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

**FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

Tenaya Therapeutics, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

81-378993
(I.R.S. Employer
Identification Number)

171 Oyster Point Boulevard, 5th Floor
South San Francisco, California 94080
(650) 825-6990

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Faraz Ali, M.B.A.
Chief Executive Officer
171 Oyster Point Boulevard, 5th Floor
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(650) 825-6990

(Name, address, including zip code, and telephone number, including area code, of agent for service)

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From time to time after the effective date of this registration statement.
(Approximate date of commencement of proposed sale to the public)

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box:

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, other than securities offered only in connection with dividend or interest reinvestment plans, 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, 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 registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

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

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

EXPLANATORY NOTE

This registration statement contains two prospectuses:

- a base prospectus, which covers the offering, issuance and sale by us of up to a maximum aggregate offering price of \$300,000,000 of our common stock, preferred stock, debt securities, depositary shares, warrants, subscription rights, purchase contracts and/or units representing two or more of the foregoing securities; and
- a prospectus supplement covering the offering, issuance and sale by us of up to a maximum aggregate offering price of \$75,000,000 of our common stock that may be issued and sold under a sales agreement (Sales Agreement) dated August 10, 2022 with SVB Securities LLC (SVB Securities).

The base prospectus immediately follows this explanatory note. The Sales Agreement prospectus supplement immediately follows the base prospectus. The \$75,000,000 of common stock that may be offered, issued and sold under the Sales Agreement prospectus supplement is included in the \$300,000,000 of securities that may be offered, issued and sold by us under the base prospectus. Any portion of the \$75,000,000 included in the Sales Agreement prospectus supplement that is not sold pursuant to the Sales Agreement will be available for sale in other offerings pursuant to the base prospectus and a corresponding prospectus supplement, and if no shares are sold under the Sales Agreement, the full \$75,000,000 of securities may be sold in other offerings pursuant to the base prospectus and a corresponding prospectus supplement.

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

Subject to Completion, dated August 10, 2022

PROSPECTUS



Tenaya Therapeutics, Inc.

\$300,000,000

**Common Stock
Preferred Stock
Debt Securities
Depositary Shares
Warrants
Subscription Rights
Purchase Contracts
Units**

We may issue securities from time to time in one or more offerings, in amounts, at prices and on terms determined at the time of offering. This prospectus describes the general terms of these securities and the general manner in which these securities will be offered. We will provide the specific terms of these securities in supplements to this prospectus, which will also describe the specific manner in which these securities will be offered and may also supplement, update or amend information contained in this prospectus. You should read this prospectus and any applicable prospectus supplement before you invest. The aggregate offering price of the securities we sell pursuant to this prospectus will not exceed \$300,000,000.

The securities may be sold directly to you, through agents or through underwriters and dealers. If agents, underwriters or dealers are used to sell the securities, we will name them and describe their compensation in a prospectus supplement. The price to the public of those securities and the net proceeds we expect to receive from that sale will also be set forth in a prospectus supplement.

Our common stock is listed on the Nasdaq Global Select Market under the symbol "TNYA." Each prospectus supplement will indicate whether the securities offered thereby will be listed on any securities exchange.

We are an "emerging growth company" and "smaller reporting company" as defined under the federal securities laws, and, as such, may elect to comply with certain reduced public company reporting requirements for this and future filings. We will provide information in any applicable prospectus supplement regarding any listing of securities other than shares of our common stock on any securities exchange.

Investing in these securities involves risks. Please carefully read the information under the headings "[Risk Factors](#)" beginning on page 5 of this prospectus, any similar section contained in the applicable prospectus supplement, and "Item 1A—Risk Factors" of our most recent report on Form 10-K or 10-Q that is incorporated by reference in this prospectus before you invest in our securities.

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

The date of this prospectus is _____, 2022.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (SEC), using a “shelf” registration process. Under this shelf registration process, we may from time to time sell any combination of the securities described in this prospectus in one or more offerings for an aggregate offering price of up to \$300,000,000.

This prospectus provides you with a general description of the securities that may be offered. Each time we sell securities, we will provide one or more prospectus supplements that will contain specific information about the terms of the offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. The prospectus supplement or free writing prospectus may also add, update or change information contained in this prospectus with respect to that offering. You should read both this prospectus and any applicable prospectus supplement and free writing prospectus together with the additional information described under the heading “Where You Can Find More Information” and “Incorporation by Reference.” If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement or free writing prospectus, you should rely on the prospectus supplement or free writing prospectus, as applicable.

We have not authorized anyone to provide you with information that is different from that contained, or incorporated by reference, in this prospectus, any applicable prospectus supplement or in any related free writing prospectus. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus and any applicable prospectus supplement or any related free writing prospectus do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the securities described in the applicable prospectus supplement or an offer to sell or the solicitation of an offer to buy such securities in any circumstances in which such offer or solicitation is unlawful. You should assume that the information appearing in this prospectus, any prospectus supplement, the documents incorporated by reference and any related free writing prospectus is accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed materially since those dates.

PROSPECTUS SUMMARY

This summary highlights selected information that is presented in greater detail elsewhere, or incorporated by reference, in this prospectus. It does not contain all of the information that may be important to you and your investment decision. Before investing in our securities, you should carefully read this entire prospectus, including the matters set forth under the section of this prospectus captioned "Risk Factors" and the financial statements and related notes and other information that we incorporate by reference herein, including our Annual Report on Form 10-K and our Quarterly Reports on Form 10-Q. Unless the context indicates otherwise, references in this prospectus to "Tenaya Therapeutics, Inc.," "we," "our" and "us" refer, collectively, to Tenaya Therapeutics, Inc., a Delaware corporation.

Company Overview

We are a biotechnology company focused on discovering, designing, developing and delivering 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.

We are advancing a deep and diverse pipeline of disease-modifying therapies that includes both gene therapies and small molecules discovered internally and developed using our product platforms and core capabilities to target defined sub-populations of patients with rare or highly prevalent forms of heart disease. All of our programs are currently in the preclinical stage; we do not have any products approved for sale and have not generated any revenue to date.

The most advanced product candidate from our Gene Therapy Platform is TN-201. TN-201 is an adeno-associated virus (AAV)-based gene therapy that addresses genetic hypertrophic cardiomyopathy (HCM) caused by Myosin Binding Protein C3 (*MYBPC3*) gene mutations. These mutations can cause the heart walls of affected individuals to become significantly thickened, leading to fibrosis, abnormal heart rhythms, cardiac dysfunction, heart failure, and sudden cardiac death in some adults and children. TN-201 is designed to deliver a fully functional *MYBPC3* gene driven by our proprietary heart-specific promoter to restore normal levels of MYBPC3 protein. We remain on track with our Investigational New Drug (IND) submission plans for TN-201 in the second half of 2022 and plan to focus on initial clinical development in adult *MYBPC3* gene mutation carriers with symptomatic non-obstructive HCM. TN-201 has been granted orphan drug designation by both the U.S. Food and Drug Administration (FDA) and the European Commission for the potential treatment of HCM due to mutations in the *MYBPC3* gene.

In 2021, we initiated a global natural history study to improve our understanding of disease progression and unmet need in individuals carrying mutations in the *MYBPC3* gene, with an initial focus on pediatric patients under the age of 18. We continue site activation and patient enrollment in the global natural history study to support the future clinical evaluation of TN-201 in pediatric patients after early safety has been established in adults. The natural history study complements existing disease registries focused primarily on adult patient HCM populations and may support and expedite the development of TN-201 in the pediatric patient population.

TN-301, the most advanced product candidate from our Precision Medicine Platform, is a highly specific small molecule inhibitor of histone deacetylase 6 (HDAC6i). It has potentially broad utility in both heart failure with preserved ejection fraction (HFpEF) as well as genetic dilated cardiomyopathy. HFpEF is one of the greatest areas of unmet need in heart disease, and is characterized by systemic inflammation, left ventricular hypertrophy, fibrosis, and diastolic dysfunction resulting in high morbidity and mortality in affected individuals. We remain on track with our IND submission plans for TN-301 in the second half of 2022.

TN-401, another product candidate from our Gene Therapy Platform, uses an AAV-based gene therapy to address genetic arrhythmogenic right ventricular cardiomyopathy (ARVC) caused by plakophilin 2 (*PKP2*) gene

mutations. ARVC is characterized by enlargement of the right ventricle in affected individuals, replacement of heart muscle with fibrotic tissue and fatty deposits, and severely abnormal heart rhythms (arrhythmia) that can make it difficult for the heart to function properly and result in sudden cardiac death in some adults and children. We have scaled up production of TN-401 to 200L and are initiating IND-enabling studies. We also intend to support establishment of a global natural history study in 2022 and expect to submit an IND for TN-401 in 2023.

Our earlier-stage discovery programs include an AAV-based gene therapy designed to express the Dwarf Open Reading Frame (*DWOLF*) gene in the heart, which has potentially broad utility in dilated cardiomyopathy and heart failure with reduced ejection fraction (HFrEF) and is currently at the candidate selection stage. Another program is an AAV-approach based on science from our founders that involves converting (or reprogramming) cells to replace cardiomyocytes lost due to heart damage, such as myocardial infarction. This program is currently at the candidate selection stage. In addition, we have numerous emerging programs being explored to address other forms of heart failure.

We have invested in significant gene therapy enabling capabilities, most notably with the build out and operational launch of our Genetic Medicines Manufacturing Center to support the production of our AAV-based programs. In June 2022, this facility obtained a drug manufacturing license from the State of California, Department of Public Health, to enable current Good Manufacturing Practice (cGMP) production of drug product. Located in Union City near our research labs, our Genetic Medicines Manufacturing Center enables scale-up of production to support first-in-human studies. This facility will initially support the production of drug product at multiple scales for clinical studies for all AAV-based programs, including TN-201 and TN-401. We have also initiated cGMP to support the production of TN-301 at a contract development and manufacturing organization (CDMO).

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.

We make available free of charge on or through our website our Securities and Exchange Commission (SEC) filings, including our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. The SEC maintains a website that contains reports, proxy and information statements and other information regarding our filings at www.sec.gov.

The Securities That May Be Offered

We may offer or sell common stock, preferred stock, depository shares, debt securities, warrants, subscription rights, purchase contracts and units in one or more offerings and in any combination. The aggregate offering price of the securities we sell pursuant to this prospectus will not exceed \$300,000,000. Each time securities are offered with this prospectus, we will provide a prospectus supplement that will describe the specific amounts, prices and terms of the securities being offered and the net proceeds we expect to receive from that sale.

The securities may be sold to or through underwriters, dealers or agents or directly to purchasers or as otherwise set forth in the section of this prospectus captioned "Plan of Distribution." Each prospectus supplement will set forth the names of any underwriters, dealers, agents or other entities involved in the sale of securities described in that prospectus supplement and any applicable fee, commission or discount arrangements with them.

Common Stock

We may offer shares of our common stock, par value \$0.0001 per share, either alone or underlying other registered securities convertible into our common stock. Holders of our common stock are entitled to receive dividends declared by our board of directors out of funds legally available for the payment of dividends, subject to rights, if any, of preferred stockholders. We have not paid dividends in the past and have no current plans to pay dividends. Each holder of common stock is entitled to one vote per share. The holders of common stock have no preemptive rights.

Preferred Stock

Our board of directors has the authority, subject to limitations prescribed by Delaware law, to issue preferred stock in one or more series, to establish from time to time the number of shares to be included in each series, and to fix the designation, powers, preferences and rights of the shares of each series and any of its qualifications, limitations or restrictions, in each case without further vote or action by our stockholders. Each series of preferred stock offered by us will be more fully described in the particular prospectus supplement that will accompany this prospectus, including redemption provisions, rights in the event of our liquidation, dissolution or winding up, voting rights and rights to convert into common stock.

Depositary Shares

We may issue fractional shares of preferred stock that will be represented by depositary shares and depositary receipts.

Each series of depositary shares or depositary receipts offered by us will be more fully described in the particular prospectus supplement that will accompany this prospectus, including redemption provisions, rights in the event of our liquidation, dissolution or winding up, voting rights and rights to convert into common stock.

Debt Securities

We may offer secured or unsecured obligations in the form of one or more series of senior or subordinated debt. The senior debt securities and the subordinated debt securities are together referred to in this prospectus as the “debt securities.” The subordinated debt securities generally will be entitled to payment only after payment of our senior debt. Senior debt generally includes all debt for money borrowed by us, except debt that is stated in the instrument governing the terms of that debt to be not senior to, or to have the same rank in right of payment as, or to be expressly junior to, the subordinated debt securities. We may issue debt securities that are convertible into shares of our common stock.

The debt securities will be issued under an indenture between us and a trustee to be identified in an accompanying prospectus supplement. We have summarized the general features of the debt securities to be governed by the indenture in this prospectus and the form of indenture has been filed as an exhibit to the registration statement of which this prospectus forms a part. We encourage you to read the indenture.

Warrants

We may offer warrants for the purchase of common stock, preferred stock, debt securities or depositary shares. We may offer warrants independently or together with other securities.

Subscription Rights

We may offer subscription rights to purchase our common stock, preferred stock, debt securities, depositary shares, warrants or units consisting of some or all of these securities. These subscription rights may be offered

independently or together with any other security offered hereby and may or may not be transferable by the stockholder receiving the subscription rights in such offering.

Purchase Contracts

We may offer purchase contracts, including contracts obligating holders or us to purchase from the other a specific or variable number of securities at a future date or dates.

Units

We may offer units comprised of one or more of the other classes of securities described in this prospectus in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit.

RISK FACTORS

An investment in our securities involves a high degree of risk. The prospectus supplement applicable to each offering of our securities will contain a discussion of the risks applicable to an investment in our securities. Prior to making a decision about investing in our securities, you should carefully consider the specific factors discussed under the section in the applicable prospectus supplement captioned “Risk Factors,” together with all of the other information contained or incorporated by reference in the prospectus supplement or appearing or incorporated by reference in this prospectus. You should also consider the risks, uncertainties and assumptions discussed under “Part I—Item 1A—Risk Factors” of our most recent Annual Report on Form 10-K and in “Part II—Item 1A—Risk Factors” in our most recent Quarterly Reports on Form 10-Q filed subsequent to such Form 10-K that are incorporated herein by reference, as may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our operations. See “Where You Can Find More Information” and “Incorporation by Reference.”

