or transfers of such title to the Building and following the assumption or assumptions of Landlord's obligations hereunder, Landlord (and, in the case of any subsequent transfers or conveyances, the then grantor) shall be concurrently freed and relieved from and after the date of such transfer or conveyance, without any further instrument or agreement, of all liability with respect to the performance of any covenants or obligations on the part of Landlord contained in this Lease thereafter to be performed.

16.13 Attorneys' Fees and Other Costs. If any Party brings an action or proceeding to enforce the terms hereof or declare rights hereunder, the Prevailing Party (as hereafter defined) in any such proceeding shall be entitled to reasonable attorneys' fees. The term "Prevailing Party" shall include, without limitation, a Party who substantially obtains or defeats the relief sought. Landlord shall be entitled to attorneys' fees, costs, and expenses incurred in the preparation and service of notices of Default and consultations in connection therewith, whether or not a legal action is subsequently commenced in connection with such Default or resulting breach, to the extent set forth in subpart (i) of Addendum 1 to this Lease. Tenant shall reimburse Landlord on demand for all actual reasonable legal, engineering, and other professional services expenses incurred by Landlord in connection with all requests by Tenant or any lender of Tenant for consent, waiver or approval of any kind.

16.14 Landlord's Access; Showing Premises; Repairs. Landlord and Landlord's agents shall have the right to enter the Premises at any time, in the case of an emergency, and otherwise at reasonable times upon 1 business day prior notice for the purpose of showing the same to prospective purchasers, lenders, or tenants, and making such alterations, repairs, improvements, or additions to the Premises or to the Building, as Landlord is required to perform hereunder. Landlord may at any time place on or about the Premises or Building any ordinary "For Sale" signs , and Landlord may at any time during the last 180 days of the Term hereof place on or about the Premises any ordinary "For Lease" signs. Notwithstanding and in addition to any other obligation of Tenant under this Lease to cooperate with Landlord, Tenant specifically acknowledges and agrees that it shall cooperate with Landlord in making the Premises available for showing to prospective tenants during the last 180 days of the Term and during any Default by Tenant. All such activities of Landlord shall be without abatement of rent or liability to Tenant. Any entry by Landlord and Landlord's agents shall not materially impair Tenant's operations more than reasonably necessary, and shall comply with Tenant's reasonable security measures.

16.15 Signs. Tenant shall not place any signs at or upon the exterior of the Premises or the Building, except that Tenant may, with Landlord's prior written consent, install (but not on the roof) such signs as are reasonably required to advertise Tenant's own business so long as such signs are in a location approved by Landlord and comply with sign ordinances and the signage criteria established for the Industrial Center by Landlord. Notwithstanding anything to the contrary, Landlord may place its then customary identification signage and graphics on the Building and Premises provided they do not interfere with any Tenant signs which have been approved by Landlord. Landlord hereby approves Tenant's installation of such signage on the Building's façade comparable to that of the existing tenant.

16.16 Termination; Merger. Unless specifically stated otherwise in writing by Landlord, the voluntary or other surrender of this Lease by Tenant, the mutual termination or cancellation hereof, or a termination hereof by Landlord for Default by Tenant, shall automatically terminate any sublease or lesser estate in the Premises; provided, however, Landlord shall, in the event of any such surrender, termination, or cancellation, have the option to continue any one or all of any existing subtenancies. Landlord's failure within 10 days following any such event to make a written election to the contrary by written notice to the holder of any such lesser interest shall constitute Landlord's election to have such event constitute the termination of such interest.

16.17 Quiet Possession. Upon payment by Tenant of the Base Rent and Additional Rent for the Premises and the performance of all of the covenants, conditions, and provisions on Tenant's part to be observed and performed under this Lease, Tenant shall have quiet possession of the Premises for the entire term hereof, subject to all of the provisions of this Lease.

16.18 Subordination; Attornment; Non-Disturbance.

(a) Subordination. This Lease shall be subject and subordinate to any ground lease, mortgage, deed of trust, or other hypothecation or mortgage (collectively, "Mortgage") now or hereafter placed by Landlord upon the real property of which the Premises are a part, to any and all advances made on the security thereof, and to all renewals, modifications, consolidations, replacements, and extensions thereof. Tenant agrees that any person holding any Mortgage shall have no duty, liability, or obligation to perform any of the obligations of Landlord under this Lease. In the event of Landlord's default with respect to any such obligation, Tenant will give any Lender, whose name and address have previously been furnished in writing to Tenant, notice of a default by Landlord. Tenant may not exercise any remedies for default by Landlord unless and until Landlord and the Lender shall have received written notice of such default and a reasonable time (not less than 60 days) shall thereafter have elapsed without the default having been cured. If any Lender shall elect to have this Lease superior to the lien of its Mortgage and shall give written notice thereof to Tenant, this Lease shall be deemed prior to such Mortgage. The provisions of a Mortgage relating to the disposition of condemnation and insurance proceeds shall prevail over any contrary provisions contained in this Lease. Landlord represents and warrants that there is no Mortgage affecting the Premises as of the date hereof.

(b) Attornment. Subject to the nondisturbance provisions of subparagraph (c) of this Paragraph 16.18, Tenant agrees to attorn to a Lender or any other party who acquires ownership of the Premises by reason of a foreclosure of a Mortgage. In the event of such foreclosure, such new owner shall not: (i) be liable for any act or omission of any prior landlord or with respect to events occurring prior to acquisition of ownership, (ii) be subject to any offsets or defenses which Tenant might have against any prior Landlord, or (iii) be liable for security deposits or be bound by prepayment of more than one month's rent unless, in each case, actually received.

(c) Non-Disturbance. With respect to a Mortgage entered into by Landlord after the execution of this Lease, this Lease shall be subject and subordinate to such Mortgage. Notwithstanding the foregoing, Landlord shall use commercially reasonable efforts to obtain a "nondisturbance agreement" from the Mortgage holder providing that Tenant's possession pursuant to this Lease will not be disturbed so long as Tenant is not in default and attorns to the record owner of the Premises. Notwithstanding anything to the contrary herein, the subordination of this Lease to any Mortgage shall be conditioned upon Tenant's receipt from any Mortgage holder of such a "nondisturbance agreement" on the lender's then current form.

(d) Self-Executing. The agreements contained in this Paragraph 16.18 shall be effective without the execution of any further documents; provided, however, that upon written request from Landlord or a Lender in connection with a sale, financing, or refinancing of Premises, Tenant and Landlord shall execute such further writings as may be reasonably required to separately document any such subordination or nonsubordination, attornment, and/or nondisturbance agreement, as is provided for herein. Landlord is hereby irrevocably vested with full power to subordinate this Lease to a Mortgage.

16.19 Rules and Regulations. Tenant agrees that it will abide by, and to cause its employees, suppliers, shippers, customers, tenants, contractors, and invitees to abide by the Rules and Regulations attached hereto as Exhibit "E", and any reasonable and non-discriminatory amendments thereto ("Rules and Regulations") which Landlord may make from time to time for the management, safety, care, and cleanliness of the Common Areas, the parking and unloading of vehicles, and the preservation of good order, as well as for the convenience of other occupants or tenants of the Building and the Industrial Center and their invitees. Landlord shall not be responsible to Tenant for the noncompliance with said Rules and Regulations by other tenants of the Industrial Center.

16.20 Security Measures. Tenant acknowledges that the rental payable to Landlord hereunder does not include the cost of guard service or other security measures. Landlord has no obligations to provide same. Tenant assumes all responsibility for the protection of the Premises, Tenant, its agents, and invitees and their property from the acts of third parties.

16.21 Reservations. Landlord reserves the right to grant such easements that Landlord deems necessary and to cause the recordation of parcel maps, so long as such easements and maps do not unreasonably interfere with the use of the Premises, Storage Area, or the parking areas by Tenant. Tenant agrees to sign any documents reasonably requested by Landlord to effectuate any such easements or maps. Landlord may not, at any time following the execution of this Lease, either directly or through Landlord's agents, identify Tenant's name in any marketing materials relating to the Building or Landlord's portfolio and/or make press releases or other announcements regarding the leasing of the Premises by Tenant, without Tenant's prior written consent, which may be withheld in its sole discretion.

16.22 Conflict. Any conflict between the printed provisions of this Lease and the typewritten or handwritten provisions shall be controlled by the typewritten or handwritten provisions.

16.23 Offer. Preparation of this Lease by either Landlord or Tenant or Landlord's agent or Tenant's agent and submission of same to Tenant or Landlord shall not be deemed an offer to lease. This Lease is not intended to be binding until executed and delivered by all Parties hereto.

16.24 Amendments. This Lease may be modified only in writing, signed by the parties in interest at the time of the modification.

16.25 Multiple Parties. Except as otherwise expressly provided herein, if more than one person or entity is named herein as Tenant, the obligations of such persons shall be the joint and several responsibility of all persons or entities named herein as such Tenant.

16.26 Authority. Landlord or Tenant warrants and represents that each person signing on behalf of such party is authorized to execute and deliver this Lease and to make it a binding obligation of Landlord or Tenant.

16.27 Broker's Fees. Except for Colliers International, who represents Landlord, and Newmark, who represents Tenant, who shall be paid by separate agreement with Landlord, Tenant represents and warrants that it has dealt with no broker, agent or other person in connection with this transaction and that no broker, agent or other person brought about this transaction and Tenant shall indemnify, defend, protect and hold Landlord harmless from and against any claims, losses, liabilities, demands, costs, expenses or causes of action by any broker, agent or other person claiming a commission or other form of compensation by virtue of having dealt with Tenant with regard to this leasing transaction.

16.28 No Partnership. Nothing in this Lease creates any relationship between the parties other than that of landlord and tenant, and nothing in this Lease constitutes the Landlord a partner of Tenant or a joint venturer or member of a common enterprise with Tenant.

16.29 Lease Captions. The captions of this Lease are for convenience only and are not a part of this Lease, and do not in any way define, limit, describe, or amplify the terms or provisions of this Lease or the scope or intent thereof.

16.30 Counterparts and Electronic Signatures. This Lease may be executed in multiple counterparts, each of which shall constitute an original, but all of which taken together shall constitute one and the same agreement. Electronic signatures by PDF via email or facsimile shall be treated as originals for all purposes.

16.31 Interpretation. The parties acknowledge that this Lease is the result of negotiations between the parties, and in construing any ambiguity hereunder no presumption shall be made in favor of either party. No inference shall be made from any item, which has been stricken from this Lease other than the deletion of such item.

16.32 Recording. Neither Tenant nor anyone claiming under Tenant shall record this Lease or any memorandum hereof in any public records without the prior written consent of Landlord.

16.33 Force Majeure. Whenever a period of time is herein prescribed for the taking of any action by Landlord or Tenant, as the case may be, Landlord or Tenant, as applicable, shall not be liable or responsible for, and there shall be excluded from the computation of such period of time, any delays due to strikes, riots, acts of God, shortages of labor or materials, war, Applicable Requirements, or any other cause whatsoever completely beyond the control of Landlord or Tenant, as applicable. The foregoing provisions of this Paragraph are inapplicable to any payments of money due under this Lease and shall not affect Tenant's rights under Paragraphs 3.2 and 9.1 above.

16.34 Patriot Act.

(a) Tenant represents and warrants that, to its current actual knowledge, neither Tenant nor its affiliates are in violation of any laws relating to terrorism or money laundering, including Executive Order No. 13224 on Terrorist Financing, effective September 24, 2001 and relating to Blocking Property and Prohibiting Transactions With Persons Who Commit, Threaten to Commit, or Support Terrorism (the "Executive Order") and/or the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (Public La 107-56, the "Patriot Act").

(b) Tenant represents and warrants that, to Tenant's current actual knowledge, neither Tenant nor any of its affiliates is a "Prohibited Person" which is defined as follows:

(i) a person or entity that is listed in the Annex to, or is otherwise subject to the provisions of, the Executive Order;

(ii) a person or entity owned or controlled by, or acting for or on behalf of, any person or entity that is listed in the Annex to, or is otherwise subject to the provisions of, the Executive Order;

(iii) a person or entity with whom Landlord is prohibited from dealing or otherwise engaging in any transaction by any terrorism or money laundering laws or regulations, including the Executive Order and the Patriot Act;

(iv) a person or entity who commits, threatens or conspires to commit or supports "terrorism" as defined in the Executive Order;

(v) a person or entity that is named as a "specially designated national and blocked person" on the most current list published by the U.S. Treasury Department Office of Foreign Assets Control at its official website, http://www.treas.gov/ofac/tllsdn.pdf or at any replacement website or other replacement official publication of such list; and

(vi) a person or entity who is affiliated with a person or entity listed above.

(c) Tenant represents and warrants that neither Tenant nor any of its affiliates will: (i) conduct any business or engage in any transaction or dealing with any Prohibited Person, including the making or receiving any contribution of funds, goods or services to or for the benefit of any Prohibited Person, (ii) deal in or otherwise engage in any transaction relating to, any property or interests in property blocked pursuant to the Executive Order; or (iii) engage in or conspire to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding, or attempts to violate, any of the prohibitions set forth in the Executive Order or the Patriot Act.

(d) Tenant will develop, implement and maintain security and emergency plans for the Premises, which shall be subject to Landlord's reasonable approval. Reference is made to the BOMA Guide to Security and Emergency Planning (ISBN No. 0-9431-30-28-X) to assist Tenant in developing such plans.

(e) Intentionally deleted.

(f) Tenant covenants and agrees to deliver to Landlord any certification or other evidence requested from time to time by Landlord in its reasonable discretion, confirming Tenant's compliance with this section.

16.35 Approvals. Whenever this Lease requires an approval, consent, determination or judgment by either Landlord or Tenant, unless another standard is expressly set forth, such approval, consent, determination or judgment and any conditions imposed thereby shall be reasonable and shall not be unreasonably withheld or delayed.

[signatures on following page]

The parties hereto have executed this Lease at the place and on the dates specified below their respective signatures.

Landlord:
Terreno Park Union City LLC
a Delaware limited liability company

By: Terreno Realty LLC,
a Delaware limited liability company
its member

By: Terreno Realty Corporation,
a Maryland corporation

By: /s/ Cody Saunders
Cody Saunders, Vice President

Telephone:

Executed at: San Francisco, CA

on: 2/15/21

ADDRESS

101 Montgomery Street, Suite 200
San Francisco, CA 94104

Tenant:
Tenaya Therapeutics, Inc.,
a Delaware corporation

By: /s/ Faraz Ali
Name: Faraz Ali
Its: CEO

Telephone:

Executed at: South San Francisco

on: 2/15/21

ADDRESS

171 Oyster Point Blvd, Suite 500
South San Francisco, CA 94080

GLOSSARY

The following terms in the Lease are defined in the paragraphs opposite the terms.

TERM	DEFINED IN PARAGRAPH
Additional Rent	4.1
Applicable Requirements	6.3
Assign	12.1
Base Rent	1.4
Basic Provisions	1
Building	1.2
Building Operating Expenses	4.2(b)
Code	12.1(a)
Commencement Date	1.3
Commencement Date Certificate	3.3
Common Area Operating Expenses	4.2(b)
Common Areas	2.2
Condemnation	14
Default	13.1
Expiration Date	1.3
HVAC	4.2(a)(x)
Hazardous Substance	6.2
Indemnity	8.5
Industrial Center	1.2
Landlord	1.1
Landlord Entities	6.2(c)
Lease	1.1
Lenders	6.4
Mortgage	16.18
Operating Expenses	4.2
Party/Parties	1.1
Patriot Act	16.34
Permitted Use	1.8
Premises	1.2
Prevailing Party	16.13
Real Property Taxes	10.2
Rent	4.1
Reportable Use	6.2
Requesting Party	15
Responding Party	15
Rules and Regulations	2.4, 16.19
Security Deposit	1.7, 5
Tenant	1.1
Tenant Acts	9.2
Tenant’s Entity	6.2(c)
Tenant’s Share	1.5
Term	1.3
Use	6.1

ADDENDUM 1

TERRENO REALTY CORPORATION
Landlord's Remedies in the Event of Tenant Default - California

This Landlord's Remedies Addendum is a part of the Lease dated February 12, 2021, by and between Terreno Park Union City LLC ("Landlord") and Tenaya Therapeutics, Inc. ("Tenant") for the Premises as defined in the Lease.

In the event of any Default by Tenant, then in addition to any other remedies available to Landlord at law or in equity and under this Lease Landlord shall have any or all of the following remedies:

(a) Termination. Landlord shall have the immediate option to terminate this Lease and all rights of Tenant hereunder by giving written notice of such intention to terminate. In the event that Landlord shall elect to so terminate this Lease then Landlord may recover from Tenant:

(1) the worth at the time of award of any unpaid Rent and any other sums due and payable which have been earned at the time of such termination; plus

(2) the worth at the time of award of the amount by which the unpaid Rent and any other sums due and payable which would have been earned after termination until the time of award exceeds the amount of such rental loss Tenant proves could have been reasonably avoided; plus

(3) the worth at the time of award of the amount by which the unpaid Rent and any other sums due and payable for the balance of the term of this Lease after the time of award exceeds the amount of such rental loss that Tenant proves could be reasonably avoided; plus

(4) any other amount necessary to compensate Landlord for all the detriment proximately caused by Tenant's failure to perform its obligations under this Lease or which in the ordinary course would be likely to result therefrom, including, without limitation, any costs or expenses incurred by Landlord (i) in retaking possession of the Premises; (ii) in maintaining, repairing, preserving, restoring, replacing, cleaning, the Premises or any portion thereof, including such acts for reletting to a new lessee or lessees; (iii) for leasing commissions; or (iv) for any other costs necessary or appropriate to relet the Premises; plus

(5) such reasonable attorneys' fees incurred by Landlord as a result of a Default, and costs in the event suit is filed by Landlord to enforce such remedy; and plus

(6) at Landlord's election, such other amounts in addition to or in lieu of the foregoing as may be permitted from time to time by applicable law. As used in subparagraphs (1) and (2) above, the "worth at the time of award" is computed by allowing interest at an annual rate equal to twelve percent (12%) per annum or the maximum rate permitted by law, whichever is less. As used in subparagraph (3) above, the "worth at the time of award" is computed by discounting such amount at the discount rate of the Federal Reserve Bank of San Francisco at the time of award, plus one percent (1 %). Tenant waives redemption or relief from forfeiture under California Code of Civil Procedure Sections 1174 and 1179, or under any other present or future law, in the event Tenant is evicted or Landlord takes possession of the Premises by reason of any Default of Tenant hereunder.

(7) any other remedies allowed by the laws of the state of California.

(b) Continuation of Lease. In the event of any Default by Tenant, then in addition to any other remedies available to Landlord at law or in equity and under this Lease, Landlord shall have the remedy described in California Civil Code Section 1951.4 (Landlord may continue this Lease in effect after Tenant's Default and abandonment and recover Rent as it becomes due, provided tenant has the right to sublet or assign, subject only to reasonable limitations).