FORWARD-LOOKING STATEMENTS

This prospectus, each prospectus supplement and the information incorporated by reference in this prospectus and each prospectus supplement contain certain statements that constitute “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended (Securities Act), and Section 21E of the Securities Exchange Act of 1934, as amended (Exchange Act). The words “may,” “will,” “should,” “would,” “expect,” “plan,” “anticipate,” “could,” “intend,” “target,” “project,” “contemplate,” “believe,” “estimate,” “predict,” “potential” or “continue” or the negative of these terms and similar expressions and variations thereof are intended to identify forward-looking statements, but are not the exclusive means of identifying such statements. Those statements appear in this prospectus, any accompanying prospectus supplement and the documents incorporated herein and therein by reference, particularly in the sections captioned “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and include statements regarding the intent, belief or current expectations of our management that are subject to known and unknown risks, uncertainties and assumptions. You are cautioned that any such forward-looking statements are not guarantees of future performance and involve risks and uncertainties, and that actual results may differ materially from those projected in the forward-looking statements as a result of various factors.

Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified, you should not rely upon forward-looking statements as predictions of future events. The events and circumstances reflected in the 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, including the securities laws of the United States and the rules and regulations of the SEC, we do not plan to publicly update or revise any forward-looking statements contained herein 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 although 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 a thorough 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.

This prospectus and the documents incorporated by reference in this prospectus may contain market data that we obtain from industry sources. These sources do not guarantee the accuracy or completeness of the information. Although we believe that our industry sources are reliable, we do not independently verify the information. The market data may include projections that are based on a number of other projections. While we believe these assumptions to be reasonable and sound as of the date of this prospectus, actual results may differ from the projections.

USE OF PROCEEDS

We will set forth in the prospectus supplement our intended use for the net proceeds received from the sale of any securities. We will retain broad discretion over the use of the net proceeds to us from the sale of our securities under this prospectus.

DESCRIPTION OF CAPITAL STOCK

The description of our capital stock is incorporated by reference to [Exhibit 4.3](#) to our Annual Report on Form 10-K for the year ended December 31, 2021, filed with the SEC on March 23, 2022.

DESCRIPTION OF DEBT SECURITIES

The following description, together with the additional information we include in any applicable prospectus supplement, summarizes certain general terms and provisions of the debt securities that we may offer under this prospectus. When we offer to sell a particular series of debt securities, we will describe the specific terms of the series in a supplement to this prospectus. We will also indicate in the supplement to what extent the general terms and provisions described in this prospectus apply to a particular series of debt securities.

We may issue debt securities either separately, or together with, or upon the conversion or exercise of or in exchange for, other securities described in this prospectus. Debt securities may be our senior, senior subordinated or subordinated obligations and, unless otherwise specified in a supplement to this prospectus, the debt securities will be our direct, unsecured obligations and may be issued in one or more series.

The debt securities will be issued under an indenture between us and a trustee to be identified in an accompanying prospectus supplement. We have summarized select portions of the indenture below. The summary is not complete. The form of the indenture has been filed as an exhibit to the registration statement of which this prospectus forms a part and you should read the indenture for provisions that may be important to you. In the summary below, we have included references to the section numbers of the indenture so that you can easily locate these provisions. Capitalized terms used in the summary and not defined herein have the meanings specified in the indenture.

General

The terms of each series of debt securities will be established by or pursuant to a resolution of our board of directors and set forth or determined in the manner provided in a resolution of our board of directors, in an officer's certificate or by a supplemental indenture. The particular terms of each series of debt securities will be described in a prospectus supplement relating to such series (including any pricing supplement or term sheet).

We can issue an unlimited amount of debt securities under the indenture that may be in one or more series with the same or various maturities, at par, at a premium, or at a discount. We will set forth in a prospectus supplement (including any pricing supplement or term sheet) relating to any series of debt securities being offered the aggregate principal amount and the following terms of the debt securities, if applicable:

- the title and ranking of the debt securities (including the terms of any subordination provisions);
- the price or prices (expressed as a percentage of the principal amount) at which we will sell the debt securities;
- any limit upon the aggregate principal amount of the debt securities;
- the date or dates on which the principal of the securities of the series is payable;
- the rate or rates (which may be fixed or variable) per annum or the method used to determine the rate or rates (including any commodity, commodity index, stock exchange index or financial index) at which the debt securities will bear interest, the date or dates from which interest will accrue, the date or dates on which interest will commence and be payable and any regular record date for the interest payable on any interest payment date;
- the place or places where principal of, and interest, if any, on the debt securities will be payable (and the method of such payment), where the securities of such series may be surrendered for registration of transfer or exchange, and where notices and demands to us in respect of the debt securities may be delivered;
- the period or periods within which, the price or prices at which and the terms and conditions upon which we may redeem the debt securities;

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- any obligation we have to redeem or purchase the debt securities pursuant to any sinking fund or analogous provisions or at the option of a holder of debt securities and the period or periods within which, the price or prices at which and the terms and conditions upon which securities of the series shall be redeemed or purchased, in whole or in part, pursuant to such obligation;
- the dates on which and the price or prices at which we will repurchase debt securities at the option of the holders of debt securities and other detailed terms and provisions of these repurchase obligations;
- the denominations in which the debt securities will be issued, if other than denominations of \$1,000 and any integral multiple thereof;
- whether the debt securities will be issued in the form of certificated debt securities or global debt securities;
- the portion of principal amount of the debt securities payable upon declaration of acceleration of the maturity date, if other than the principal amount;
- the currency of denomination of the debt securities, which may be United States dollars or any foreign currency, and if such currency of denomination is a composite currency, the agency or organization, if any, responsible for overseeing such composite currency;
- the designation of the currency, currencies or currency units in which payment of principal of, premium and interest on the debt securities will be made;
- if payments of principal of, premium or interest on the debt securities will be made in one or more currencies or currency units other than that or those in which the debt securities are denominated, the manner in which the exchange rate with respect to these payments will be determined;
- the manner in which the amounts of payment of principal of, premium, if any, or interest on the debt securities will be determined, if these amounts may be determined by reference to an index based on a currency or currencies or by reference to a commodity, commodity index, stock exchange index or financial index;
- any provisions relating to any security provided for the debt securities;
- any addition to, deletion of or change in the Events of Default described in this prospectus or in the indenture with respect to the debt securities and any change in the acceleration provisions described in this prospectus or in the indenture with respect to the debt securities;
- any addition to, deletion of or change in the covenants described in this prospectus or in the indenture with respect to the debt securities;
- any depositaries, interest rate calculation agents, exchange rate calculation agents or other agents with respect to the debt securities;
- any other terms of the debt securities, which may supplement, modify or delete any provision of the indenture as it applies to that series, including any terms that may be required under applicable law or regulations or advisable in connection with the marketing of the securities; and
- whether any of our direct or indirect subsidiaries will guarantee the debt securities of that series, including the terms of subordination, if any, of such guarantees.

We may issue debt securities that provide for an amount less than their stated principal amount to be due and payable upon declaration of acceleration of their maturity pursuant to the terms of the indenture. We will provide you with information on the federal income tax considerations and other special considerations applicable to any of these debt securities in the applicable prospectus supplement.

If we denominate the purchase price of any of the debt securities in a foreign currency or currencies or a foreign currency unit or units, or if the principal of and any premium and interest on any series of debt securities

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is payable in a foreign currency or currencies or a foreign currency unit or units, we will provide you with information on the restrictions, elections, general tax considerations, specific terms and other information with respect to that issue of debt securities and such foreign currency or currencies or foreign currency unit or units in the applicable prospectus supplement.

Transfer and Exchange

Each debt security will be represented by either one or more global securities registered in the name of a clearing agency registered under the Exchange Act, which we refer to as the depository, or a nominee of the depository (we will refer to any debt security represented by a global debt security as a “book-entry debt security”), or a certificate issued in definitive registered form (we will refer to any debt security represented by a certificated security as a “certificated debt security”) as set forth in the applicable prospectus supplement. Except as set forth under the heading “Global Debt Securities and Book-Entry System” below, book-entry debt securities will not be issuable in certificated form.

Certificated Debt Securities

You may transfer or exchange certificated debt securities at any office we maintain for this purpose in accordance with the terms of the indenture. No service charge will be made for any transfer or exchange of certificated debt securities, but we may require payment of a sum sufficient to cover any tax or other governmental charge payable in connection with a transfer or exchange.

You may effect the transfer of certificated debt securities and the right to receive the principal of, premium and interest on certificated debt securities only by surrendering the certificate representing those certificated debt securities and either reissuance by us or the trustee of the certificate to the new holder or the issuance by us or the trustee of a new certificate to the new holder.

Global Debt Securities and Book-Entry System

Each global debt security representing book-entry debt securities will be deposited with, or on behalf of, the depository, and registered in the name of the depository or a nominee of the depository.

Covenants

We will set forth in the applicable prospectus supplement any restrictive covenants applicable to any issue of debt securities.

No Protection in the Event of a Change of Control

Unless we state otherwise in the applicable prospectus supplement, the debt securities will not contain any provisions which may afford holders of the debt securities protection in the event we have a change in control or in the event of a highly leveraged transaction (whether or not such transaction results in a change in control) which could adversely affect holders of debt securities.

Consolidation, Merger and Sale of Assets

We may not consolidate with or merge with or into, or convey, transfer or lease all or substantially all of our properties and assets to any person, which we refer to as a successor person, unless:

- we are the surviving corporation or the successor person (if other than us) is a corporation organized and validly existing under the laws of any U.S. domestic jurisdiction and expressly assumes our obligations on the debt securities and under the indenture; and
- immediately after giving effect to the transaction, no Default or Event of Default, shall have occurred and be continuing.

Notwithstanding the above, any of our subsidiaries may consolidate with, merge into or transfer all or part of its properties to us.

Events of Default

“Event of Default” means with respect to any series of debt securities, any of the following:

- default in the payment of any interest upon any debt security of that series when it becomes due and payable, and continuance of such default for a period of 30 days (unless the entire amount of the payment is deposited by us with the trustee or with a paying agent prior to the expiration of the 30-day period);
- default in the payment of principal of any security of that series at its maturity;
- default in the performance or breach of any other covenant or warranty by us in the indenture (other than a covenant or warranty that has been included in the indenture solely for the benefit of a series of debt securities other than that series), which default continues uncured for a period of 60 days after we receive written notice from the trustee, or we and the trustee receive written notice from the holders of not less than 25% in principal amount of the outstanding debt securities of that series as provided in the indenture;
- certain voluntary or involuntary events of bankruptcy, insolvency or reorganization of us; and
- any other Event of Default provided with respect to debt securities of that series that is described in the applicable prospectus supplement.

No Event of Default with respect to a particular series of debt securities (except as to certain events of bankruptcy, insolvency or reorganization) necessarily constitutes an Event of Default with respect to any other series of debt securities. The occurrence of certain Events of Default or an acceleration under the indenture may constitute an event of default under certain indebtedness of ours or our subsidiaries outstanding from time to time.

We will provide the trustee written notice of any Default or Event of Default within 30 days of becoming aware of the occurrence of such Default or Event of Default, which notice will describe in reasonable detail the status of such Default or Event of Default and what action we are taking or propose to take in respect thereof.

If an Event of Default with respect to debt securities of any series at the time outstanding occurs and is continuing, then the trustee or the holders of not less than 25% in principal amount of the outstanding debt securities of that series may, by a notice in writing to us (and to the trustee if given by the holders), declare to be due and payable immediately the principal of (or, if the debt securities of that series are discount securities, that portion of the principal amount as may be specified in the terms of that series) and accrued and unpaid interest, if any, on all debt securities of that series. In the case of an Event of Default resulting from certain events of bankruptcy, insolvency or reorganization, the principal (or such specified amount) of and accrued and unpaid interest, if any, on all outstanding debt securities will become and be immediately due and payable without any declaration or other act on the part of the trustee or any holder of outstanding debt securities. At any time after a declaration of acceleration with respect to debt securities of any series has been made, but before a judgment or decree for payment of the money due has been obtained by the trustee, the holders of a majority in principal amount of the outstanding debt securities of that series may rescind and annul the acceleration if all Events of Default, other than the non-payment of accelerated principal and interest, if any, with respect to debt securities of that series, have been cured or waived as provided in the indenture. We refer you to the prospectus supplement relating to any series of debt securities that are discount securities for the particular provisions relating to acceleration of a portion of the principal amount of such discount securities upon the occurrence of an Event of Default.

The indenture provides that the trustee may refuse to perform any duty or exercise any of its rights or powers under the indenture unless the trustee receives indemnity satisfactory to it against any cost, liability or

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expense which might be incurred by it in performing such duty or exercising such right or power. Subject to certain rights of the trustee, the holders of a majority in principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee with respect to the debt securities of that series.

No holder of any debt security of any series will have any right to institute any proceeding, judicial or otherwise, with respect to the indenture or for the appointment of a receiver or trustee, or for any remedy under the indenture, unless:

- that holder has previously given to the trustee written notice of a continuing Event of Default with respect to debt securities of that series; and
- the holders of not less than 25% in principal amount of the outstanding debt securities of that series have made written request, and offered indemnity or security satisfactory to the trustee, to the trustee to institute the proceeding as trustee, and the trustee has not received from the holders of not less than a majority in principal amount of the outstanding debt securities of that series a direction inconsistent with that request and has failed to institute the proceeding within 60 days.

Notwithstanding any other provision in the indenture, the holder of any debt security will have an absolute and unconditional right to receive payment of the principal of, premium and any interest on that debt security on or after the due dates expressed in that debt security and to institute suit for the enforcement of payment.

The indenture requires us, within 120 days after the end of our fiscal year, to furnish to the trustee a statement as to compliance with the indenture. If a Default or Event of Default occurs and is continuing with respect to the securities of any series and if it is known to a responsible officer of the trustee, the trustee shall send to each securityholder of the securities of that series notice of a Default or Event of Default within 90 days after it occurs or, if later, after a responsible officer of the trustee has knowledge of such Default or Event of Default. The indenture provides that the trustee may withhold notice to the holders of debt securities of any series of any Default or Event of Default (except in payment on any debt securities of that series) with respect to debt securities of that series if the trustee determines in good faith that withholding notice is in the interest of the holders of those debt securities.

Modification and Waiver

We and the trustee may modify, amend or supplement the indenture or the debt securities of any series without the consent of any holder of any debt security:

- to cure any ambiguity, defect or inconsistency;
- to comply with covenants in the indenture described above under the heading "Consolidation, Merger and Sale of Assets";
- to provide for uncertificated securities in addition to or in place of certificated securities;
- to add guarantees with respect to debt securities of any series or secure debt securities of any series;
- to surrender any of our rights or powers under the indenture;
- to add covenants or events of default for the benefit of the holders of debt securities of any series;
- to comply with the applicable procedures of the applicable depository;
- to make any change that does not adversely affect the rights of any holder of debt securities;
- to provide for the issuance of and establish the form and terms and conditions of debt securities of any series as permitted by the indenture;

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- to effect the appointment of a successor trustee with respect to the debt securities of any series and to add to or change any of the provisions of the indenture to provide for or facilitate administration by more than one trustee; or
- to comply with requirements of the SEC in order to effect or maintain the qualification of the indenture under the Trust Indenture Act.

We may also modify and amend the indenture with the consent of the holders of at least a majority in principal amount of the outstanding debt securities of each series affected by the modifications or amendments. We may not make any modification or amendment without the consent of the holders of each affected debt security then outstanding if that amendment will:

- reduce the amount of debt securities whose holders must consent to an amendment, supplement or waiver;
- reduce the rate of or extend the time for payment of interest (including default interest) on any debt security;
- reduce the principal of or premium on or change the fixed maturity of any debt security or reduce the amount of, or postpone the date fixed for, the payment of any sinking fund or analogous obligation with respect to any series of debt securities;
- reduce the principal amount of discount securities payable upon acceleration of maturity;
- waive a default in the payment of the principal of, premium or interest on any debt security (except a rescission of acceleration of the debt securities of any series by the holders of at least a majority in aggregate principal amount of the then outstanding debt securities of that series and a waiver of the payment default that resulted from such acceleration);
- make the principal of or premium or interest on any debt security payable in currency other than that stated in the debt security;
- make any change to certain provisions of the indenture relating to, among other things, the right of holders of debt securities to receive payment of the principal of, premium and interest on those debt securities and to institute suit for the enforcement of any such payment and to waivers or amendments; or
- waive a redemption payment with respect to any debt security.

Except for certain specified provisions, the holders of at least a majority in principal amount of the outstanding debt securities of any series may on behalf of the holders of all debt securities of that series waive our compliance with provisions of the indenture. The holders of a majority in principal amount of the outstanding debt securities of any series may on behalf of the holders of all the debt securities of such series waive any past default under the indenture with respect to that series and its consequences, except a default in the payment of the principal of, premium or any interest on any debt security of that series; provided, however, that the holders of a majority in principal amount of the outstanding debt securities of any series may rescind an acceleration and its consequences, including any related payment default that resulted from the acceleration.

Defeasance of Debt Securities and Certain Covenants in Certain Circumstances

Legal Defeasance

The indenture provides that, unless otherwise provided by the terms of the applicable series of debt securities, we may be discharged from any and all obligations in respect of the debt securities of any series (subject to certain exceptions). We will be so discharged upon the irrevocable deposit with the trustee, in trust, of money and/or U.S. government obligations or, in the case of debt securities denominated in a single currency other than U.S. dollars, government obligations of the government that issued or caused to be issued such currency, that, through the payment of interest and principal in accordance with their terms, will provide money

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or U.S. government obligations in an amount sufficient in the opinion of a nationally recognized firm of independent public accountants or investment bank to pay and discharge each installment of principal, premium and interest on and any mandatory sinking fund payments in respect of the debt securities of that series on the stated maturity of those payments in accordance with the terms of the indenture and those debt securities.

This discharge may occur only if, among other things, we have delivered to the trustee an opinion of counsel stating that we have received from, or there has been published by, the United States Internal Revenue Service a ruling or, since the date of execution of the indenture, there has been a change in the applicable United States federal income tax law, in either case to the effect that, and based thereon such opinion shall confirm that, the holders of the debt securities of that series will not recognize income, gain or loss for United States federal income tax purposes as a result of the deposit, defeasance and discharge and will be subject to United States federal income tax on the same amounts and in the same manner and at the same times as would have been the case if the deposit, defeasance and discharge had not occurred.

Defeasance of Certain Covenants

The indenture provides that, unless otherwise provided by the terms of the applicable series of debt securities, upon compliance with certain conditions:

- we may omit to comply with the covenant described under the heading “Consolidation, Merger and Sale of Assets” and certain other covenants set forth in the indenture, as well as any additional covenants which may be set forth in the applicable prospectus supplement; and
- any omission to comply with those covenants will not constitute a Default or an Event of Default with respect to the debt securities of that series.

We refer to this as covenant defeasance. The conditions include:

- depositing with the trustee money and/or U.S. government obligations or, in the case of debt securities denominated in a single currency other than U.S. dollars, government obligations of the government that issued or caused to be issued such currency, that, through the payment of interest and principal in accordance with their terms, will provide money in an amount sufficient in the opinion of a nationally recognized firm of independent public accountants or investment bank to pay and discharge each installment of principal of, premium and interest on and any mandatory sinking fund payments in respect of the debt securities of that series on the stated maturity of those payments in accordance with the terms of the indenture and those debt securities;
- such deposit will not result in a breach or violation of, or constitute a default under the indenture or any other agreement to which we are a party;
- no Default or Event of Default with respect to the applicable series of debt securities shall have occurred or is continuing on the date of such deposit; and
- delivering to the trustee an opinion of counsel to the effect that we have received from, or there has been published by, the United States Internal Revenue Service a ruling or, since the date of execution of the indenture, there has been a change in the applicable United States federal income tax law, in either case to the effect that, and based thereon such opinion shall confirm that, the holders of the debt securities of that series will not recognize income, gain or loss for United States federal income tax purposes as a result of the deposit and related covenant defeasance and will be subject to United States federal income tax on the same amounts and in the same manner and at the same times as would have been the case if the deposit and related covenant defeasance had not occurred.

No Personal Liability of Directors, Officers, Employees or Stockholders

None of our past, present or future directors, officers, employees or stockholders, as such, will have any liability for any of our obligations under the debt securities or the indenture or for any claim based on, or in

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respect or by reason of, such obligations or their creation. By accepting a debt security, each holder waives and releases all such liability. This waiver and release is part of the consideration for the issue of the debt securities. However, this waiver and release may not be effective to waive liabilities under U.S. federal securities laws, and it is the view of the SEC that such a waiver is against public policy.

Governing Law

The indenture and the debt securities, including any claim or controversy arising out of or relating to the indenture or the securities, will be governed by the laws of the State of New York.

The indenture will provide that we, the trustee and the holders of the debt securities (by their acceptance of the debt securities) irrevocably waive, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to the indenture, the debt securities or the transactions contemplated thereby.

The indenture will provide that any legal suit, action or proceeding arising out of or based upon the indenture or the transactions contemplated thereby may be instituted in the federal courts of the United States of America located in the City of New York or the courts of the State of New York in each case located in the City of New York, and we, the trustee and the holder of the debt securities (by their acceptance of the debt securities) irrevocably submit to the non-exclusive jurisdiction of such courts in any such suit, action or proceeding. The indenture will further provide that service of any process, summons, notice or document by mail (to the extent allowed under any applicable statute or rule of court) to such party's address set forth in the indenture will be effective service of process for any suit, action or other proceeding brought in any such court. The indenture will further provide that we, the trustee and the holders of the debt securities (by their acceptance of the debt securities) irrevocably and unconditionally waive any objection to the laying of venue of any suit, action or other proceeding in the courts specified above and irrevocably and unconditionally waive and agree not to plead or claim any such suit, action or other proceeding has been brought in an inconvenient forum.

DESCRIPTION OF DEPOSITARY SHARES

General

We may, at our option, elect to offer fractional shares of preferred stock, or depositary shares, rather than full shares of preferred stock. If we do, we will issue to the public receipts, called depositary receipts, for depositary shares, each of which will represent a fraction, to be described in the applicable prospectus supplement, of a share of a particular series of preferred stock. Unless otherwise provided in the prospectus supplement, each owner of a depositary share will be entitled, in proportion to the applicable fractional interest in a share of preferred stock represented by the depositary share, to all the rights and preferences of the preferred stock represented by the depositary share. Those rights include dividend, voting, redemption, conversion and liquidation rights.

The shares of preferred stock underlying the depositary shares will be deposited with a bank or trust company selected by us to act as depositary under a deposit agreement between us, the depositary and the holders of the depositary receipts. The depositary will be the transfer agent, registrar and dividend disbursing agent for the depositary shares.

The depositary shares will be evidenced by depositary receipts issued pursuant to the depositary agreement. Holders of depositary receipts agree to be bound by the deposit agreement, which requires holders to take certain actions such as filing proof of residence and paying certain charges.

The summary of terms of the depositary shares contained in this prospectus is not complete. You should refer to the form of the deposit agreement, our certificate of incorporation and the certificate of designation for the applicable series of preferred stock that are, or will be, filed with the SEC.

Dividends and Other Distributions

The depositary will distribute all cash dividends or other cash distributions, if any, received in respect of the preferred stock underlying the depositary shares to the record holders of depositary shares in proportion to the numbers of depositary shares owned by those holders on the relevant record date. The relevant record date for depositary shares will be the same date as the record date for the underlying preferred stock.

If there is a distribution other than in cash, the depositary will distribute property (including securities) received by it to the record holders of depositary shares, unless the depositary determines that it is not feasible to make the distribution. If this occurs, the depositary may, with our approval, adopt another method for the distribution, including selling the property and distributing the net proceeds from the sale to the holders.

Liquidation Preference

If a series of preferred stock underlying the depositary shares has a liquidation preference, in the event of the voluntary or involuntary liquidation, dissolution or winding up of us, holders of depositary shares will be entitled to receive the fraction of the liquidation preference accorded each share of the applicable series of preferred stock, as set forth in the applicable prospectus supplement.

Withdrawal of Stock

Unless the related depositary shares have been previously called for redemption, upon surrender of the depositary receipts at the office of the depositary, the holder of the depositary shares will be entitled to delivery, at the office of the depositary to or upon his or her order, of the number of whole shares of the preferred stock and any money or other property represented by the depositary shares. If the depositary receipts delivered by the holder evidence a number of depositary shares in excess of the number of depositary shares representing the

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number of whole shares of preferred stock to be withdrawn, the depositary will deliver to the holder at the same time a new depositary receipt evidencing the excess number of depositary shares. In no event will the depositary deliver fractional shares of preferred stock upon surrender of depositary receipts. Holders of preferred stock thus withdrawn may not thereafter deposit those shares under the deposit agreement or receive depositary receipts evidencing depositary shares therefor.

Redemption of Depositary Shares

Whenever we redeem shares of preferred stock held by the depositary, the depositary will redeem as of the same redemption date the number of depositary shares representing shares of the preferred stock so redeemed, so long as we have paid in full to the depositary the redemption price of the preferred stock to be redeemed plus an amount equal to any accumulated and unpaid dividends on the preferred stock to the date fixed for redemption. The redemption price per depositary share will be equal to the redemption price and any other amounts per share payable on the preferred stock multiplied by the fraction of a share of preferred stock represented by one depositary share. If less than all the depositary shares are to be redeemed, the depositary shares to be redeemed will be selected by lot or pro rata or by any other equitable method as may be determined by the depositary.

After the date fixed for redemption, depositary shares called for redemption will no longer be deemed to be outstanding and all rights of the holders of depositary shares will cease, except the right to receive the monies payable upon redemption and any money or other property to which the holders of the depositary shares were entitled upon redemption upon surrender to the depositary of the depositary receipts evidencing the depositary shares.

Voting the Preferred Stock

Upon receipt of notice of any meeting at which the holders of the preferred stock are entitled to vote, the depositary will mail the information contained in the notice of meeting to the record holders of the depositary receipts relating to that preferred stock. The record date for the depositary receipts relating to the preferred stock will be the same date as the record date for the preferred stock. Each record holder of the depositary shares on the record date will be entitled to instruct the depositary as to the exercise of the voting rights pertaining to the number of shares of preferred stock represented by that holder's depositary shares. The depositary will endeavor, insofar as practicable, to vote the number of shares of preferred stock represented by the depositary shares in accordance with those instructions, and we will agree to take all action that may be deemed necessary by the depositary in order to enable the depositary to do so. The depositary will not vote any shares of preferred stock except to the extent that it receives specific instructions from the holders of depositary shares representing that number of shares of preferred stock.

Charges of the Depositary

We will pay all transfer and other taxes and governmental charges arising solely from the existence of the depositary arrangements. We will pay charges of the depositary in connection with the initial deposit of the preferred stock and any redemption of the preferred stock. Holders of depositary receipts will pay transfer, income and other taxes and governmental charges and such other charges (including those in connection with the receipt and distribution of dividends, the sale or exercise of rights, the withdrawal of the preferred stock and the transferring, splitting or grouping of depositary receipts) as are expressly provided in the deposit agreement to be for their accounts. If these charges have not been paid by the holders of depositary receipts, the depositary may refuse to transfer depositary shares, withhold dividends and distributions and sell the depositary shares evidenced by the depositary receipt.

Amendment and Termination of the Deposit Agreement

The form of depositary receipt evidencing the depositary shares and any provision of the deposit agreement may be amended by agreement between us and the depositary. However, any amendment that materially and

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adversely alters the rights of the holders of depositary shares, other than fee changes, will not be effective unless the amendment has been approved by the holders of a majority of the outstanding depositary shares. The deposit agreement may be terminated by the depositary or us only if:

- all outstanding depositary shares have been redeemed; or
- there has been a final distribution of the preferred stock in connection with our dissolution and such distribution has been made to all the holders of depositary shares.

Resignation and Removal of Depositary

The depositary may resign at any time by delivering to us notice of its election to do so, and we may remove the depositary at any time. Any resignation or removal of the depositary will take effect upon our appointment of a successor depositary and its acceptance of such appointment. The successor depositary must be appointed within 60 days after delivery of the notice of resignation or removal and must be a bank or trust company having its principal office in the United States and having the requisite combined capital and surplus as set forth in the applicable agreement.

Notices

The depositary will forward to holders of depositary receipts all notices, reports and other communications, including proxy solicitation materials received from us, that are delivered to the depositary and that we are required to furnish to the holders of the preferred stock. In addition, the depositary will make available for inspection by holders of depositary receipts at the principal office of the depositary, and at such other places as it may from time to time deem advisable, any reports and communications we deliver to the depositary as the holder of preferred stock.

Limitation of Liability

Neither we nor the depositary will be liable if either is prevented or delayed by law or any circumstance beyond its control in performing its obligations. Our obligations and those of the depositary will be limited to performance in good faith of our and its duties thereunder. We and the depositary will not be obligated to prosecute or defend any legal proceeding in respect of any depositary shares or preferred stock unless satisfactory indemnity is furnished. We and the depositary may rely upon written advice of counsel or accountants, on information provided by persons presenting preferred stock for deposit, holders of depositary receipts or other persons believed to be competent to give such information and on documents believed to be genuine and to have been signed or presented by the proper party or parties.