(c) Re-entry. In the event of any Default by Tenant, Landlord shall also have the right, after terminating this Lease, in compliance with applicable law, to re-enter the Premises and remove all persons and property from the Premises; such property may be removed and stored in a public warehouse or elsewhere at the cost of and for the account of Tenant.

(d) Reletting. In the event of the abandonment of the Premises by Tenant or in the event that Landlord shall elect to re-enter or shall take possession of the Premises pursuant to legal proceeding or pursuant to any notice provided by law, then if Landlord elects to terminate this Lease as provided in Paragraph a, Landlord may from time to time, relet the Premises or any part thereof for such term or terms and at such rental or rentals and upon such other terms and conditions as Landlord in its sole discretion may deem advisable with the right to make alterations and repairs to the Premises. Notwithstanding anything to the contrary, Tenant hereby specifically acknowledges and agrees that Landlord may hold and apply the Security Deposit against future rent damages incurred by Landlord in the event of a default by Tenant under this Lease and Tenant specifically waives the provisions of California Civil Code section 1950.7 or any successor statute which would prevent Landlord from making such application.

(e) Election to Terminate. No re-entry or taking of possession of the Premises by Landlord shall be construed as an election to terminate this Lease unless a written notice of such intention is given to Tenant or unless the termination thereof is decreed by a court of competent jurisdiction.

(f) Default Payment Remedies. If Tenant fails to pay Rent within applicable notice and cure periods more than two (2) times in any twelve (12) month period or more than three (3) times during the Term or any extension thereof, Landlord, in its sole discretion may demand in writing and Tenant shall pay all future installments of Rent quarterly in advance and all future payments of Rent shall be made by cashier's check or other certified funds.

(g) Cumulative Remedies. The remedies herein provided are not exclusive and Landlord shall have any and all other remedies provided herein or by law or in equity.

(h) No Surrender. No act or conduct of Landlord, whether consisting of the acceptance of the keys to the Premises, or otherwise, shall be deemed to be or constitute an acceptance of the surrender of the Premises by Tenant prior to the expiration of the Term, and such acceptance by Landlord of surrender by Tenant shall only flow from and must be evidenced by a written acknowledgment of acceptance of surrender signed by Landlord. The surrender of this Lease by Tenant, voluntarily or otherwise, shall not work a merger unless Landlord elects in writing that such merger take place, but shall operate as an assignment to Landlord of any and all existing subleases, or Landlord may, at its option, elect in writing to treat such surrender as a merger terminating Tenant's estate under this Lease, and thereupon Landlord may terminate any or all such subleases by notifying the sublessee of its election so to do within five (5) days after such surrender.

(i) Notice Provisions Tenant agrees that any notice given by Landlord pursuant to Paragraph 13.1 of the Lease shall satisfy the requirements for notice under California Code of Civil Procedure Section 1161, and Landlord shall not be required to give any additional notice in order to be entitled to commence an unlawful detainer proceeding. Should Landlord prepare any notice to Tenant for failure to pay rent, additional rent or perform any other obligation under the Lease, Tenant shall pay to Landlord, without any further notice from Landlord, the additional sum of $150.00 which the parties hereby agree represents a fair and reasonable estimate of the costs Landlord will incur by reason of preparing such notice.

(j) Miscellaneous. Every term, condition, agreement, or provision contained in the Lease shall be deemed to be a covenant. The specified remedies to which Landlord may resort under the terms of the Lease are cumulative and are not intended to be exclusive of any other remedies or means of redress to which Landlord may be lawfully entitled in case of any breach or threatened breach by Tenant of any provision of the Lease. The failure of either party to insist in any one or more cases upon the strict performance of any of the terms, covenants, conditions, provisions or agreements of the Lease or to exercise any option herein contained shall not be construed as a waiver or a relinquishment for the future of any such term, covenant, condition, provision, agreement or option. A receipt and acceptance by Landlord of Rent or any other payment, or the acceptance of performance of anything required by the Lease to be performed, with knowledge of the breach of any term, covenant, condition, provision or agreement of the Lease, shall not be deemed a waiver of such breach, nor shall any such acceptance of Rent in a lesser amount than is herein provided for (regardless of any endorsement on any check, or any statement in any letter accompanying any payment of Rent) operate or be construed either as an accord and satisfaction or in any manner other than as a payment on account of the earliest Rent then unpaid by Tenant, and no waiver by Landlord of any term, covenant, condition, provision or agreement of the Lease shall be deemed to have been made unless expressed in writing and signed by Landlord. In addition to the other remedies provided Landlord in the Lease, Landlord shall be entitled to the immediate restraint by injunction of any violation or attempted or threatened violation, of any of the terms, covenants, conditions, provisions or agreements of the Lease. No act or conduct of Landlord, whether consisting of the acceptance of the keys to the Premises, or otherwise, shall be deemed to be or constitute an acceptance of the surrender of the Premises by Tenant prior to the expiration of the Term, and such acceptance by Landlord of surrender by Tenant shall only flow from and must be evidenced by a written acknowledgment of acceptance of surrender signed by Landlord. Notwithstanding anything to the contrary contained in the Lease or this Addendum, the foregoing terms and conditions shall apply to the extent that they are not contrary to any laws of the state of California.

ADDENDUM 2

TERRENO REALTY CORPORATION
Tenant Improvement Addendum

This Tenant Improvement Addendum is a part of the Lease dated February 12, 2021, by and between Terreno Park Union City LLC ("Landlord") and Tenaya Therapeutics, Inc. ("Tenant") for the Premises as defined in the Lease.

Tenant may construct at its sole cost and expense the improvements ("Alterations") for which Tenant has obtained Landlord's prior written consent. Landlord hereby consent to the Alterations shown on Schedule 1 hereto. Prior to commencement of construction, Tenant shall obtain and deliver to Landlord any building permit required by applicable law and a copy of the executed construction contract(s). Tenant shall reimburse Landlord within 30 days after the rendition of a bill for all of Landlord's actual, reasonable out-of-pocket costs incurred in connection with the Alterations, including, without limitation, all management, engineering, outside consulting, and construction fees incurred by or on behalf of Landlord for the review and approval of Tenant's plans and specifications and for the monitoring of construction of the Alterations. Tenant shall supply all contact info for contractors and subcontractors Tenant shall require its contractor to maintain insurance in the amounts and in the forms reasonably acceptable to Landlord. The Alterations shall be constructed by licensed contractors approved by Landlord and in accordance with reasonable rules, such as hours of construction, imposed by Landlord. Landlord hereby approves Dome Construction and DGA as the contractor and architect for the Alterations. The Alterations shall be completed lien free, in accordance with the plans and specifications approved by Landlord, in a good, workmanlike, and prompt manner, with new materials of first-class quality and comply with all applicable local, state, and federal regulations. At Landlord's election upon the expiration or earlier termination of the Lease, Tenant shall remove the Alterations except those for which Tenant obtained Landlord's consent and Landlord, in such consent, did not require the removal of same, and repair any and all damage caused by such removal. Notwithstanding the foregoing, at the end of the Term or earlier termination of this Lease, Tenant shall remove the Approved Alterations set forth in Schedule 1 to this Addendum and restore the Premises to its condition prior to the installation and construction of the Approved Alterations.

Tenant shall pay when due all claims for labor or materials furnished or alleged to have been furnished to or for Tenant at or for use on the Premises. Tenant shall give Landlord not less than 10 days' notice prior to the commencement of any work in, on, or about the Premises, and Landlord shall have the right to post notices of non-responsibility in or on the Premises as provided by law.

Tenant agrees to indemnify, protect, and defend Landlord and hold Landlord harmless against any loss, liability, or damage resulting from construction of the Alterations.

Tenant Improvement Allowance: Subject to Tenant's compliance with the provisions of this Addendum and the Lease, Landlord shall provide to Tenant an allowance in the amount of Two Hundred Eighty-Two Thousand One Hundred Thirty-Eight and zero/00 Dollars ($282,138.00) ("TI Allowance") to construct and install only the alterations to the Premises which have been approved in writing by Landlord pursuant to this Addendum ("Alterations"). The TI Allowance shall be used to design, prepare, plan, obtain approval of, construct and install the Alterations and for no other purpose. Except as otherwise expressly provided herein, Landlord shall have no obligation to contribute the TI Allowance unless and until the Alterations have been completed in a good and workmanlike manner in lien free condition and evidence of same reasonably satisfactory to Landlord has been received by Landlord to include, but not be limited to (a) receipt by Landlord of unconditional mechanics' lien releases from the contractor and all subcontractors, labor suppliers and materialmen for the Alterations completed by the contractor, subcontractors, labor suppliers and materialmen and for which Tenant seeks funds from the TI Allowance to pay for such Alterations, (b) invoices, bills, or statements for the Alterations completed and the materials and supplies used for all Alterations for which the TI Allowance was utilized, and (c) completion by Landlord or Landlord's agents of any inspections of the Alterations completed and materials and supplies used as deemed reasonably necessary by Landlord which Landlord will complete within thirty (30) days after notice from Tenant that work is complete. The TI Allowance shall be paid to Tenant within forty-five (45) days from the satisfaction of the conditions set forth in the immediately preceding sentence. Should the total cost of constructing the Alterations be less than the TI Allowance, the TI Allowance shall be automatically reduced to the amount equal to said actual cost. If the Lease is terminated prior to the date on which the Alterations are completed, for any reason due to the default of Tenant hereunder, in addition to any other remedies available to Landlord under the Lease, Tenant shall pay to Landlord as Additional Rent under the Lease, within thirty (30) days of receipt of a statement therefor, any and all costs incurred by Landlord and not reimbursed or otherwise paid by Tenant as required herein through the date of termination in connection with the Alterations to the extent planned, installed and/or constructed as of such date of termination , including, but not limited to, any costs related to the removal of all or any portion of the Alterations and restoration costs related thereto. Notwithstanding the foregoing, if all of the conditions for payment of the TI Allowance have not been completed or Landlord has not received the request for the TI Allowance from Tenant on or before April 30, 2022, Landlord shall have no obligation to pay the TI Allowance. To the extent that any Alterations or improvements made by or for Tenant or Tenant's specific use require compliance with Applicable Requirements for the Premises

or any part of the Industrial Center including, but not limited to, the Americans with Disabilities Act (collectively "Compliance Improvements"), Tenant shall (i) be solely responsible for the cost of the Compliance Improvements, (ii) reimburse Landlord for any amounts expended by Landlord for the cost of the Compliance Improvements, and (iii) indemnify, hold harmless and defend at Tenant's sole cost by counsel reasonably satisfactory to Landlord, Landlord and the Landlord Entities from any liability, damage or cost arising from the Compliance Improvements, which indemnity shall survive the termination or expiration of the Lease.