DESCRIPTION OF WARRANTS

We may issue warrants to purchase debt securities, preferred stock, depositary shares or common stock. We may offer warrants separately or together with one or more additional warrants, debt securities, preferred stock, depositary shares or common stock, or any combination of those securities in the form of units, as described in the applicable prospectus supplement. If we issue warrants as part of a unit, the applicable prospectus supplement will specify whether those warrants may be separated from the other securities in the unit prior to the expiration date of the warrants. The applicable prospectus supplement will also describe the following terms of any warrants:

- the specific designation and aggregate number of, and the offering price at which we will issue, the warrants;
- the currency or currency units in which the offering price, if any, and the exercise price are payable;
- the date on which the right to exercise the warrants will begin and the date on which that right will expire or, if you may not continuously exercise the warrants throughout that period, the specific date or dates on which you may exercise the warrants;
- whether the warrants are to be sold separately or with other securities as parts of units;
- whether the warrants will be issued in definitive or global form or in any combination of these forms, although, in any case, the form of a warrant included in a unit will correspond to the form of the unit and of any security included in that unit;
- any applicable material U.S. federal income tax consequences;
- the identity of the warrant agent for the warrants and of any other depositaries, execution or paying agents, transfer agents, registrars or other agents;
- the proposed listing, if any, of the warrants or any securities purchasable upon exercise of the warrants on any securities exchange;
- the designation and terms of any equity securities purchasable upon exercise of the warrants;
- the designation, aggregate principal amount, currency and terms of any debt securities that may be purchased upon exercise of the warrants;
- if applicable, the designation and terms of the debt securities, preferred stock, depositary shares or common stock with which the warrants are issued and the number of warrants issued with each security;
- if applicable, the date from and after which any warrants issued as part of a unit and the related debt securities, preferred stock, depositary shares or common stock will be separately transferable;
- the number of shares of preferred stock, the number of depositary shares or the number of shares of common stock purchasable upon exercise of a warrant and the price at which those shares may be purchased;
- if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;
- information with respect to book-entry procedures, if any;
- the antidilution provisions, and other provisions for changes to or adjustment in the exercise price, of the warrants, if any;
- any redemption or call provisions; and
- any additional terms of the warrants, including terms, procedures and limitations relating to the exchange or exercise of the warrants.

DESCRIPTION OF SUBSCRIPTION RIGHTS

We may issue subscription rights to purchase our common stock, preferred stock, debt securities, depositary shares, warrants or units consisting of some or all of these securities. These subscription rights may be offered independently or together with any other security offered hereby and may or may not be transferable by the stockholder receiving the subscription rights in such offering. In connection with any offering of subscription rights, we may enter into a standby arrangement with one or more underwriters or other purchasers pursuant to which the underwriters or other purchasers may be required to purchase any securities remaining unsubscribed for after such offering.

The prospectus supplement relating to any subscription rights we offer, if any, will, to the extent applicable, include specific terms relating to the offering, including some or all of the following:

- the price, if any, for the subscription rights;
- the exercise price payable for our common stock, preferred stock, debt securities, depositary shares, warrants or units consisting of some or all of these securities upon the exercise of the subscription rights;
- the number of subscription rights to be issued to each stockholder;
- the number and terms of our common stock, preferred stock, debt securities, depositary shares, warrants or units consisting of some or all of these securities which may be purchased per each subscription right;
- the extent to which the subscription rights are transferable;
- any other terms of the subscription rights, including the terms, procedures and limitations relating to the exchange and exercise of the subscription rights;
- the date on which the right to exercise the subscription rights shall commence, and the date on which the subscription rights shall expire;
- the extent to which the subscription rights may include an over-subscription privilege with respect to unsubscribed securities or an over-allotment privilege to the extent the securities are fully subscribed; and
- if applicable, the material terms of any standby underwriting or purchase arrangement which may be entered into by us in connection with the offering of subscription rights.

The descriptions of the subscription rights in this prospectus and in any prospectus supplement are summaries of the material provisions of the applicable subscription right agreements. These descriptions do not restate those subscription right agreements in their entirety and may not contain all the information that you may find useful. We urge you to read the applicable subscription right agreements because they, and not the summaries, define your rights as holders of the subscription rights. For more information, please review the forms of the relevant subscription right agreements, which will be filed with the SEC promptly after the offering of subscription rights and will be available as described in the section of this prospectus captioned "Where You Can Find More Information."

DESCRIPTION OF PURCHASE CONTRACTS

The following description summarizes the general features of the purchase contracts that we may offer under this prospectus. Although the features we have summarized below will generally apply to any future purchase contracts we may offer under this prospectus, we will describe the particular terms of any purchase contracts that we may offer in more detail in the applicable prospectus supplement. The specific terms of any purchase contracts may differ from the description provided below as a result of negotiations with third parties in connection with the issuance of those purchase contracts, as well as for other reasons. Because the terms of any purchase contracts we offer under a prospectus supplement may differ from the terms we describe below, you should rely solely on information in the applicable prospectus supplement if that summary is different from the summary in this prospectus.

We will incorporate by reference into the registration statement of which this prospectus is a part the form of any purchase contract that we may offer under this prospectus before the sale of the related purchase contract. We urge you to read any applicable prospectus supplement related to specific purchase contracts being offered, as well as the complete instruments that contain the terms of the securities that are subject to those purchase contracts. Certain of those instruments, or forms of those instruments, have been filed as exhibits to the registration statement of which this prospectus is a part, and supplements to those instruments or forms may be incorporated by reference into the registration statement of which this prospectus is a part from reports we file with the SEC.

We may issue purchase contracts, including contracts obligating holders to purchase from us, and for us to sell to holders, a specific or variable number of our securities at a future date or dates. Alternatively, the purchase contracts may obligate us to purchase from holders, and obligate holders to sell to us, a specific or varying number of our securities.

If we offer any purchase contracts, certain terms of that series of purchase contracts will be described in the applicable prospectus supplement, including, without limitation, the following:

- the price of the securities or other property subject to the purchase contracts (which may be determined by reference to a specific formula described in the purchase contracts);
- whether the purchase contracts are issued separately, or as a part of units each consisting of a purchase contract and one or more of our other securities, including U.S. Treasury securities, securing the holder's obligations under the purchase contract;
- any requirement for us to make periodic payments to holders or vice versa, and whether the payments are unsecured or pre-funded;
- any provisions relating to any security provided for the purchase contracts;
- whether the purchase contracts obligate the holder or us to purchase or sell, or both purchase and sell, the securities subject to purchase under the purchase contract, and the nature and amount of each of those securities, or the method of determining those amounts;
- whether the purchase contracts are to be prepaid or not;
- whether the purchase contracts are to be settled by delivery, or by reference or linkage to the value, performance or level of the securities subject to purchase under the purchase contract;
- any acceleration, cancellation, termination or other provisions relating to the settlement of the purchase contracts;
- a discussion of certain U.S. federal income tax considerations applicable to the purchase contracts;
- whether the purchase contracts will be issued in fully registered or global form; and
- any other terms of the purchase contracts and any securities subject to such purchase contracts.

DESCRIPTION OF UNITS

We may issue units comprising two or more securities described in this prospectus in any combination. For example, we might issue units consisting of a combination of debt securities and warrants to purchase common stock. The following description sets forth certain general terms and provisions of the units that we may offer pursuant to this prospectus. The particular terms of the units and the extent, if any, to which the general terms and provisions may apply to the units so offered will be described in the applicable prospectus supplement.

Each unit will be issued so that the holder of the unit also is the holder of each security included in the unit. Thus, the unit will have the rights and obligations of a holder of each included security. Units will be issued pursuant to the terms of a unit agreement, which may provide that the securities included in the unit may not be held or transferred separately at any time or at any time before a specified date. A copy of the forms of the unit agreement and the unit certificate relating to any particular issue of units will be filed with the SEC each time we issue units, and you should read those documents for provisions that may be important to you. For more information on how you can obtain copies of the forms of the unit agreement and the related unit certificate, see the section of this prospectus captioned “Where You Can Find More Information.”

The prospectus supplement relating to any particular issuance of units will describe the terms of those units, including, to the extent applicable, the following:

- the designation and terms of the units and the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provision for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units; and
- whether the units will be issued in fully registered or global form.

PLAN OF DISTRIBUTION

We may sell securities:

- through underwriters;
- through dealers;
- through agents;
- directly to purchasers; or
- through a combination of any of these methods of sale.

In addition, we may issue the securities as a dividend or distribution or in a subscription rights offering to our existing securityholders.

We may directly solicit offers to purchase securities or agents may be designated to solicit such offers. We will, in the prospectus supplement relating to such offering, name any agent that could be viewed as an underwriter under the Securities Act and describe any commissions that we must pay. Any such agent will be acting on a best efforts basis for the period of its appointment or, if indicated in the applicable prospectus supplement, on a firm commitment basis. This prospectus may be used in connection with any offering of our securities through any of these methods or other methods described in the applicable prospectus supplement.

The distribution of the securities may be effected from time to time in one or more transactions:

- at a fixed price or prices that may be changed from time to time;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices; or
- at negotiated prices.

Each prospectus supplement will describe the method of distribution of the securities and any applicable restrictions.

The prospectus supplement with respect to the securities of a particular series will describe the terms of the offering of the securities, including the following:

- the name of the agent or any underwriters;
- the public offering or purchase price;
- if applicable, the names of any selling securityholders;
- any discounts and commissions to be allowed or paid to the agent or underwriters;
- all other items constituting underwriting compensation;
- any discounts and commissions to be allowed or paid to dealers; and
- any exchanges on which the securities will be listed.

If any underwriters or agents are utilized in the sale of the securities in respect of which this prospectus is delivered, we will enter into an underwriting agreement or other agreement with them at the time of sale to them, and we will set forth in the prospectus supplement relating to such offering the names of the underwriters or agents and the terms of the related agreement with them.

If a dealer is utilized in the sale of the securities in respect of which the prospectus is delivered, we will sell such securities to the dealer, as principal. The dealer may then resell such securities to the public at varying prices to be determined by such dealer at the time of resale.

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If we offer securities in a subscription rights offering to our existing securityholders, we may enter into a standby underwriting agreement with dealers, acting as standby underwriters. We may pay the standby underwriters a commitment fee for the securities they commit to purchase on a standby basis. If we do not enter into a standby underwriting arrangement, we may retain a dealer-manager to manage a subscription rights offering for us.

Agents, underwriters, dealers and other persons may be entitled under agreements that they may enter into with us to indemnification by us against certain civil liabilities, including liabilities under the Securities Act.

If so indicated in the applicable prospectus supplement, we will authorize underwriters or other persons acting as our agents to solicit offers by certain institutions to purchase securities from us pursuant to delayed delivery contracts providing for payment and delivery on the date stated in the prospectus supplement. Each contract will be for an amount not less than, and the aggregate amount of securities sold pursuant to such contracts shall not be less nor more than, the respective amounts stated in the prospectus supplement. Institutions with whom the contracts, when authorized, may be made include commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and other institutions, but shall in all cases be subject to our approval. Delayed delivery contracts will not be subject to any conditions except that:

- the purchase by an institution of the securities covered under that contract shall not at the time of delivery be prohibited under the laws of the jurisdiction to which that institution is subject; and
- if the securities are also being sold to underwriters acting as principals for their own account, the underwriters shall have purchased such securities not sold for delayed delivery.

The underwriters and other persons acting as agents will not have any responsibility in respect of the validity or performance of delayed delivery contracts.

Certain agents, underwriters and dealers, and their associates and affiliates may be customers of, have borrowing relationships with, engage in other transactions with, and/or perform services, including investment banking services, for us or one or more of our respective affiliates in the ordinary course of business.

In order to facilitate the offering of the securities, any underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the securities or any other securities the prices of which may be used to determine payments on such securities. Specifically, any underwriters may over-allot in connection with the offering, creating a short position for their own accounts. In addition, to cover over-allotments or to stabilize the price of the securities or of any such other securities, the underwriters may bid for, and purchase, the securities or any such other securities in the open market. Finally, in any offering of the securities through a syndicate of underwriters, the underwriting syndicate may reclaim selling concessions allowed to an underwriter or a dealer for distributing the securities in the offering if the syndicate repurchases previously distributed securities in transactions to cover syndicate short positions, in stabilization transactions or otherwise. Any of these activities may stabilize or maintain the market price of the securities above independent market levels. Any such underwriters are not required to engage in these activities and may end any of these activities at any time.

Under Rule 15c6-1 of the Exchange Act, trades in the secondary market generally are required to settle in two business days, unless the parties to any such trade expressly agree otherwise. The applicable prospectus supplement may provide that the original issue date for your securities may be more than two scheduled business days after the trade date for your securities. Accordingly, in such a case, if you wish to trade securities on any date prior to the third business day before the original issue date for your securities, you will be required, by virtue of the fact that your securities initially are expected to settle in more than three scheduled business days after the trade date for your securities, to make alternative settlement arrangements to prevent a failed settlement.

The securities may be new issues of securities and may have no established trading market. Any common stock will be listed on the Nasdaq Global Select Market, but any other securities may or may not be listed on a

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national securities exchange. We can make no assurance as to the liquidity of or the existence of trading markets for any of the securities.

The specific terms of any lock-up provisions in respect of any given offering will be described in the applicable prospectus supplement.

LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for us by Wilson Sonsini Goodrich & Rosati, Professional Corporation, Palo Alto, California. Additional legal matters may be passed on for us, or any underwriters, dealers or agents by counsel we will name in the applicable prospectus supplement.

EXPERTS

The financial statements of Tenaya Therapeutics, Inc. as of December 31, 2021 and 2020, and for each of the two years in the period ended December 31, 2021, incorporated by reference in this Prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2021 have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report. Such financial statements are incorporated by reference in reliance upon the report of such firm given their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at www.sec.gov. Copies of certain information filed by us with the SEC are also available on our website at www.tenayatherapeutics.com. Information accessible on or through our website is not a part of this prospectus.

This prospectus and any prospectus supplement is part of a registration statement that we filed with the SEC and do not contain all of the information in the registration statement. You should review the information and exhibits in the registration statement for further information on us and our consolidated subsidiaries and the securities that we are offering. Forms of any indenture or other documents establishing the terms of the offered securities are filed as exhibits to the registration statement of which this prospectus forms a part or under cover of a Current Report on Form 8-K and incorporated in this prospectus by reference. Statements in this prospectus or any prospectus supplement about these documents are summaries and each statement is qualified in all respects by reference to the document to which it refers. You should read the actual documents for a more complete description of the relevant matters.