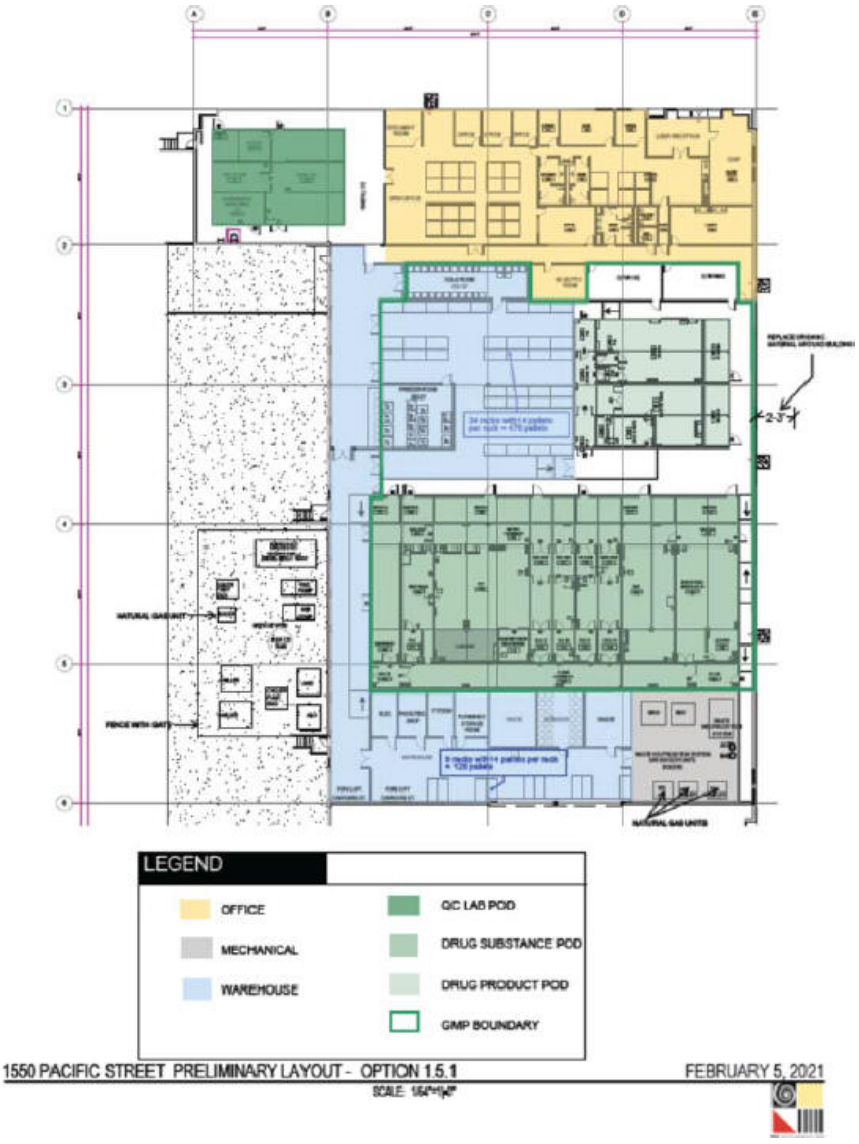
Tenant acknowledges and agrees that it has had sufficient opportunity to investigate and inspect the physical condition of the Premises and, except as otherwise set forth in the Lease, accepts the Premises subject to the foregoing in its existing condition, "as-is, where is and with all faults". Except as specifically set forth herein or in the Lease, it is expressly understood and agreed that Landlord has no responsibility or obligation to or for (1) repair or perform any work with respect to the Premises including, but not limited to, the building, floor, roof, storefront (if any), walls, ceiling, lighting fixtures, heating, ventilating and air-conditioning systems, plumbing, bathrooms, utilities systems or otherwise, (2) the condition of the Premises, (3) the suitability of the Premises for any use by Tenant, (4) the presence of any hazardous, toxic or environmentally sensitive materials in, on or below the Premises, or (5) the existence of any other physical impairment or impairment to the Premises not specifically disclosed in this Lease.

Notwithstanding anything to the contrary, within five (5) business days of receipt from Landlord of a Move-In Inspection form on Landlord's then current form ("Move-Inspection"), Tenant shall execute the Move-In Inspection and return the signed Move-In Inspection to Landlord. Failure by Tenant to sign and return the Move-In Inspection in a timely manner shall be a default under the Lease.

Where no time period is specified above, Landlord shall respond to any consent or approval request within ten (10) business days and Landlord's failure to provide or reasonably refuse its consent within such time period shall be deemed Landlord's consent or approval to the request.

Schedule 1

Approved Alterations



1. PURPOSE

1.1. This Specification describes the Purchaser's host facility requirements.

2. SCOPE

2.1. This Specification sets forth the host facility requirements for facilities where G-CON PODs® will be operated. These requirements must be satisfied for a POD® or POD system to meet its/their intended purpose.

2.2. A G-CON project team member shall inspect the host facility one month prior to shipment of the PODs to ensure that all requirements are met. If any items are not met, Purchaser must address the same two weeks prior to POD® shipment.

3. ROLES AND RESPONSIBILITIES

Role	Responsibility
Purchaser	• The Purchaser shall ensure that the Host Facility for the POD(s) meets all of the requirements stated in this document.

4. ABBREVIATIONS

Abbreviation	Definition
SOP	Standard Operating Procedure
SPEC	Specification
HVAC	Heating, Ventilation and Air Conditioning
AHU	Air Handling Unit
HEPA	High Efficiency Particulate Air
CFM	Cubic Feet per Minute
DB	Dry Bulb
RH	Relative Humidity
BMAH	Building Makeup Air Handler
A	Amps
V	Volts
Ph	Phase
W	Watts
KW	Kilowatts
CHWS	Chilled Water Supply
CHWR	Chilled Water Return
GPM	Gallons per Minute
psig	Pounds per Square Inch Gage
EWT	Entering Water Temperature
LWT	Leaving Water Temperature
FACP	Fire Alarm Control Panel
BAS	Building Automation System
PAS	POD® Automation System

Abbreviation	Definition
FC	Foot Candle
AFF	Above Finished Floor

5. DEFINITIONS

Term	Definition
POD	An autonomous, mobile, flexible cleanroom module that houses pharmaceutical or biopharmaceutical production and processing.
POD Set	A contiguous group of PODs that perform as a single unit and cannot be broken apart easily. POD Sets usually incorporate multiple PODs with separated air systems within but incorporate corridors that span over multiple PODs.
POD System	Can be made up of multiple PODs or POD Sets. A group of PODs that will be treated as a single project site. In a system of PODs, one master panel will be found to control all the POD Sets.
SubPOD	A single unit that makes up a larger POD. SubPODs cannot function on their own and must be a part of a system of other SubPODs to make up a POD.

6. PROCEDURE

6.1. HVAC - All requirements, flow rates and quantities shown are per POD unless otherwise noted.

6.1.1. Make up air to the POD from grey space or Outside Air Unit

6.1.1.1. No less than 5 CFM per Square Foot of Clean Space for single pass air systems; no less than 2 CFM per Square Foot of Clean Space for full recirculated air systems (estimate only – to be determined during detailed design)

6.1.1.2. Maintain host space at 65°F DB +/- 15F and 50% RH +/- 10% (Humidity requirement based on client product humidity requirements. POD does not have humidification capability. Dehumidification is directly lowered via mechanical cooling only.)

6.1.1.3. Make-up air for the POD must be available to a louvered vent located on the outer wall of the mechanical space of each POD.

6.1.1.3.1. If local ordinance or the Purchaser requires the make-up air to the POD to be ducted from outdoors, then an interlock between the building makeup air handler (BMAH) and the POD AHUs shall be provided by the Purchaser.

6.1.1.3.2. The temperature and RH of the ducted supply air in 6.1.1.3.1 shall be 65°F DB +/- 15F and 50% RH +/- 10% (Humidity requirement based on client product humidity requirements. A POD does not have humidification capability. Dehumidification is directly lowered via mechanical cooling only.)

6.1.2. Exhaust

6.1.2.1. No less than 5 CFM per Square Foot of Clean Space (estimate only – to be determined during detailed design)

6.1.2.2. POD will exhaust air. This air can be exhausted to the grey space or to atmosphere.

6.1.2.2.1. If the air is required to be exhausted to atmosphere, Purchaser shall provide make up air directly to the POD. Purchaser shall make the final connections to a G-CON provided rectangular duct located at the top of the mechanical space of each POD.

6.1.3. Energy Recovery

6.1.3.1. To the extent Purchaser desires energy recovery, Purchaser shall provide pumped energy recovery coils to the process exhaust and make up air systems to pre-condition the outside air.

6.1.4. Test and Balance

6.1.4.1. The Purchaser shall provide testing and balancing services for areas directly adjacent to the PODs so that all pressure gradients between the G-CON supplied PODs and/or G-CON supplied corridors and the host building are achieved based upon the design specifications.

6.1.4.2. G-CON shall test and balance each POD so that all pressure gradients within the POD are achieved for the POD only per the design specifications for the PODs.

6.1.5. G-CON provides two HVAC cooling options for PODs.

6.1.5.1. CHWS (Chilled Water Supply) and CHWR (Chilled Water Return)

6.1.5.1.1. Purchaser shall provide no less than .05 GPM per square foot, 15 psig, 42°F EWT / 52°F LWT or as specified per POD model.

6.1.5.1.2. Purchaser shall provide a 1.5" threaded connection to a GCON ball valve overhead to each POD system service inlet location for chilled water supply and return.

6.1.5.1.3. All CHWS and CHWR shall be hydro-flushed by the Purchaser immediately prior to connecting the POD(s) to the chilled water. All systems shall be flushed with the ball valves completely open. If the PODs are not installed immediately following the flush then, after flushing, the Purchaser shall completely drain the pipes and protect them against corrosion. Purchaser shall provide G-CON with a certificate showing the date and time of the system flushing.

6.1.5.1.4. Final connection of all CHWS and CHWR to the POD shall be completed by G-CON during installation of the POD.

6.1.5.1.5. If Purchaser desires quick disconnects for the CHWS and CHWR, G-CON shall provide the quick disconnect female coupling to the Purchaser for installation on the CHWS and CHWR hoses being provided by the Purchaser. G-CON shall supply the associated male coupling, which shall be installed at the service inlet on the back of each POD. Final connection of the couplings shall be completed by G-CON during the POD installation.

6.1.5.2. Direct Expansion Variable Refrigerant Cooling

6.1.5.2.1. G-CON will provide a Direct Expansion Variable Refrigerant condensing unit to the Purchaser prior to POD shipment.

6.1.5.2.2. The Purchaser shall install, pipe, and wire (low and high voltage) the condenser prior to the POD(s) arriving on site.

6.1.5.2.3. The condenser unit shall require no less than .03 KW per POD square foot. This power can either be terminated at a terminal panel on the POD or to the host facility power panels.

6.1.5.2.4. G-CON shall provide insulated copper tubing and control wiring at the POD service inlet. A certified HVAC contractor directed by the Purchaser shall make the final connections to the condenser.

6.1.5.2.5. G-CON shall supervise the final connection of all pipe and wire to the POD during installation of the POD.

6.1.5.2.6. G-CON shall provide factory startup assistance either directly or through a certified start up contractor.

6.2. Power – All power connections to the POD shall be hard-wired to a bus duct connection located on the POD at the service inlet location of each POD. G-CON shall provide said bus duct connection on each POD.

6.2.1. Purchaser shall provide no less than 200A/208V/3Ph/4W or100A/480v/277v/3PH/4W power via a 4 wire 200 conductor with a separate building ground to power each POD system. Customer must allow for additional service capacity if process equipment service power requirements are more than 40 A/208V per POD. The final power requirements shall be confirmed during detailed design.

6.2.2. Purchaser shall terminate the conductor at the back of each subPOD with enough slack to allow for final connection to the POD. G-CON shall connect the conductor to the POD bus connection.

6.2.3. If quick disconnects are selected by the Purchaser for each POD, G-CON shall provide the receptacle (female) and associated hardware to the Purchaser for the Purchaser's installation on a Purchaser-supplied and installed 4 wire 200A rated conductor which will terminate at the back of each POD. G-CON shall provide the associated inlet (male) installed at the back of each POD. G-CON shall complete the final connection between the receptacle and inlet during the POD installation.

6.2.4. Purchaser shall provide separate bus ducts for main and emergency power if desired or required by local ordinance.

6.2.5. G-CON shall manage customer power requirements during detailed design. G-CON base space plan will allow for no more than two (2) different power types to each POD. If more electrical panels are required, G-CON shall require additional mechanical space.

6.2.6. Purchaser shall provide step down transformers and/or automatic transfer switches outside the POD before entering with power if required.

6.3. Process Equipment

6.3.1. Room space planning, process utilities, electrical and HVAC cooling requirements shall all be based upon Purchaser provided process equipment list.

6.3.2. To commence a project timeline, Purchaser shall provide a detailed and complete process equipment list to G-CON.

6.3.3. If Purchaser assumptions are included in the process equipment list and require changes later in the process, such will affect G-CON's ability to complete the project timely and within budget.

6.4. Process Gas/Liquid Services

6.4.1. All process related gases shall be sized and run to a valve termination on the back of each subPOD.

6.5. Combined Condensate and Process Waste

6.5.1. Purchaser shall provide a threaded ball valve overhead to the POD service inlet location for pumped process waste and condensate drainage.

6.6. Fire Alarm System

6.6.1. Each POD Set shall generally be provided with a fire alarm control panel (FACP). This panel will provide the following circuits which can be connected to and monitored by the host building fire alarm controls:

- Supervisory
- Status
- Trouble

6.6.2. G-CON shall connect all POD FACP circuits to a junction box located at the back of the POD.

6.6.3. Purchaser or its designee shall complete the final connection from the host building fire alarm system to the POD FACP junction box.

6.6.4. Purchaser shall provide the fire communication points and system requirements to G-CON prior to quotation.

6.6.5. G-CON shall provide four (4) signals from the POD to the POD terminal box that will allow the building owner to see POD activity as well as 4 signals from the host facility to the POD FACP to notify building alarm conditions.

6.7. Fire Management Options

6.7.1. Based upon local municipality, customer requirements, process requirements and budget, G-CON shall provide a fire detection and management system. The options available are as follows:

6.7.1.1. Fire Extinguisher

6.7.1.1.1. G-CON shall provide a clean case for the placement of a Purchaser provided fire extinguisher.

6.7.1.2. Fire Sprinkler

6.7.1.2.1. G-CON shall provide all pipe, calculations, heads and other equipment related to the installation of fire sprinklers within the PODs. Purchaser shall provide adequate flow and pipe per local jurisdiction requirements to each subPOD. All requirements shall be submitted to local governing body prior to installation by the Purchaser's fire alarm contractor.

6.7.1.3. Fire Suppression

6.7.1.3.1. G-CON shall provide an on-board gas fire suppression system. The suppression system shall work in conjunction with the FACP to provide a signal horn/strobe per room notifying the user if there is a fire within the POD and/or the host building. If Purchaser requires an additional horn/strobe for separate notifications for the building alarm and POD alarm, such information shall be provided to G-CON prior to quotation.

6.8. BAS (Building Automation System)

6.8.1. G-CON shall provide a PAS (POD Automation System) which shall manage the function of each POD.

6.8.2. Each POD shall be able to provide live operating system data or trending data at Purchaser's option or connect to a host building automation system (BAS) for live data collection and trending by the host BAS.

6.8.3. Purchaser shall provide control wires from the host facility to the back of the POD for connection between the host BAS and the PAS.

6.8.4. Purchaser or Purchaser directed contractor shall land the control wires on the PAS terminal panel during installation of the POD.

6.9. Information Technology

6.9.1. G-CON shall provide all Category 6 cabling within the POD if specified for either PAS communication, Ethernet or telephone communication.

6.9.2. All internal cabling to the POD shall be landed by G-CON on RJ45 modular connectors located at the back of the POD.

6.9.3. The Purchaser shall provide cabling from the host facility to the connectors located at the service inlet on the back of the POD.

6.10. General Construction

6.10.1. Floor:

6.10.1.1. All floors shall be concrete.

6.10.1.2. All floors shall be level and plumb with no greater than a +/- 0.5" variance in 100'.

6.10.1.3. Surface plane shall be within 1/8" gap under a 10' straight edge in any direction.

6.10.1.4. All floors shall have a smooth sealed finish and be free of gaps greater than ⅛".

6.10.1.5. All floors shall be able to support the POD weight of 50 lbs/ft² plus the weight of any process equipment located within each POD.

6.10.2. Purchaser shall provide up-to-date drawings of the host facility at all times up to and including installation of PODs.

6.10.3. Requirements for area directly surrounding the PODs

6.10.3.1. Lighting: No less than 50 FC

6.10.3.2. Purchaser shall provide female docking materials for connection to the POD. G-CON shall specify connection details at docked locations to Purchaser supplied corridors or building structure.

6.10.3.3. Purchaser shall ensure that there is an opening in the host facility no less than 4 feet greater than the width of the widest POD supplied to the facility and 2 feet higher the tallest POD. Egress through the building to the final installation of the same dimensions are also required.

6.10.3.4. The entrances to all doors located on a POD are located at approximately 5" AFF. All ramps required in and out of PODs, corridors or pass through units shall be provided by Purchaser.