INCORPORATION BY REFERENCE

The SEC allows us to incorporate by reference much of the information that we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference in this prospectus is considered to be part of this prospectus. Because we are incorporating by reference future filings with the SEC, this prospectus is continually updated and those future filings may modify or supersede some of the information included or incorporated by reference in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or in any document previously incorporated by reference have been modified or superseded. This prospectus incorporates by reference the documents listed below and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (in each case, other than those documents or the portions of those documents furnished pursuant to Items 2.02 or 7.01 of any Current Report on Form 8-K and, except as may be noted in any such Form 8-K, exhibits filed on such form that are related to such information), until the offering of the securities under the registration statement of which this prospectus forms a part is terminated or completed:

- our Annual Report on [Form 10-K](#) for the year ended December 31, 2021;
- our Quarterly Reports on Form 10-Q for the quarters ended [March 31, 2022](#) and [June 30, 2022](#);
- the portions of our [Definitive Proxy Statement](#) on Schedule 14A (other than information furnished rather than filed) that are incorporated by reference into our Annual Report on Form 10-K, filed with the SEC on April 28, 2022;
- our Current Report on Form 8-K filed on [June 10, 2022](#); and
- the description of our common stock contained in the Registration Statement on [Form 8-A](#) relating thereto, filed on July 23, 2021, including any amendment or report filed for the purpose of updating such description.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address or telephone number:

Tenaya Therapeutics, Inc.
171 Oyster Point Boulevard, 5th Floor
South San Francisco, California 94080
Attn: Investor Relations
(650) 825-6990

The information in this preliminary prospectus supplement 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 supplement is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED AUGUST 10, 2022

PROSPECTUS SUPPLEMENT

Up to \$75,000,000

COMMON STOCK



We have entered into a sales agreement with SVB Securities LLC (SVB Securities), relating to shares of our common stock, par value \$0.0001 per share, offered by this prospectus supplement and the accompanying prospectus. In accordance with the terms of the sales agreement, we may offer and sell shares of our common stock having an aggregate offering price of up to \$75,000,000 from time to time through SVB Securities, acting as our sales agent.

Our common stock is traded on the Nasdaq Global Select Market under the symbol "TNYA." On August 9, 2022, the last reported sale price of our common stock was \$5.38 per share.

Sales of our common stock, if any, under this prospectus supplement may be made in sales deemed to be "at the market offerings" as defined in Rule 415(a)(4) under the Securities Act of 1933, as amended (the Securities Act). SVB Securities is not required to sell any specific number or dollar amount of securities, but will act as a sales agent using commercially reasonable efforts consistent with its normal trading and sales practices, on mutually agreed terms between SVB Securities and us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

The compensation to SVB Securities for sales of common stock sold pursuant to the sales agreement will be equal to 3% of the gross proceeds of any shares of common stock sold under the sales agreement. In connection with the sale of the common stock on our behalf, SVB Securities will be deemed to be an "underwriter" within the meaning of the Securities Act and the compensation of SVB Securities will be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to SVB Securities with respect to certain liabilities, including liabilities under the Securities Act or the Securities Exchange Act of 1934, as amended (Exchange Act). See "Plan of Distribution" beginning on page S-14 for additional information regarding SVB Securities' compensation.

INVESTING IN OUR COMMON STOCK INVOLVES SIGNIFICANT RISKS. YOU SHOULD REVIEW CAREFULLY THE "[RISK FACTORS](#)" ON PAGE S-8 OF THIS PROSPECTUS SUPPLEMENT, AND IN THE DOCUMENTS INCORPORATED BY REFERENCE IN THIS PROSPECTUS SUPPLEMENT AND ACCOMPANYING PROSPECTUS BEFORE INVESTING IN OUR COMMON STOCK.

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

SVB Securities

The date of this prospectus supplement is _____, 2022.

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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus are part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission, which we refer to as the “SEC,” utilizing a “shelf” registration process. Under this shelf registration process, we may from time to time offer shares of our common stock having an aggregate offering price of up to \$75,000,000 under this prospectus supplement at prices and on terms to be determined by market conditions at the time of each such offering.

We are providing information to you about this offering of our common stock in two parts. The first part is this prospectus supplement, which provides you with specific information regarding the terms of this offering and our common stock, and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference in this prospectus supplement and the accompanying prospectus. The second part is the accompanying prospectus, which provides more general information, some of which does not apply to this offering of our common stock.

Before buying any of the common stock that we are offering, we urge you to carefully read this prospectus supplement and all of the information incorporated by reference herein, as well as the additional information described under the headings “Where You Can Find More Information” and “Incorporation of Certain Information by Reference.” These documents contain important information that you should consider when making your investment decision.

To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in any document incorporated by reference in this prospectus supplement that was filed with the SEC before the date of this prospectus supplement, on the other hand, you should rely on the information in this prospectus supplement. If any statement in one of these documents is inconsistent with a statement in another document having a later date—for example, a document incorporated by reference in this prospectus supplement—the statement in the document having the later date modifies or supersedes the earlier statement.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference herein were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreement, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

We have not, and SVB Securities has not, authorized anyone to provide you with any information other than that contained or incorporated by reference in this prospectus supplement and in the accompanying prospectus or in any related free writing prospectus that we authorize for use in connection with this offering and to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. You should assume that the information appearing in this prospectus supplement, the documents incorporated by reference and the accompanying prospectus or free writing prospectus is accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed materially since those dates.

This prospectus supplement does not constitute an offer to sell or the solicitation of an offer to buy any securities other than the securities described in this prospectus supplement or an offer to sell or the solicitation of an offer to buy such securities in any circumstances in which such offer or solicitation is unlawful.

Unless the context otherwise indicates, references in this prospectus supplement, the accompanying prospectus and the information incorporated by reference herein and therein to “Tenaya Therapeutics, Inc.,” “Tenaya,” “we,” “our” and “us” refer, collectively, to Tenaya Therapeutics, Inc., a Delaware corporation.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus, and the documents incorporated by reference herein and therein, contain forward-looking statements within the meaning of Section 27A of the Securities Act, and Section 21E of the Exchange Act. All statements other than statements of historical facts contained in this prospectus supplement, the accompanying prospectus, and the documents incorporated by reference herein and therein, including statements regarding our future results of operations and financial position, business strategy, development plans, planned preclinical studies and clinical trials, future results of preclinical studies and 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. The words “may,” “will,” “should,” “would,” “expect,” “plan,” “anticipate,” “could,” “intend,” “target,” “project,” “contemplate,” “believe,” “estimate,” “predict,” “potential” or “continue” or the negative of these terms and similar expressions and variations thereof are intended to identify forward-looking statements, but are not the exclusive means of identifying such statements. These forward-looking statements 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;
- the timing, scope and likelihood of regulatory filings and approvals, including timing of investigational new drugs (INDs), clinical trial applications (CTAs), Food and Drug Administration (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;
- 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;
- our competitive position and the success of competing therapies that are or may become available;
- 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 effects of the ongoing 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;

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- 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, operating losses, future revenue, capital requirements and needs for additional financing;
- our financial performance;
- the period over which we estimate our existing cash, cash equivalents, and investments in marketable securities 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 Jumpstart Our Business Startups Act of 2012 and a smaller reporting company under the Securities Exchange Act of 1934, as amended;
- our anticipated use of our existing cash, cash equivalents, and marketable securities; and
- our expectations related to the use of 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 supplement and are subject to a number of risks, uncertainties and assumptions described in the section titled “Risk Factors” and elsewhere in this prospectus supplement, the accompanying prospectus, and the documents incorporated by reference herein and therein. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified, you 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 supplement, 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 supplement 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 you are cautioned not to unduly rely upon these statements.

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights selected information contained elsewhere in this prospectus supplement, the accompanying prospectus and in the documents we incorporate by reference. This summary does not contain all of the information you should consider before making an investment decision. You should read this entire prospectus supplement and the accompanying prospectus carefully, especially the risks of investing in our common stock discussed under “Risk Factors” beginning on page S-8 of this prospectus supplement, the “Risk Factors” section of our most recent Annual Report on Form 10-K, as may be updated by our subsequent Quarterly Reports on Form 10-Q and other filings we make with the SEC, along with our consolidated financial statements and notes to those consolidated financial statements and the other information incorporated by reference in this prospectus supplement and the accompanying prospectus and in our filings with the SEC.

Company Overview

We are a biotechnology company focused on discovering, designing, developing and delivering 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.

We are advancing a deep and diverse pipeline of disease-modifying therapies that includes both gene therapies and small molecules discovered internally and developed using our product platforms and core capabilities to target defined sub-populations of patients with rare or highly prevalent forms of heart disease. All of our programs are currently in the preclinical stage; we do not have any products approved for sale and have not generated any revenue to date.

The most advanced product candidate from our Gene Therapy Platform is TN-201. TN-201 is an adeno-associated virus (AAV)-based gene therapy that addresses genetic hypertrophic cardiomyopathy (HCM) caused by Myosin Binding Protein C3 (*MYBPC3*) gene mutations. These mutations can cause the heart walls of affected individuals to become significantly thickened, leading to fibrosis, abnormal heart rhythms, cardiac dysfunction, heart failure, and sudden cardiac death in some adults and children. TN-201 is designed to deliver a fully functional *MYBPC3* gene driven by our proprietary heart-specific promoter to restore normal levels of MYBPC3 protein. We remain on track with our Investigational New Drug (IND) submission plans for TN-201 in the second half of 2022 and plan to focus on initial clinical development in adult *MYBPC3* gene mutation carriers with symptomatic non-obstructive HCM. TN-201 has been granted orphan drug designation by both the U.S. Food and Drug Administration (FDA) and the European Commission for the potential treatment of HCM due to mutations in the *MYBPC3* gene.

In 2021, we initiated a global natural history study to improve our understanding of disease progression and unmet need in individuals carrying mutations in the *MYBPC3* gene, with an initial focus on pediatric patients under the age of 18. We continue site activation and patient enrollment in the global natural history study to support the future clinical evaluation of TN-201 in pediatric patients after early safety has been established in adults. The natural history study complements existing disease registries focused primarily on adult patient HCM populations and may support and expedite the development of TN-201 in the pediatric patient population.

TN-301, the most advanced product candidate from our Precision Medicine Platform is a highly specific small molecule inhibitor of histone deacetylase 6 (HDAC6i). It has potentially broad utility in both heart failure with preserved ejection fraction (HFpEF) as well as genetic dilated cardiomyopathy. HFpEF is one of the greatest areas of unmet need in heart disease, and is characterized by systemic inflammation, left ventricular hypertrophy, fibrosis, and diastolic dysfunction resulting in high morbidity and mortality in affected individuals. We remain on track with our IND submission plans for TN-301 in the second half of 2022.

TN-401, another product candidate from our Gene Therapy Platform, uses an AAV-based gene therapy to address genetic arrhythmogenic right ventricular cardiomyopathy (ARVC) caused by plakophilin 2 (*PKP2*) gene

mutations. ARVC is characterized by enlargement of the right ventricle in affected individuals, replacement of heart muscle with fibrotic tissue and fatty deposits, and severely abnormal heart rhythms (arrhythmia) that can make it difficult for the heart to function properly and result in sudden cardiac death in some adults and children. We have scaled up production of TN-401 to 200L and are initiating IND-enabling studies. We also intend to support establishment of a global natural history study in 2022 and expect to submit an IND for TN-401 in 2023.

Our earlier-stage discovery programs include an AAV-based gene therapy designed to express the Dwarf Open Reading Frame (*DWOLF*) gene in the heart, which has potentially broad utility in dilated cardiomyopathy and heart failure with reduced ejection fraction (HFrEF) and is currently at the candidate selection stage. Another program is an AAV-approach based on science from our founders that involves converting (or reprogramming) cells to replace cardiomyocytes lost due to heart damage, such as myocardial infarction. This program is currently at the candidate selection stage. In addition, we have numerous emerging programs being explored to address other forms of heart failure.

We have invested in significant gene therapy enabling capabilities, most notably with the build out and operational launch of our Genetic Medicines Manufacturing Center to support the production of our AAV-based programs. In June 2022, this facility obtained a drug manufacturing license from the State of California, Department of Public Health, to enable current Good Manufacturing Practice (cGMP) production of drug product. Located in Union City near our research labs, our Genetic Medicines Manufacturing Center enables scale-up of production to support first-in-human studies. This facility will initially support the production of drug product at multiple scales for clinical studies for all AAV-based programs, including TN-201 and TN-401. We have also initiated cGMP to support the production of TN-301 at a contract development and manufacturing organization (CDMO).

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.

We make available free of charge on or through our website our Securities and Exchange Commission (SEC) filings, including our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. The SEC maintains a website that contains reports, proxy and information statements and other information regarding our filings at www.sec.gov.

THE OFFERING

| | |
|--|--|
| Common Stock Offered by Us | Shares of our common stock having an aggregate offering price of up to \$75,000,000. |
| Common Stock Outstanding After this Offering | Up to 13,940,520 shares, assuming the sale of \$75,000,000 of shares of our common stock in this offering at an offering price of \$5.38 per share, which was the closing price of our common stock on the Nasdaq Global Select Market on August 9, 2022. The actual number of shares issued will vary depending on the sales price under this offering. |
| Plan of Distribution | “At the market offering” that may be made from time to time through our sales agent, SVB Securities. See “Plan of Distribution” on page S-14. |
| Use of Proceeds | 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, HDAC6i and PKP2 programs, the continued development of our other programs, including our DWORF and Reprogramming programs, our manufacturing operations and the remainder, if any, for working capital and other general corporate purposes. See “Use of Proceeds” on page S-10. |
| Risk Factors | Investing in our common stock involves significant risks. You should read the “Risk Factors” section of this prospectus supplement and in the documents incorporated by reference in this prospectus supplement and accompanying prospectus for a discussion of factors to consider carefully before deciding to purchase shares of our common stock. |
| Nasdaq Global Select Market Symbol | “TNYA” |

The number of shares of our common stock outstanding after this offering is based on 41,363,820 shares of our common stock outstanding as of June 30, 2022, and excludes:

- 5,161,710 shares of our common stock issuable upon the exercise of options outstanding as of June 30, 2022, at a weighted-average exercise price of \$10.43 per share;
- 72,559 shares of our common stock issuable upon the vesting of restricted stock units outstanding as of June 30, 2022;
- 47,800 shares of our common stock issuable upon the exercise of options granted after June 30, 2022, at a weighted-average exercise price of \$5.20 per share;
- 2,762,859 shares of our common stock reserved for issuance pursuant to future awards under our 2021 Equity Incentive Plan (2021 Plan), as of June 30, 2022, plus any future increases in the number of shares of common stock reserved for issuance under our 2021 Plan pursuant to provisions thereof that automatically increase the share reserve under the plan each year; and

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- 1,161,305 shares of our common stock reserved for future issuance under our 2021 Employee Stock Purchase Plan (ESPP), as of June 30, 2022, plus any future increases in the number of shares of common stock reserved for issuance under the ESPP pursuant to provisions thereof that automatically increase the share reserve under the plan each year.