6.10.3.5. Purchaser shall provide any mechanical or electrical interlocks required for the airlocks, including relays, switches, indicator lights, hardware mounted on the POD doors, or any other part of the system. Installation of these items shall be provided iby the Purchaser unless specifically agreed to by G-CON.

ADDENDUM 3

Intentionally Deleted

ADDENDUM 4

Option to Extend Addendum

This Option to Extend Addendum is a part of the Lease dated February 12, 2021, by and between Terreno Park Union City LLC ("Landlord") and Tenaya Therapeutics, Inc. ("Tenant") for the Premises as defined in the Lease.

Landlord hereby grants to Tenant the option ("Option") to extend the term of the Lease for one (1) five (5) year period from the end of the existing term of the Lease ("Option Period") on the following terms and conditions:

a) Exercise Date: In order to exercise the Option, Tenant must not be in Default of any of its obligations under the Lease and Tenant must give written notice ("Notice") of such election to Landlord and Landlord must receive the Notice not earlier than 15 months ("Earliest Exercise Date") nor later than 12 months prior to the Expiration Date ("Last Exercise Date") which are sometimes collectively referred to herein as the "Option Exercise Date." If the Notice is not received, the Option shall automatically expire. Tenant's failure to notify Landlord by the Option Exercise Date will conclusively be presumed an election by Tenant not to exercise the Option.

Monthly Base Rent. The monthly Base Rent and any increases for each month of the Option Period shall be the fair market rent determined as follows but in no event less than one hundred three percent (103%) of the highest Base Rent paid during the initial Term. Four months prior to the commencement of each Adjustment Period, if the selected Rent Adjustment Alternative is the Market Rent Adjustment, the Parties shall negotiate in good faith to determine the Base Rent for the Adjustment Period. If agreement cannot be reached within thirty days, then Landlord and Tenant shall each, no later than 90 days prior to the commencement of the Adjustment Period, make a reasonable determination of the fair market rental for the Premises for the Adjustment Period and submit such determination, in writing, to arbitration in accordance with the following provisions:

(1) No later than 90 days prior to the commencement of the Adjustment Period, Landlord and Tenant shall each select an industrial leasing broker to act as an arbitrator. The two arbitrators so appointed shall, no later than 75 days prior to the commencement of the Adjustment Period, select a third mutually acceptable industrial leasing broker to act as a third arbitrator.

(2) The three arbitrators, acting by a majority, shall no later than 75 days prior to the commencement of the Adjustment Period, determine the actual fair market rental for the Premises for the Adjustment Period. The decision of a majority of the arbitrators shall be binding on the Parties. The fair market rental determination of Landlord or Tenant which is closest to the fair market rental as determined by the arbitrators shall be the Base Rent for the Adjustment Period.

(3) If either of the Parties fails to appoint an arbitrator within the period required by this Addendum, the arbitrator timely appointed shall determine the Base Rent for the Adjustment Period.

(4) The entire cost of such arbitration shall be paid by the party whose fair market rental submission is not selected.

b) **Conditions to Exercise of Option.** Tenant's right to extend is conditioned upon and subject to each of the following:

i) In order to exercise the Option, Tenant must not have been in Default of any of its obligations under the Lease during the Term or any extended Term and must give written notice of such election to Landlord and Landlord must receive the same by the Last Exercise Date but not prior to the Earliest Exercise Date. If proper notification of the exercise of an Option is not given and/or received, the Option shall automatically expire. Failure to exercise an option terminates the Option. Tenant acknowledges that because of the importance to Landlord of knowing no later than the Last Exercise Date whether or not Tenant will exercise the Option, the failure of Tenant to notify Landlord by the Last Exercise Date will conclusively be presumed an election by Tenant not to exercise the Option.

ii) Tenant shall have no right to exercise an option (i) if Tenant is in Default or (ii) in the event that Landlord has given to Tenant three or more notices of separate Defaults during the 12-month period immediately preceding the exercise of the option, whether or not the Defaults are cured. The period of time within which the Option may be exercised shall not be extended or enlarged by reason of Tenant's inability to exercise the Option because of the provisions of this paragraph.

iii) All of the terms and conditions of this Lease, except where specifically modified by this Amendment, shall apply.

iv) The Option is personal to the Tenant and any transferee permitted under Paragraph 12 of the Lease and cannot otherwise be assigned or exercised by anyone other than the Tenant.

ADDENDUM 5

TERRENO REALTY CORPORATION
Early Possession and Inducement Recapture Addendum

This Early Possession and Inducement Recapture Addendum is a part of the Lease dated February 12, 2021, by and between Terreno Park Union City LLC ("Landlord") and Tenaya Therapeutics, Inc. ("Tenant") for the Premises as defined in the Lease.

1. Early Possession. Tenant may occupy the Premises upon delivery of possession by Landlord after Landlord's receipt of all monies due upon execution and all evidence of insurance required of Tenant ("Early Possession Date"), even though the Early Possession Date is prior to the Commencement Date of the Lease ("Early Possession"). The obligation to pay Rent shall be abated for the Early Possession Period. All other terms of this Lease, however, including, but not limited to, the obligations to carry the insurance required by Paragraph 8, shall be in effect during the Early Possession period. Such Early Possession shall not change the Expiration Date of the original Term.

2. Inducement Recapture in Event of Breach. Any agreement by Landlord for possession of the Premises without the payment or reduced payment of rent or other charges or for the giving or paying by Landlord to or for Tenant of any cash or other bonus, inducement, or consideration for Tenant's entering into this Lease including, but not limited to tenant improvement allowances and abated rent, all of which concessions are hereinafter referred to as "Inducement Provisions," are conditioned upon Tenant's full and faithful performance of all of the terms, covenants, and conditions of this Lease to be performed or observed by Tenant during the term of this Lease. Upon the occurrence of a Default by Tenant, the unamortized portion of any rent, other charge, bonus, inducement, or consideration abated, given, or paid by Landlord under such an Inducement Provision shall be immediately due and payable by Tenant to Landlord and recoverable by Landlord as additional rent due under this Lease, notwithstanding any subsequent cure by Tenant.

Exhibit “A”

Site Plan and Premises

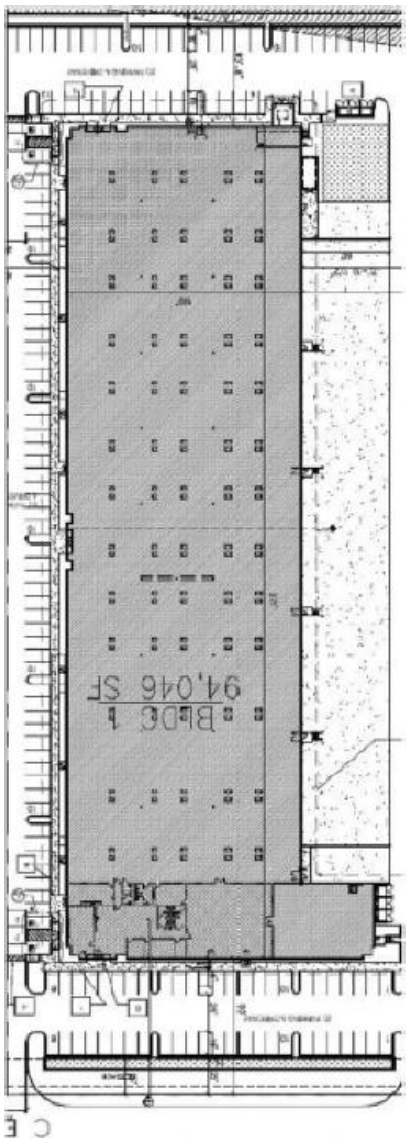


Exhibit "B"
COMMENCEMENT DATE MEMORANDUM

[SAMPLE ONLY – FORM TO BE COMPLETED BY LANDLORD AFTER COMMENCEMENT DATE]

LANDLORD:	Terreno Park Union City LLC
TENANT:	Tenaya Therapeutics, Inc.
LEASE DATE:	February 12, 2021
PREMISES:	33498 Central Avenue Union City, CA 94587

Tenant hereby accepts the Premises as being in the condition required under the Lease.

The Commencement Date of the Lease is ____, ____.

The Expiration Date of the Lease is ____, ____.

Landlord:
Terreno Park Union City LLC,
a Delaware limited liability company

By: Terreno Realty LLC,
a Delaware limited liability company
its member

By: Terreno Realty Corporation,
a Maryland corporation

By: _____
Name: _____
Its: _____

Executed at: _____

on: _____

Tenant:
Tenaya Therapeutics, Inc.,
a Delaware corporation

By: _____
Name: _____
Its: _____

Executed at: _____

on: _____

Exhibit "C"

TENANT MOVE-IN AND LEASE RENEWAL ENVIRONMENTAL QUESTIONNAIRE FOR COMMERCIAL AND INDUSTRIAL PROPERTIES

Property Name: Central Pacific Business Park
Property Address: 33498 Central Avenue, Union City, CA 94587

Exhibit to Industrial Lease Dated February 12, 2021
Between

Tenaya Therapeutics, Inc.
("Tenant")
and

Terreno Park Union City LLC
("Landlord")

Instructions: The following questionnaire is to be completed by the Tenant Representative with knowledge of the planned/existing operations for the specified building/location. A copy of the completed form must be attached to all new leases and renewals, and forwarded to the Owner's Risk Management Department.

1.0 PLANNED USE/OPERATIONS

1-1. Describe planned use (new Lease) or existing operations (lease renewal), and include brief description of manufacturing processes employed.

Planned use is for Good Manufacturing Production (GMP) of pharmaceutical products targeting heart disease. Tenaya manufacturing process entails gene therapy product production.