Unless otherwise indicated, all information in this prospectus supplement assumes no exercise of outstanding options or vesting of outstanding restricted stock units after June 30, 2022.

RISK FACTORS

Investing in our securities involves a high degree of risk. Before making a decision to invest in our securities, in addition to carefully considering the other information contained in this prospectus supplement, in the accompanying prospectus and incorporated by reference herein or therein, you should carefully consider the risks described under the caption “Risk Factors” contained in the accompanying prospectus, and any related free writing prospectus, and the risks discussed under the caption “Risk Factors” contained in our most recent annual report on Form 10-K and in our most recent quarterly reports on Form 10-Q, as well as any amendments thereto, which are incorporated by reference into this prospectus supplement in their entirety, together with other information in this prospectus supplement, the documents incorporated by reference, and any free writing prospectus that we may authorize for use in connection with a specific offering. See “Where You Can Find More Information” and “Incorporation by Reference.”

Risks Related to this Offering

Investors in this offering may experience immediate and substantial dilution in the book value of their investment.

The last reported sale price of our common stock on the Nasdaq Global Select Market on August 9, 2022 was \$5.38 per share, which is less than our net tangible book value per share as of June 30, 2022. For a more detailed discussion regarding the foregoing and the dilution to new investors participating in this offering, assuming that an aggregate of 13,940,520 shares of our common stock are sold at such price for aggregate gross proceeds of approximately \$75,000,000, please see the section entitled “Dilution” on page S-12 of this prospectus supplement.

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. As of June 30, 2022, we had 41,363,820 shares of our common stock outstanding. If our stockholders sell, or the market perceives that our stockholders intend to sell, substantial amount of our common stock in the public market, the market price of our common stock could decline significantly.

Shares issued upon the exercise of stock options outstanding under our equity incentive plans or pursuant to future awards granted under those plans will become available for sale in the public market to the extent permitted by the provisions of applicable vesting schedules and Rule 144 and Rule 701 under the Securities Act.

Moreover, certain holders of our common stock have rights, subject to 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. Registration of these shares under the Securities Act would result in the shares becoming freely tradeable in the public market, subject to the restrictions of Rule 144 in the case of our affiliates. If any of these additional shares are sold, or if it is perceived that they will be sold, in the public market, the market price of our common stock could decline.

Our management team will have broad discretion to use the net proceeds from this offering and its investment of these proceeds may not yield a favorable return.

Our management team will have broad discretion in the application of the net proceeds from this offering and could spend or invest the proceeds in ways that may not yield a favorable return or enhance the value of our common stock. Accordingly, investors will need to rely on our management team’s judgment with respect to the use of these proceeds. We intend to use the proceeds from this offering in the manner described in the section titled “Use of Proceeds.” The failure by management to apply these funds effectively could negatively affect our ability to operate and grow our business. We cannot specify with certainty all of the particular uses for the net

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proceeds to be received upon the completion of this offering. In addition, the amount, allocation and timing of our actual expenditures will depend upon numerous factors, including any milestone payments received from any future strategic partnerships. Accordingly, we will have broad discretion in using these proceeds. Until the net proceeds are used, they may be placed in investments that do not produce significant income or that may lose value.

We do not anticipate paying cash dividends and, accordingly, stockholders must rely on share appreciation for any return on their investment.

We have never paid any dividends on our capital stock. We currently intend to retain our future earnings, if any, to fund the development and growth of our businesses and do not anticipate that we will declare or pay any cash dividends on our capital stock in the foreseeable future. See the section titled “Dividend Policy.” As a result, capital appreciation, if any, of our common stock will be your sole source of gain on your investment for the foreseeable future. Investors seeking cash dividends should not invest in our common stock.

Raising additional capital may cause dilution to our stockholders, including purchasers of our common stock in this offering, restrict our operations or require us to relinquish substantial rights.

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 of these new securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing, if available, may involve fixed payment obligations or agreements that include covenants limiting or restricting our ability to take specific actions such as incurring additional debt, making capital expenditures or declaring dividends. If we raise additional funds through partnerships, collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, product candidates or future revenue streams, or grant licenses on terms that are not favorable to us. We cannot assure you that we will be able to obtain additional funding if and when necessary. If we are unable to obtain adequate financing on a timely basis, we could be required to delay, scale back or eliminate one or more of our clinical or discovery programs or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves. In addition, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans.

The common stock offered hereby will be sold in “at the market offerings,” and investors who buy shares at different times will likely pay different prices.

Investors who purchase shares in this offering at different times will likely pay different prices, and accordingly may experience different levels of dilution and different outcomes in their investment results. We will have discretion, subject to market demand and the terms of the sales agreement, to vary the timing, prices and number of shares sold in this offering. In addition, subject to the final determination by our board of directors or any restrictions we may place in any applicable placement notice, there is no minimum or maximum sales price for shares to be sold in this offering. Investors may experience a decline in the value of the shares they purchase in this offering as a result of sales made at prices lower than the prices they paid.

USE OF PROCEEDS

We may issue and sell shares of our common stock having an aggregate gross sales proceeds of up to \$75,000,000 from time to time pursuant to the sales agreement. The amount of proceeds from this offering will depend upon the number of shares of our common stock sold and the market price at which they are sold. Because there is no minimum offering amount required as a condition to close this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time.

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, HDAC6i and PKP2 programs, the continued development of our other programs, including our DWORF and Reprogramming programs, our manufacturing operations and the remainder, if any, for working capital and other general corporate purposes.

Pending the specific use of net proceeds as described in this prospectus supplement, we intend to invest the net proceeds to us from this offering in short and intermediate-term investment grade instruments, certificates of deposit or guaranteed obligations of the U.S. government in accordance with our investment policy.

Our expected use of proceeds from this offering represents our current intentions based on our present plans and business condition. As of the date of this prospectus supplement, we cannot predict with certainty all of the particular uses for the proceeds to be received upon the completion of this offering or the actual amounts that we will spend on the uses set forth above. We may also use a portion of the proceeds to in-license, acquire or invest in additional businesses, technologies, products or assets. Although we have no specific agreements, commitments or understandings with respect to any in-licensing activity or acquisition, we evaluate these opportunities and engage in related discussions with other companies from time to time.

The amount and timing of our actual expenditures will depend on numerous factors, including the results of our research and development efforts, the timing and outcome of any ongoing or future preclinical studies and clinical trials the timing and outcome of regulatory submissions and any unforeseen cash needs. As a result, our management will have broad discretion over the use of the proceeds from this offering.

DIVIDEND POLICY

We have never declared or paid cash dividends on our common stock. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business. We do not intend to pay cash dividends to holders of our common stock in the foreseeable future. Payment of future cash dividends, if any, will be at the discretion of our board of directors after taking into account various factors, including our financial condition, operating results, current and anticipated cash needs, the requirements and contractual restrictions of then-existing debt instruments, and other factors that our board of directors deems relevant.

DILUTION

Our historical net tangible book value as of June 30, 2022 was \$223.9 million, or \$5.41 per share of our common stock. Historical net tangible book value per share represents the amount of our total tangible assets less total liabilities, divided by the number of shares of our common stock outstanding.

Dilution in historical net tangible book value per share to new investors in this offering represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the historical net tangible book value per share of common stock immediately after the completion of this offering. After giving effect to the assumed sale by us of shares of our common stock having an aggregate amount of \$75.0 million at an assumed public offering price of \$5.38 per share, which was the last reported sale price of our common stock on the Nasdaq Global Select Market on August 9, 2022 and after deducting estimated commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of June 30, 2022 would have been \$296.0 million, or \$5.35 per share. This represents an immediate decrease in net tangible book value per share of \$0.06 to existing stockholders and immediate dilution of \$0.03 in net tangible book value per share to new investors purchasing common stock in this offering.

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

| | | |
|---|-----------------|---------------|
| Assumed public offering price per share | | \$5.38 |
| Historical net tangible book value per share as of June 30, 2022 | \$ 5.41 | |
| Increase (Decrease) in net tangible book value per share attributable to new investors in this offering | <u>\$(0.06)</u> | |
| As adjusted net tangible book value per share after this offering | | <u>\$5.35</u> |
| Dilution per share to new investors purchasing shares in this offering | | <u>\$0.03</u> |

The as adjusted information is illustrative only and will adjust based on the actual price to the public, the actual number of shares sold and other terms of the offering determined at the time shares of our common stock are sold pursuant to this prospectus supplement. The shares sold in this offering, if any, will be sold from time to time at various prices. An increase of \$1.00 per share in the price at which the shares are sold from the assumed offering price of \$5.38 per share shown in the table above, assuming all of our common stock in the aggregate amount of \$75.0 million during the term of the sales agreement with SVB Securities is sold at that price, would increase our adjusted net tangible book value per share after the offering to \$5.57 per share and would increase the dilution in net tangible book value per share to new investors in this offering to \$0.81 per share, after deducting commissions and estimated offering expenses payable by us. A decrease of \$1.00 per share in the price at which the shares are sold from the assumed offering price of \$5.38 per share shown in the table above, assuming all of our common stock in the amount of \$75.0 million during the term of the sales agreement with SVB Securities is sold at that price, would decrease our adjusted net tangible book value per share after the offering to \$5.06 per share and would result in an accretion in net tangible book value of \$0.68 per share to new investors in this offering, after deducting commissions and estimated aggregate offering expenses payable by us. This information is supplied for illustrative purposes only and may differ based on the actual offering price and the actual number of shares offered.

The foregoing table and calculations (other than the historical net tangible book value calculations) are based on 41,363,820 shares of our common stock outstanding as of June 30, 2022 and exclude as of such date:

- 5,161,710 shares of our common stock issuable upon the exercise of options outstanding as of June 30, 2022, at a weighted-average exercise price of \$10.43 per share;
- 72,559 shares of our common stock issuable upon the vesting of restricted stock units outstanding as of June 30, 2022;

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- 47,800 shares of our common stock issuable upon the exercise of options granted after June 30, 2022, at a weighted-average exercise price of \$ 5.20 per share;
- 2,762,859 shares of our common stock reserved for issuance pursuant to future awards under our 2021 Equity Incentive Plan (2021 Plan), as of June 30, 2022, plus any future increases in the number of shares of common stock reserved for issuance under our 2021 Plan pursuant to provisions thereof that automatically increase the share reserve under the plan each year; and
- 1,161,305 shares of our common stock reserved for future issuance under our 2021 Employee Stock Purchase Plan (ESPP), as of June 30, 2022, plus any future increases in the number of shares of common stock reserved for issuance under the ESPP pursuant to provisions thereof that automatically increase the share reserve under the plan each year.

PLAN OF DISTRIBUTION

We have entered into a sales agreement with SVB Securities under which we may issue and sell from time to time up to an aggregate of \$75.0 million of shares of our common stock through SVB Securities, acting as sales agent or principal. Sales of the shares to which this prospectus relates, if any, will be made by any method deemed to be an “at the market offering” as defined in Rule 415 promulgated under the Securities Act. As our sales agent, SVB Securities will not engage in any transactions that stabilize our common stock.

SVB Securities will offer the shares of our common stock subject to the terms and conditions of the sales agreement on a daily basis or as otherwise agreed upon by us and SVB Securities. We will designate the maximum number of shares or dollar value of common stock to be sold through SVB Securities on a daily basis or otherwise determine such maximum number together with SVB Securities. Subject to the terms and conditions of the sales agreement, SVB Securities will use its commercially reasonable efforts to sell on our behalf all of the shares of common stock so designated or determined. We may instruct SVB Securities not to sell shares of common stock if the sales cannot be effected at or above the price designated by us in any such instruction. We or SVB Securities may suspend the offering of shares of common stock being made through SVB Securities under the sales agreement upon proper notice to the other party.

For its service as sales agent in connection with the sale of shares of our common stock that may be offered hereby, we will pay SVB Securities an amount equal to 3.0% of the aggregate sales price received by SVB Securities from each sale of shares sold through it acting as our sales agent. The remaining sales proceeds, after deducting any expenses payable by us and any transaction fees imposed by any governmental, regulatory, or self-regulatory organization in connection with the sales, will equal our net proceeds for the sale of such shares. We have also agreed to reimburse SVB Securities for certain specified expenses, including the fees and disbursements of its legal counsel in an amount not to exceed \$75,000, payable upon execution of the sales agreement, plus certain ongoing fees of its legal counsel, as provided in the sales agreement.

SVB Securities will provide written confirmation to us following the close of trading on the Nasdaq Global Select Market each day in which shares of common stock are sold by it for us under the sales agreement. Each confirmation will include the number of shares sold on that day, the gross sales price per share, the compensation payable by us to SVB Securities and the proceeds to us net of such compensation.

Settlement for sales of common stock will occur, unless the parties agree otherwise, on the second business day following the date on which any sales were made in return for payment of the proceeds to us net of compensation paid by us to SVB Securities. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

We will deliver to the Nasdaq Global Select Market copies of this prospectus pursuant to the rules of the Nasdaq Global Select Market. Unless otherwise required, we will report at least quarterly the number of shares of common stock sold through SVB Securities under the sales agreement, the net proceeds to us and the compensation paid by us to SVB Securities in connection with the sales of common stock.

In connection with the sale of the common stock on our behalf, SVB Securities will be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation paid to SVB Securities will be deemed to be underwriting commissions or discounts. We have agreed in the sales agreement to provide indemnification and contribution to SVB Securities against certain civil liabilities, including liabilities under the Securities Act.

In the ordinary course of their business, SVB Securities and/or its affiliates may perform, investment banking, broker dealer, lending, financial advisory or other services for us for which they have received, or may receive, separate fees.

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We estimate that the total expenses of the offering payable by us, excluding discounts and commissions payable to SVB Securities under the sales agreement, will be approximately \$0.6 million.

The offering of common stock pursuant to the sales agreement will terminate upon the earlier of (1) the sale of all of our shares of common stock provided for in the sales agreement or (2) the termination of the sales agreement, pursuant to its terms, by either SVB Securities or us.

LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for us by Wilson Sonsini Goodrich & Rosati, Professional Corporation, Palo Alto, California. SVB Securities LLC is being represented in connection with this offering by Davis Polk & Wardwell LLP, Menlo Park, California.

EXPERTS

The financial statements of Tenaya Therapeutics, Inc. as of December 31, 2021 and 2020, and for each of the two years in the period ended December 31, 2021, incorporated by reference in this Prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2021 have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report. Such financial statements are incorporated by reference in reliance upon the report of such firm given their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

Because we are subject to the information and reporting requirements of the Exchange Act, we file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at www.sec.gov. We also maintain a website at www.tenayatherapeutics.com where these materials are available. 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 accessible through our website is not a part of this prospectus supplement and is not incorporated by reference herein, and the inclusion of our website address in this prospectus supplement is an inactive textual reference only.

This prospectus supplement and the accompanying prospectus are part of a registration statement that we filed with the SEC and do not contain all of the information in the registration statement. The full registration statement may be obtained from the SEC or us, as provided below. Forms of the indenture and other documents establishing the terms of the offered securities are or may be filed as exhibits to the registration statement. Statements in this prospectus supplement or the accompanying prospectus about these documents are summaries and each statement is qualified in all respects by reference to the document to which it refers. You should refer to the actual documents for a more complete description of the relevant matters. You may inspect a copy of the registration statement through the SEC's website, as provided above.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference much of the information that we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference in this prospectus supplement is considered to be part of this prospectus supplement. Because we are incorporating by reference future filings with the SEC, this prospectus supplement is continually updated and those future filings may modify or supersede some of the information included or incorporated by reference in this prospectus supplement. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus supplement or in any document previously incorporated by reference have been modified or superseded. This prospectus supplement incorporates by reference the documents listed below and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (in each case, other than those documents or the portions of those documents furnished pursuant to Items 2.02 or 7.01 of any Current Report on Form 8-K and, except as may be noted in any such Form 8-K, exhibits filed on such form that are related to such information), until the offering of the securities under the registration statement of which this prospectus supplement forms a part is terminated or completed:

- our Annual Report on [Form 10-K](#) for the year ended December 31, 2021;
- our Quarterly Reports on Form 10-Q for the quarters ended [March 31, 2022](#) and [June 30, 2022](#);
- the portions of our [Definitive Proxy Statement](#) on Schedule 14A (other than information furnished rather than filed) that are incorporated by reference into our Annual Report on Form 10-K, filed with the SEC on April 28, 2022;
- our Current Report on Form 8-K filed on [June 10, 2022](#); and
- the description of our common stock contained in the Registration Statement on [Form 8-A](#) relating thereto, filed on July 23, 2021, including any amendment or report filed for the purpose of updating such description.

You can request a copy of these filings, at no cost, by writing or telephoning us at the following address or telephone number:

Tenaya Therapeutics, Inc.
171 Oyster Point Boulevard, 5th Floor
South San Francisco, California 94080
Attn: Investor Relations
(650) 825-6990

The information accessible through any website referred to in this prospectus supplement or any document incorporated herein is not, and should not be deemed to be, a part of this prospectus supplement.



Up to \$75,000,000

Common Stock

PROSPECTUS SUPPLEMENT

SVB Securities

, 2022

PART II**INFORMATION NOT REQUIRED IN PROSPECTUS****Item 14. Other Expenses of Issuance and Distribution**

The following table sets forth estimated expenses (except in the case of the SEC registration fee and FINRA filing fee) in connection with the issuance and distribution of the securities being registered:

| | Amount to be Paid |
|--|----------------------------------|
| SEC registration fee | \$27,810 |
| FINRA filing fee | 45,500 |
| Stock exchange listing fee | * |
| Printing and engraving expenses | * |
| Accounting fees and expenses | * |
| Legal fees and expenses | * |
| Transfer agent and registrar fees and expenses | * |
| Trustee's fees and expenses | * |
| Miscellaneous expenses | * |
| Total | <u>\$73,310*</u> |

* These fees and expenses are calculated based on the securities offered and the number of issuances and accordingly cannot be estimated at this time and will be reflected in the applicable prospectus supplement.

Item 15. Indemnification of Directors and Officers

Section 145 of the Delaware General Corporation Law authorizes a corporation's board of directors to grant, and authorizes a court to award, indemnity to officers, directors and other corporate agents.

The registrant's amended and restated certificate of incorporation contains provisions that limit the liability of the registrant's directors for monetary damages to the fullest extent permitted by the Delaware General Corporation Law. Consequently, the registrant's directors will not be personally liable to the registrant or its stockholders for monetary damages for any breach of fiduciary duties as directors, except liability for the following:

- any breach of their duty of loyalty to the registrant or its stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or
- any transaction from which they derived an improper personal benefit.

Any amendment, repeal or elimination of these provisions will not eliminate or reduce the effect of these provisions in respect of any act, omission or claim that occurred or arose prior to that amendment, repeal or elimination. If the Delaware General Corporation Law is amended to provide for further limitations on the personal liability of directors of corporations, then the personal liability of the registrant's directors will be further limited to the greatest extent permitted by the Delaware General Corporation Law.

In addition, the registrant's amended and restated bylaws provide that the registrant will indemnify its directors and officers, and may indemnify its employees, agents and any other persons, to the fullest extent permitted by the Delaware General Corporation Law. The registrant's amended and restated bylaws will also provide that the registrant must advance expenses incurred by or on behalf of a director or officer in advance of the final disposition of any action or proceeding, subject to limited exceptions.

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Further, the registrant has entered into indemnification agreements with each of its directors and executive officers that may be broader than the specific indemnification provisions contained in the Delaware General Corporation Law. These indemnification agreements require the registrant, among other things, to indemnify its directors and executive officers against liabilities that may arise by reason of their status or service. These indemnification agreements also require the registrant to advance all expenses reasonably and actually incurred by the directors and executive officers in investigating or defending any such action, suit or proceeding. The registrant believes that these agreements are necessary to attract and retain qualified individuals to serve as directors and executive officers.

The limitation of liability and indemnification provisions in the registrant's amended and restated certificate of incorporation, amended and restated bylaws and the indemnification agreements that the registrant has entered into with its directors and executive officers may discourage stockholders from bringing a lawsuit against the registrant's directors and executive officers for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against the registrant's directors and executive officers, even though an action, if successful, might benefit the registrant and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that the registrant pays the costs of settlement and damage awards against directors and executive officers as required by these indemnification provisions. At present, the registrant is not aware of any pending litigation or proceeding involving any person who is or was one of the registrant's directors or officers, or is or was one of the registrant's directors or officers serving at its request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, for which indemnification is sought, and we are not aware of any threatened litigation that may result in claims for indemnification.

The registrant has obtained insurance policies under which, subject to the limitations of the policies, coverage is provided to the registrant's directors and executive officers against loss arising from claims made by reason of breach of fiduciary duty or other wrongful acts as a director or executive officer, including claims relating to public securities matters, and to the registrant with respect to payments that may be made by the registrant to these directors and executive officers pursuant to its indemnification obligations or otherwise as a matter of law.

Certain of the registrant's non-employee directors may, through their relationships with their employers, be insured and/or indemnified against certain liabilities incurred in their capacity as members of the registrant's board of directors.

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 our 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 16. Exhibits

| <u>Exhibit Number</u> | <u>Exhibit Description</u> | <u>Incorporation by Reference</u> | | | |
|-----------------------|--|-----------------------------------|-----------------------|--------------------|-----------------------|
| | | <u>Form</u> | <u>Exhibit Number</u> | <u>Filing Date</u> | <u>Filed Herewith</u> |
| 1.1* | Form of Underwriting Agreement | | | | |
| 1.2 | Sales Agreement, dated August 10, 2022, by and between the Registrant and SVB Securities LLC | | | | X |

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| Exhibit Number | Exhibit Description | Incorporation by Reference | | | |
|----------------|---|----------------------------|----------------|----------------|----------------|
| | | Form | Exhibit Number | Filing Date | Filed Herewith |
| 3.1 | Amended and Restated Certificate of Incorporation | 8-K | 3.1 | August 3, 2021 | |
| 3.2 | Amended and Restated Bylaws | 8-K | 3.2 | August 3, 2021 | |
| 4.1 | Amended and Restated Investors' Rights Agreement by and among the Registrant and certain of its stockholders, dated December 17, 2020 | S-1/A | 4.1 | July 26, 2021 | |
| 4.2 | Description of Securities | 10-K | 4.3 | March 23, 2022 | |
| 4.3 | Specimen Common Stock Certificate | S-1/A | 4.2 | July 26, 2021 | |
| 4.4* | Form of Preferred Stock Certificate | | | | |
| 4.5 | Form of Indenture | | | | X |
| 4.6* | Form of Debt Security | | | | |
| 4.7* | Form of Depositary Agreement | | | | |
| 4.8* | Form of Warrant Agreement | | | | |
| 4.9* | Form of Subscription Agreement | | | | |
| 4.10* | Form of Purchase Contract Agreement | | | | |
| 4.11* | Form of Unit Agreement | | | | |
| 4.12* | Form of Unit | | | | |
| 5.1 | Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation | | | | X |
| 23.1 | Consent of Independent Registered Public Accounting Firm | | | | X |
| 23.2 | Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (included in the opinion filed as Exhibit 5.1 to this Registration Statement) | | | | X |
| 24.1 | Power of Attorney (included on the signature page to this Registration Statement) | | | | X |
| 25.1** | Form T-1 Statement of Eligibility of Trustee for Indenture under the Trust Indenture Act of 1939 | | | | |
| 107 | Filing Fee Table | | | | X |

* To be filed, if applicable, by amendment or incorporated by reference pursuant to a Current Report on Form 8-K.

** To be filed pursuant to Section 305(b)(2) of the Trust Indenture Act of 1939, as amended.

Item 17. Undertakings

(a) The undersigned registrant hereby undertakes:

- (1) to file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) to include any prospectus required by Section 10(a)(3) of the Securities Act;

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(ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC, pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or Section 15(d) of the Exchange Act, that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) that, for the purpose of determining any liability under the Securities Act, each such post-effective amendment 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.

(3) to remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) that, for the purpose of determining liability under the Securities Act to any purchaser:

(i) each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(5) that, for the purpose of determining liability of a registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of such undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

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- (ii) any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
- (iii) the portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
- (iv) any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(6) that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement 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.

(b) 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 SEC 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.

(c) The undersigned registrant hereby undertakes to file an application for the purpose of determining the eligibility of the trustee to act under subsection (a) of Section 310 of the Trust Indenture Act in accordance with the rules and regulations prescribed by the SEC under Section 305(b)(2) of the Trust Indenture Act.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and 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, State of California, on August 10, 2022.

TENAYA THERAPEUTICS, INC.

By: /s/ Faraz Ali, M.B.A.

Faraz Ali, M.B.A.

Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Faraz Ali and Leone D. Patterson, and each of them, as his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this registration statement, including post-effective amendments, and registration statements filed pursuant to Rule 462 under the Securities Act, 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 and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith and about the premises, as fully for all intents and purposes as they, he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent or any of them, or their, his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated:

| <u>Signature</u> | <u>Title</u> | <u>Date</u> |
|---|---|-----------------|
| <u>/s/ Faraz Ali, M.B.A.</u> Faraz Ali, M.B.A. | Chief Executive Officer and Director <i>(Principal Executive Officer)</i> | August 10, 2022 |
| <u>/s/ Leone D. Patterson, M.B.A.</u> Leone D. Patterson, M.B.A. | Chief Financial and Business Officer <i>(Principal Financial and Accounting Officer)</i> | August 10, 2022 |
| <u>/s/ Eli Casdin, M.B.A.</u> Eli Casdin, M.B.A. | Director | August 10, 2022 |
| <u>/s/ Jin-Long Chen, Ph.D.</u> Jin-Long Chen, Ph.D. | Director | August 10, 2022 |
| <u>/s/ David V. Goeddel, Ph.D.</u> David V. Goeddel, Ph.D. | Director | August 10, 2022 |
| <u>/s/ June Lee, M.D.</u> June Lee, M.D. | Director | August 10, 2022 |

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|---|----------|-----------------|
| <u>/s/ Karah Parschauer</u> Karah Parschauer | Director | August 10, 2022 |
| <u>/s/ Deepak Srivastava, M.D.</u> Deepak Srivastava, M.D. | Director | August 10, 2022 |
| <u>/s/ Catherine Stehman-Breen, M.D.</u> Catherine Stehman-Breen, M.D. | Director | August 10, 2022 |
| <u>/s/ Jeffrey T. Walsh, M.B.A.</u> Jeffrey T. Walsh, M.B.A. | Director | August 10, 2022 |
| <u>/s/ R. Sanders (Sandy) Williams, M.D.</u> R. Sanders (Sandy) Williams, M.D. | Director | August 10, 2022 |

TENAYA THERAPEUTICS, INC.
Shares of Common Stock
(\$0.0001 par value per share)

SALES AGREEMENT

August 10, 2022

SVB SECURITIES LLC
1301 Avenue of the Americas, 12th Floor
New York, New York 10019

Ladies and Gentlemen:

Tenaya Therapeutics, Inc., a Delaware corporation (the “**Company**”), confirms its agreement (this “**Agreement**”) with SVB Securities LLC (the “**Agent**”), as follows:

1. **Issuance and Sale of Shares.** The Company agrees that, from time to time during the term of this Agreement, on the terms and subject to the conditions set forth herein, it may issue and sell through the Agent up to \$75,000,000 of shares of common stock, \$0.0001 par value per share, of the Company (the “**Common Stock**”), subject to the limitations set forth in Section 5(c) (the “**Placement Shares**”). Notwithstanding anything to the contrary contained herein, the parties hereto agree that compliance with the limitation set forth in this Section 1 on the aggregate gross sales price of Placement Shares that may be issued and sold under this Agreement from time to time shall be the sole responsibility of the Company, and that the Agent shall have no obligation in connection with such compliance. The issuance and sale of Placement Shares through the Agent will be effected pursuant to the Registration Statement (as defined below) to be filed by the Company with the Securities and Exchange Commission (the “**Commission**”) on the date hereof and to be declared effective by the Commission, although nothing in this Agreement shall be construed as requiring the Company to issue any Placement Shares.

The Company has prepared and will file, in accordance with the provisions of the Securities Act of 1933, as amended, and the rules and regulations thereunder (collectively, the “**Securities Act**”), with the Commission a registration statement on Form S-3, including (a) a base prospectus, relating to certain securities, including the Common Stock, to be issued from time to time by the Company, and which incorporates by reference documents that the Company has filed or will file in accordance with the provisions of the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder (collectively, the “**Exchange Act**”), and (b) a prospectus supplement specifically relating to the Placement Shares to be issued from time to time pursuant to this Agreement (the “**Prospectus Supplement**”) to the base prospectus included as part of such registration statement. The Company will furnish to the Agent, for use by the Agent, copies of the base prospectus included as part of such registration statement at the time it becomes effective, as supplemented by the Prospectus Supplement. Except where the context otherwise requires, such registration statement, including all documents filed as part thereof or incorporated by reference therein, and including any information contained in a Prospectus (as defined below) subsequently filed with the Commission pursuant to Rule 424(b) under the Securities Act or deemed to be a part of such registration statement pursuant to Rule 430B or Rule 462(b) under the Securities Act, is herein called the “**Registration Statement**.” The base prospectus, including all

documents incorporated therein by reference, included in the Registration Statement, as it may be supplemented by the Prospectus Supplement, in the form in which such prospectus and/or Prospectus Supplement have most recently been filed by the Company with the Commission pursuant to Rule 424(b) under the Securities Act, together with any “issuer free writing prospectus” (as used herein, as defined in Rule 433 under the Securities Act (“**Rule 433**”)), relating to the Placement Shares that (i) is required to be filed with the Commission by the Company or (ii) is exempt from filing pursuant to Rule 433(d)(5)(i), in each case, in the form filed or required to be filed with the Commission or, if not required to be filed, in the form retained in the Company’s records pursuant to Rule 433(g), is herein called the “**Prospectus**.”