2.0 HAZARDOUS MATERIALS

2-1. Are hazardous materials used or stored? If so, continue with the next question. If not, go to Section 3.0.

2-2. Are any of the following materials handled on the property? (A material is handled if it is used, generated, processed, produced, packaged, treated, stored, emitted, discharged, or disposed.) If so, complete this section. If this question is not applicable, skip this section and go on to Section 5.0.

☐	Explosives	☒Fuels	☒Oils
☒	Solvents	☒Oxidizers	☒Organics/Inorganics
☒	Acids	☒Bases	☒Pesticides
☒	Gases	☐PCBs	☐Radioactive Materials
☐	Other (please specify)		

2-3. For the following groups of chemicals, please check the type(s), use(s), and quantity of each chemical used or stored on the site. Attach either a chemical inventory or list the chemicals in each category.

☒**Solvents**	☒ **Gases**
Type: Ethanol, Isopropanol	Type: O2, N2, CO2
Use: disinfecting and cleaning	Use: temperature control and process
Quantity: 50 gal	Quantity: 3600 lbs
☐**Inorganic**	☒ **Acids**
Type:	Type: Phosphoric acid, Acetic acid
Use:	Use: neutralization, lab reagent

Quantity:

Quantity: 50 gal

☒ **Fuels**

Type: Diesel

Use: emergency generator

Quantity:

☐ **Explosives**

Type:

Use:

Quantity:

☒ **Oils**

Type: Pump oil

Use: vacuum pumps and motors

Quantity: 50 gal

☒ **Bases**

Type: NaOH

Use: neutralization, sanitization

Quantity: 50 gal

X ☒**Oxidizers**

Type: Oxygen, H2O2

Use: manufacturing

Quantity: 1200 lbs

☒ **Pesticides**

Type: Approved and licensed by California

Use: Interior and exterior pest control

Quantity: As needed by licensed pest control company

☒ **Organic**

Type: lab reagents

Use: manufacturing

Quantity: 10 gal

☐ **Radioactive Materials**

Type:

Use:

Quantity:

☐**Other**

Type:

Use:

Quantity:

2-4. List and quantify the materials identified above.

MATERIAL	PHYSICAL STATE	CONTAINER SIZE	NUMBER OF CONTAINERS
Ethanol	L	4L	10
NaOH	L	4L	4
Neutralization base	L	50 gal	1
Phosphoric acid	L	4L	2
Neutralization acid	L	50 gal	1
Glacial Acetic acid	L	4L	2
Hydrogen peroxide 35%	L	1L	6
Acetonitrile	L	4L	2
Methanol	L	4L	2
Vesphene	L	4L	4
LPH	L	4L	4
Trypan Blue	L	1L	6

Triton X	L	4L	3
N2	L	400 lbs	4
O2	L	400 lbs	3
CO2	G	200 lbs	4
Isopropanol	L	4L	4
Diesel fuel	L	400 gal	1
Pump oil	L	55 gal	1

2-5. Describe the storage area location(s) for these materials. Emergency generator tank, gas storage room, flammable storage room, GMP warehouse

3.0 HAZARDOUS WASTES

3-1. Are hazardous wastes generated? If so, continue with the next question. If not, skip this section and go to section 4.0.

3-2. Are any of the following wastes generated, handled, or disposed of (where applicable) on the property? Yes, generated

- ☒ Hazardous wastes
- ☐ Waste oils
- ☐ Air emissions
- ☒ Other (please specify) Biowaste
- ☒ Industrial Wastewater
- ☐ PCBs
- ☐ Sludges

3-3. Identify and describe those wastes generated, handled or disposed of (disposition). Specify any wastes known to be regulated under the Resource Conservation and Recovery Act (RCRA) as “listed characteristic or statutory” wastes. Include total amounts generated monthly. Please include name, location, and permit number (e.g. EPA ID No.) for transporter and disposal facility, if applicable). Attach separate pages as necessary.

RCRA listed characteristic wastes include ignitable, corrosive and toxic. Hazardous waste transporter will be Veolia Technical Solutions (NJD080631369).

3-4. List and quantify the materials identified in Question 3-2 of this section.

WASTE GENERATED	SOURCE	APPROXIMATE MONTHLY QUANTITY	WASTE CHARACTERIZATION	DISPOSITION
Cleaning waste	operations	25 lbs	ignitable	incineration
Lab waste	operations	25 lbs	corrosive	treatment
Lab waste	operations	25 lbs	toxic	incineration
Biowaste	operations	200 lbs	biowaste	treatment
Industrial wastewater	operations	Discharged to sanitary sewer	NA	POTW

3-5. Are pollution controls or monitoring employed in the process to prevent or minimize the release of wastes into the environment? If so, please describe.

Hazardous wastes are generated inside the facility and kept in closed containers, stored inside the facility until transported off site for treatment and disposal.

4.0 USTS/ASTS

4-1. Are underground storage tanks (USTs), aboveground storage tanks (ASTs), or associated pipelines present on site (lease renewals) or required for planned operations (new tenants)? If not, continue with section 5.0. If yes, please describe capacity, contents, age, design and construction of USTs or ASTs

New emergency generator will have a double walled belly AST to hold ~ 400 gal diesel fuel and new wastewater neutralization system will have < 50 gal acid and base AST for wastewater neutralization.

4-2. Is the UST/AST registered and permitted with the appropriate regulatory agencies? Please provide a copy of the required permits.

ASTs will be registered and permitted by the jurisdiction having authority.

4-3. Indicate if any of the following leak prevention measures have been provided for the USTs/ASTs and their associated piping. Additionally, please indicate the number of tanks that are provided with the indicated measure. Please provide copies of written test results and monitoring documentation.

☒ Integrity testing 3	☐ Inventory reconciliation
☒ Leak detection system 1	☒ Overfill spill protection 3
☒ Secondary containment 3	☐ Other (please describe)
☐ Cathodic protection	

4-4. If this Questionnaire is being completed for a lease renewal, and if any of the USTs/ASTs have leaked, please state the substance released, the media(s) impacted (e.g., soil, water, asphalt, etc.), the actions taken, and all remedial responses to the incident. NA

4-5. If this Questionnaire is being completed for a lease renewal, have USTs/ASTs been removed from the property? If so, please provide any official closure letters or reports and supporting documentation (e.g., analytical test results, remediation report results, etc.). NA

4-6. For Lease renewals, are there any above or below ground pipelines on site used to transfer chemicals or wastes? For new tenants, are installations of this type required for the planned operations? If so, please describe.

Wastewater only

4-7. If present or planned, have the chemical transfer pipelines been inspected or tested for leaks? If so, please indicate the results and provide a copy of the inspection or test results.

Neutralization system will be inspected tested before operation.

5.0 **ASBESTOS CONTAINING BUILDING MATERIALS**

5-1. Please be advised that this property participates in an Asbestos Operations and Maintenance Program, and that an asbestos survey may have been performed at the Property. If provided, please review the information that identifies the locations of known asbestos containing material or presumed asbestos containing material. All personnel and appropriate subcontractors should be notified of the presence of these materials, and informed not to disturb these materials. Any activity that involves the disturbance or removal of these materials must be done by an appropriately trained individual/contractor.

6.0 **REGULATORY**

6-1. For Lease Renewals, are there any past, current, or pending regulatory actions by federal, state, or local environmental agencies alleging noncompliance with regulations? If so, please describe. NA

6-2. For lease renewals, are there any past, current, or pending lawsuits or administrative proceedings for alleged environmental damages involving the property, you, or any owner or tenant of the property? If so, please describe. NA

6-3. Does the operation have or require a National Pollutant Discharge Elimination System (NPDES) or equivalent permit? If so, please provide a copy of this permit. No

6-4. For Lease renewals, have there been any complaints from the surrounding community regarding facility operations? If so, please describe. Have there been any worker complaints or regulatory investigations regarding hazardous material exposure at the facility? If so, please describe status and any corrective actions taken. NA

6-5. Has a Hazardous Materials Business Plan been developed for the site? If so, please provide a copy.

A Hazardous Materials Business Plan will be developed and provided before operations begin.

CERTIFICATION

Tenant is familiar with the real property described in this questionnaire. By signing below, Tenant represents and warrants that the answers to the above questions are complete and accurate to Tenant's current actual, knowledge. Tenant also understand that the Owner will rely on the completeness and accuracy of my answers in assessing any environmental liability risks associated with the property.

TENAYA THERAPEUTICS, INC.

Signature: /s/ Kameron Balzer

Name: Kameron Balzer

Title: Sr Director Facilities

Date: 02/10/21

Telephone:

Exhibit "D"

MOVE OUT STANDARDS

This Move Out Standards Exhibit is dated for the reference purposes as of the same date as the Lease, and is made between Terreno Park Union City LLC ("Landlord") and Tenaya Therapeutics, Inc. ("Tenant") to be a part of that certain Industrial Lease ("Lease") concerning the premises located at 33498 Central Avenue, Union City, CA 94587 ("Premises"). Landlord and Tenant agree that the Lease is hereby modified and supplemented as follows:

At the expiration or earlier termination of the Lease and subject to any other provisions of the Lease regarding surrender of the Premises, Tenant shall surrender the Premises in the same condition as they were upon delivery of possession thereto under the Lease, reasonable wear and tear, casualty, condemnation, and repairs that are not Tenant's responsibility under the Lease, excepted, and shall deliver all keys to Landlord. Before surrendering the Premises, Tenant shall remove all of its personal property and trade fixtures and such alterations or additions to the Premises made by Tenant as may be specified for removal by Landlord at the time of its consent thereto. If Tenant fails to remove its personal property, fixtures or alterations or additions upon the expiration or earlier termination of the Lease, the same shall be deemed abandoned and shall become the property of the Landlord. Notwithstanding the foregoing, Tenant shall be liable to Landlord for all costs and damages incurred by Landlord in removing, storing or selling such property, fixtures, alterations or additions and in restoring the Premises to the condition required pursuant to the Lease.

Subject to any provision to the contrary in the Lease, Tenant shall surrender the Premises, at the time of the expiration or earlier termination of the Lease, in a condition that shall include, but is not limited to, the following:

1. Lights:	Office, exterior, emergency exit and warehouse lights will be fully operational with all bulbs functioning. Replacement lamps should be consistent in color, type and style.
2. Roll-Up Doors & Pedestrian Doors:	Roll-up doors must receive final maintenance by a licensed contractor to include: lube, adjustments, alignment and replacement of seals and panels (if required). Pedestrian doors must have all hardware in working condition (including crash hardware, thresholds, closers and weather-stripping). Replacement of doors and/or hardware shall be of similar type as existing. Tenant shall provide written evidence of such maintenance/repairs to Landlord.
3. Loading Docks:	Includes dock levelers, dock bumpers, dock door seals, pit levelers and sump pumps. Tenant to provide evidence of final maintenance on all items from a licensed contractor.
4. Warehouse Floor:	Tenant shall remove all paint and stickers and leave floors free of stains, and swept with no racking bolts or other protrusions left in floor. Cracks should be repaired with an epoxy or polymer.
5. Tenant-Installed Equipment & Wiring:	Tenant shall remove all air lines, junction boxes, distribution boxes, conduit, etc. All wiring shall be terminated back to point of connection. Telecom and associated data wiring shall be removed and terminated at the original phone board.
6. Walls:	Warehouse Walls - Sheetrock (drywall) damage should be patched and fire-taped so that there are no holes remaining. Office Walls – shall be patched and returned to a paint-ready condition.
7. Roof:	Any tenant-installed equipment must be removed and roof penetrations properly repaired by Landlord's roofing contractor or a roofing contractor reasonably approved by Landlord.
8. Signs:	All Tenant installed signage shall be removed, including interior and exterior window signage. Exterior building surface shall be restored to original condition, including patching of all holes and painting to match exterior color.

9. Heating & Air Conditioning System:	HVAC equipment must receive final maintenance by a licensed HVAC contractor, including filter changes and repairs/replacements if required. Tenant shall provide written evidence of maintenance/repairs to Landlord.
10. Plumbing	Restroom/Kitchen fixtures and accessories (i.e. “insta-hot” water heaters, vanity heaters, handrails, soap dispensers, paper towel holders, etc.) shall be returned in good working condition, free of leaks and stains. Tenant shall provide written evidence of final service to water heater.
10. Overall Cleanliness:	Clean windows, sanitize bathroom(s), vacuum carpet, and remove any and all debris from office and warehouse. Remove all pallets and debris from exterior of premises and dock areas. In addition, Tenant shall properly dispose of all hazardous materials, including paint, at Tenant’s expense.

Exhibit "E"

Rules & Regulations

This Rules & Regulations Exhibit is dated for the reference purposes as of the same date as the Lease, and is made between Terreno Park Union City LLC ("Landlord") and Tenaya Therapeutics, Inc. ("Tenant") to be a part of that certain Industrial Lease ("Lease") concerning the premises located at 33498 Central Avenue, Union City, CA 94587 ("Premises"). Landlord and Tenant agree that (i) the terms, conditions and provisions of this Exhibit E are hereby incorporated into and are made a part of the Lease, (ii) any capitalized terms used herein and not otherwise defined herein shall have the meaning ascribed to such terms as set forth in the Lease, and (iii) the Lease is hereby modified and supplemented as follows:

1. No advertisement, picture or sign of any sort shall be displayed on or outside the Premises or the Building without the prior written consent of Landlord. Landlord shall have the right to remove any such unapproved item without notice and at Tenant's expense.

2. Tenant shall not use any method of heating or air conditioning other than that supplied by Landlord without the prior written consent of Landlord.

3. All window coverings installed by Tenant and visible from the outside of the Building require the prior written approval of Landlord. Tenants shall not remove any carpet, or wall coverings, window blinds, or window draperies in their Premises without the prior written approval from Landlord.

4. Tenant shall not use, keep, or permit to be used or to be kept, any foul or noxious gas or substance in the Premises, or permit or suffer the Premises to be occupied or used in a manner offensive or objectionable to Landlord or other occupants of the Building by reason of noise, odors and/or vibrations, or interfere in any way with other Lessees or those having business therein. Tenant shall maintain the leased Premises free from mice, rats, bugs and ants attracted by food, water or storage materials.

5. No person shall disturb the occupants of this or adjoining buildings or Premises by the use of any radio or musical instrument or by the making of loud or improper noises.

6. Tenant shall not disturb, solicit or canvas any occupant of the Building or Industrial Center and shall cooperate to prevent same.

7. Parking any type of recreational vehicles is specifically prohibited. No vehicle of any type shall be stored in the parking areas at any time. In the event that a vehicle is disabled, it shall be removed within 48 hours. There shall be no "For Sale" or other advertising signs on or about any parked vehicle. All vehicles shall be parked in the designated parking areas in conformation with all signs and other markings.

8. Tenant shall park motor vehicles in those general parking areas as designated by Landlord except for loading and unloading. During those periods of loading and unloading, Tenant shall not unreasonably interfere with traffic flow within the Industrial Center and loading and unloading areas of other tenants.

9. Tractor trailers which must be unhooked or parked with dolly wheels beyond the concrete loading areas must use steel plates or wood blocks under the dolly wheels to prevent damage to the asphalt paving surfaces. No parking or storing of such trailers will be permitted in the auto parking areas of the Industrial Center or on streets adjacent thereto.

10. No person shall go on the roof without Landlord's permission.

11. All goods, including material used to store goods, delivered to the Premises of Tenant shall be immediately moved into the Premises and shall not be left in parking or receiving areas overnight.

12. Forklifts which operate on asphalt paving areas shall not have solid rubber tires and shall only use tires that do not damage the asphalt.

13. Tenant is responsible for the storage and removal of all trash and refuse. All such trash and refuse shall be contained in suitable receptacles stored behind screened enclosures at locations approved by Landlord.

14. Tenant shall not store or permit the storage or placement of goods, or merchandise or pallets or equipment of any sort outside of the Premises nor in or around the Building, the Industrial Center or any of the Common Areas of the foregoing. No displays or sales of merchandise shall be allowed in the parking lots or other Common Areas.

15. Tenant shall not permit any animals, including, but not limited to, any household pets, fish tanks, etc., to be brought or kept in or about the Premises, the Building, the Industrial Center or any of the Common Areas of the foregoing.

16. Tenant shall not permit any motor vehicles to be washed on any portion of the Premises or in the Common Areas of the Industrial Center, nor shall Tenant permit mechanical work or maintenance of motor vehicles to be performed on any portion of the Premises or in the Common Areas of the Industrial Center.

17. Tenants shall not do, or permit anything to be done in their Premises or bring or keep anything therein which will in anyway obstruct or interfere with the rights of other Tenants, or do, or permit anything to be done in their Premises which shall, in the judgment of the Landlord or its manager, in any way injure or annoy them, or conflict with the laws relating to fire, or with the regulations of the fire department or with any insurance policy upon the Building or any part thereof or any contents there in or conflict with any of the rules and ordinances of the public Building or health authorities.

18. All electrical equipment used by Tenants shall be U.L. approved. Nothing shall be done or permitted in Tenant's Premises, and nothing shall be brought into or kept in the Premises which would impair or interfere with any of the Building services or the proper and economic heating, cooling, cleaning or other servicing of the Building or the Premises. Tenant's computers and other equipment are hereby expressly allowed.

19. Tenants shall not install or operate any steam or gas engine or boiler, or carry on any mechanical business in the Premises or Building. The use of oil, gas or inflammable liquids for heating, lighting or any other purpose is expressly prohibited. Explosives or other articles deemed extra hazardous shall not be brought into the Premises, Building or Industrial Center. Notwithstanding the foregoing, Tenant may use diesel fuel in connection with its operation of a generator serving the Premises and natural gas for heating purposes within the Premises.

20. The water closets, urinals, waste lines, vents or flues of the Building shall not be used for any purpose other than those for which they were constructed, and no rubbish, acids, vapors, newspapers or other such substances of any kind shall be thrown into them. The expense caused by any breakage, stoppage or damage resulting from a violation of this rule by any Tenant, its employees, visitors, guests or licensees, shall be paid by Tenant.

21. If any Tenant desires radio signal, communication equipment such as satellite dishes, etc., or any other utility or service connection installed or changed, such work shall be done at the expense of Tenant, with the prior written approval and under the direction of Landlord. No wiring shall be installed in any part of the Building without Landlord's approval and direction. Landlord reserves the right to disconnect any radio signal or alarm system when, in Landlord's opinion, such installation or apparatus interferes with the proper operation of the Building or systems within the Building.

22. Landlord reserves the right to make such other and further reasonable and non-discriminatory rules and regulations as in its judgment may from time to time be needful and desirable for the safety, care and cleanliness of the Premises, the Building or the Industrial Center and for the preservation of good order therein. In the event of a conflict between these rules and regulations and the provisions of the Lease, the provisions of the Lease shall control.