Any reference herein to the Registration Statement, the Prospectus Supplement, the Prospectus or any issuer free writing prospectus shall be deemed to refer to and include the documents, if any, that are or are deemed to be incorporated by reference therein (the “**Incorporated Documents**”), including, unless the context otherwise requires, the documents, if any, filed as exhibits to such Incorporated Documents. Any reference herein to the terms “amend,” “amendment” or “supplement” with respect to the Registration Statement, the Prospectus Supplement, the Prospectus or any issuer free writing prospectus shall be deemed to refer to and include the filing of any document under the Exchange Act on or after the most-recent effective date of the Registration Statement, or the respective dates of the Prospectus Supplement, Prospectus or such issuer free writing prospectus, as the case may be, and incorporated therein by reference. For purposes of this Agreement, all references to the Registration Statement, the Prospectus or any amendment or supplement thereto shall be deemed to include the most recent copy filed with the Commission pursuant to its Electronic Data Gathering Analysis and Retrieval System or, if applicable, the Interactive Data Electronic Application system when used by the Commission (collectively, “**EDGAR**”).

2. **Placements.** Each time that the Company wishes to issue and sell any Placement Shares through the Agent hereunder (each, a “**Placement**”), it will notify the Agent by email notice (or other method mutually agreed to in writing by the parties) (each such notice, a “**Placement Notice**”) containing the parameters in accordance with which it desires such Placement Shares to be sold, which at a minimum shall include the maximum number or amount of Placement Shares to be sold, the time period during which sales are requested to be made, any limitation on the number or amount of Placement Shares that may be sold in any one Trading Day (as defined in Section 3) and any minimum price below which sales may not be made, a form of which containing such minimum sales parameters is attached hereto as **Schedule 1**. The Placement Notice must originate from one of the individuals authorized to act on behalf of the Company and set forth on **Schedule 2** (with a copy to each of the other individuals from the Company listed on such **Schedule 2**), and shall be addressed to each of the recipients from the Agent set forth on **Schedule 2**, as such **Schedule 2** may be updated by either party from time to time by sending a written notice containing a revised **Schedule 2** to the other party in the manner provided in Section 12 (including by email correspondence to each of the individuals of the Company set forth on **Schedule 2**, if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply). The Placement Notice shall be effective upon receipt by the Agent unless and until (i) in accordance with the notice requirements set forth in Section 4, the Agent declines to accept the terms contained therein for any reason, in its sole discretion, within two Trading Days of the date the Agent receives the Placement Notice, (ii) in accordance with the notice requirements set forth in Section 4, the Agent suspends sales under the Placement Notice for any reason in its sole discretion, (iii) the entire amount of the Placement Shares has been sold pursuant to this Agreement, (iv) in accordance with the notice requirements set forth in Section 4, the Company suspends sales under or terminates the Placement Notice for any reason in its sole discretion, (v) the Company issues a subsequent Placement Notice and explicitly indicates that its parameters supersede those contained in the earlier dated Placement Notice or (vi) this Agreement has been terminated pursuant to the provisions of Section 11. The amount of any discount, commission or other compensation to be paid by the Company to the Agent in connection with the sale of the Placement Shares effected through the Agent shall be calculated in accordance with the

terms set forth in **Schedule 3**. It is expressly acknowledged and agreed that neither the Company nor the Agent will have any obligation whatsoever with respect to a Placement or any Placement Shares unless and until the Company delivers a Placement Notice to the Agent and the Agent does not decline such Placement Notice pursuant to the terms set forth above, and then only upon the terms specified therein and herein. In the event of a conflict between the terms of this Agreement and the terms of a Placement Notice, the terms of the Placement Notice will control with respect to the matters covered thereby.

3. **Sale of Placement Shares by the Agent.** On the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, including Section 5(c), upon the Agent's acceptance of the terms of a Placement Notice as provided in Section 2, and unless the sale of the Placement Shares described therein has been declined, suspended or otherwise terminated in accordance with the terms of this Agreement, the Agent, for the period specified in the Placement Notice, will use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable state and federal laws, rules and regulations and the rules of the Nasdaq Global Select Market ("**Nasdaq**") to sell such Placement Shares up to the number or amount specified in, and otherwise in accordance with the terms of, such Placement Notice. The Agent will provide written confirmation to the Company (including by email correspondence to each of the individuals of the Company set forth on **Schedule 2**, if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply) no later than the opening of the Trading Day (as defined below) immediately following the Trading Day on which it has made sales of Placement Shares hereunder setting forth the number or amount of Placement Shares sold on such Trading Day, the volume-weighted average price of the Placement Shares sold and the Net Proceeds (as defined below) payable to the Company. Unless otherwise specified by the Company in a Placement Notice, the Agent may sell Placement Shares by any method permitted by law deemed to be an "at the market offering" as defined in Rule 415 of the Securities Act, including sales made directly on or through Nasdaq, on or through any other existing trading market for the Common Stock or to or through a market maker. If expressly authorized by the Company (including in a Placement Notice), the Agent may also sell Placement Shares in negotiated transactions. Notwithstanding the provisions of Section 6(tt), except as may be otherwise agreed by the Company and the Agent, the Agent shall not purchase Placement Shares on a principal basis pursuant to this Agreement unless the Company and the Agent enter into a separate written agreement setting forth the terms of such sale. The Company acknowledges and agrees that (i) there can be no assurance that the Agent will be successful in selling Placement Shares, (ii) the Agent will incur no liability or obligation to the Company or any other person or entity if it does not sell Placement Shares for any reason other than a failure by the Agent to use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable state and federal laws, rules and regulations and the rules of Nasdaq to sell such Placement Shares as required under this Agreement and (iii) the Agent shall be under no obligation to purchase Placement Shares on a principal basis pursuant to this Agreement unless the Company and the Agent enter into a separate written agreement setting forth the terms of such sale. For the purposes hereof, "**Trading Day**" means any day on which the Common Stock is purchased and sold on Nasdaq.

4. **Suspension of Sales.**

(a) The Company or the Agent may, upon notice to the other party in writing (including by email correspondence to each of the individuals of the other party set forth on **Schedule 2**, if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply) or by telephone (confirmed immediately by email correspondence to each of the individuals of the other party set forth on **Schedule 2**), suspend any sale of Placement Shares; *provided, however*, that such suspension shall not affect or impair either party's obligations with respect to any Placement Shares sold hereunder prior to the receipt of such notice. Each of the parties agrees that no such notice under this Section 4 shall be effective against the other party unless notice is sent by one of the individuals named on **Schedule 2** hereto to the other party in writing (including by email correspondence to each of the individuals of the other party set forth on **Schedule 2**, if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply).

(b) Notwithstanding any other provision of this Agreement, during any period in which the Company is, or could be deemed to be, in possession of material non-public information, the Company and the Agent agree that (i) no sale of Placement Shares will take place, (ii) the Company shall not request the sale of any Placement Shares and shall cancel any effective Placement Notices instructing the Agent to make any sales and (iii) the Agent shall not be obligated to sell or offer to sell any Placement Shares.

5. Settlement and Delivery of the Placement Shares.

(a) Settlement of Placement Shares. Unless otherwise specified in the applicable Placement Notice, settlement for sales of Placement Shares will occur on the second Trading Day (or such earlier day as is industry practice or as is required for regular-way trading) following the date on which such sales are made (each, a "**Settlement Date**"). The amount of proceeds to be delivered to the Company on a Settlement Date against receipt of the Placement Shares sold (the "**Net Proceeds**") will be equal to the aggregate gross sales price received by the Agent at which such Placement Shares were sold, after deduction of (i) the Agent's commission, discount or other compensation for such sales payable by the Company pursuant to Section 2 hereof, (ii) any other amounts due and payable by the Company to the Agent hereunder pursuant to Section 7(g) hereof and (iii) any transaction fees imposed by any governmental or self-regulatory organization in respect of such sales.

(b) Delivery of Placement Shares. On or before each Settlement Date, the Company will issue the Placement Shares being sold on such date and will, or will cause its transfer agent to, electronically transfer such Placement Shares by crediting the Agent's or its designee's account (provided the Agent shall have given the Company written notice of such designee prior to the Settlement Date) at The Depository Trust Company through its Deposit and Withdrawal at Custodian System ("**DWAC**") or by such other means of delivery as may be mutually agreed upon by the parties hereto, which in all cases shall be duly authorized, freely tradeable, transferable, registered shares of Common Stock in good deliverable form. On each Settlement Date, the Agent will deliver the related Net Proceeds in same day funds to an account designated by the Company on or prior to the Settlement Date. The Agent shall be responsible for providing DWAC instructions or other instructions for delivery by other means with regard to the transfer of the Placement Shares being sold. In addition to and in no way limiting the rights and obligations set forth in Section 9(a) hereto, the Company agrees that if the Company or its transfer agent (if applicable), defaults in its obligation to deliver duly authorized, freely tradeable, transferable, registered Placement Shares in good deliverable form by 2:30 P.M., New York City time, on a Settlement Date (other than as a result of a failure by the Agent to provide instructions for delivery), the Company will (i) take all necessary action to cause the full amount of any Net Proceeds that were delivered to the Company's account with respect to such settlement, together with any costs incurred by the Agent and/or its clearing firm in connection with recovering such Net Proceeds, to be immediately returned to the Agent or its clearing firm no later than 5:00 P.M., New York City time, on such Settlement Date, by wire transfer of immediately available funds to an account designated by the Agent or its clearing firm, (ii) indemnify and hold the Agent and its clearing firm harmless against any loss, claim, damage, or expense (including reasonable legal fees and expenses), as incurred, arising out of or in connection with such default by the Company or its transfer agent (if applicable) and (iii) pay to the Agent any commission, discount or other compensation to which it would otherwise have been entitled absent such default. Certificates for the Placement Shares, if any, shall be in such denominations and registered in such names as the Agent may request in writing one Business Day (as defined below) before the applicable Settlement Date. Certificates for the Placement Shares, if any, will be made available by the Company for examination and packaging by the Agent in New York City not later than 12:00 P.M., New York City time, on the Business Day prior to the applicable Settlement Date.

(c) **Limitations on Offering Size.** Under no circumstances shall the Company cause or request the offer or sale of any Placement Shares if, after giving effect to the sale of such Placement Shares, the aggregate number or gross sales proceeds of Placement Shares sold pursuant to this Agreement would exceed the lesser of: (i) the number or dollar amount of shares of Common Stock registered pursuant to, and available for offer and sale under, the Registration Statement pursuant to which the offering of Placement Shares is being made, (ii) the number of authorized but unissued shares of Common Stock of the Company (less shares of Common Stock issuable upon exercise, conversion or exchange of any outstanding securities of the Company or otherwise reserved from the Company's authorized capital stock), (iii) the number or dollar amount of shares of Common Stock permitted to be offered and sold by the Company under Form S-3 (including General Instruction I.B.6. thereof, if such instruction is applicable), (iv) the number or dollar amount of shares of Common Stock that the Company's board of directors or a duly authorized committee thereof is authorized to issue and sell from time to time, and notified to the Agent in writing, or (v) the dollar amount of shares of Common Stock for which the Company has filed the Prospectus Supplement. Under no circumstances shall the Company cause or request the offer or sale of any Placement Shares pursuant to this Agreement at a price lower than the minimum price authorized from time to time by the Company's board of directors or a duly authorized committee thereof, and notified to the Agent in writing. Notwithstanding anything to the contrary contained herein, the parties hereto acknowledge and agree that compliance with the limitations set forth in this Section 5(c) on the number or dollar amount of Placement Shares that may be issued and sold under this Agreement from time to time shall be the sole responsibility of the Company, and that the Agent shall have no obligation in connection with such compliance.

6. **Representations and Warranties of the Company.** The Company represents and warrants to, and agrees with, the Agent that as of the date of this Agreement (except for those representations, warranties and agreements that speak solely as of a specified date or time, in which case as of such date or time), and as of (i) each Representation Date (as defined in Section 7(m)) for which no waiver is in effect, (ii) each date on which a Placement Notice is given, (iii) the date and time of each sale of any Placement Shares pursuant to this Agreement and (iv) each Settlement Date (each such time or date referred to in clauses (i) through (iv)), an "**Applicable Time**":

(a) The Company and the transactions contemplated by this Agreement meet the requirements for and comply with the conditions for the use of Form S-3 (including General Instructions I.A and I.B.1.) under the Securities Act. The Registration Statement will be filed with the Commission and will be declared effective by the Commission under the Securities Act prior to the issuance of any Placement Notices by the Company. At the time the Registration Statement will become effective, the Company will meet the applicable requirements for use of Form S-3 (including General Instructions I.A and I.B.1.) under the Securities Act. The Registration Statement meets, and the offering and sale of Placement Shares as contemplated hereby comply with, the requirements of Rule 415(a)(1)(x) under the Securities Act. The Agent is named as the agent engaged by the Company in the section entitled "Plan of Distribution" in the Prospectus Supplement. The Company has not received, and has no notice from the Commission of, any notice pursuant to Rule 401(g)(1) under the Securities Act objecting to the use of the shelf registration statement form. No stop order of the Commission preventing or suspending the use of the base prospectus, the Prospectus Supplement or the Prospectus, or the effectiveness of the Registration Statement, has been issued, and no proceedings for such purpose are pending before or, to the knowledge of the Company, threatened by the Commission. At the time of the initial filing of the Registration Statement, the Company will pay the required Commission filing fees relating to the securities covered by the Registration Statement, including the Placement Shares that may be sold pursuant to this Agreement, in accordance with Rule 457(o) under the Securities Act. Copies of the Registration Statement, the Prospectus, any such amendments or supplements to any of the foregoing and all Incorporated Documents that were filed with the Commission on or prior to the date of this Agreement have been delivered, or are available through EDGAR, to the Agent and its counsel.

(b) Each of the Registration Statement and any post-effective amendment thereto, at the time it became or becomes effective, at each deemed effective date with respect to the Agent pursuant to Rule 430B(f)(2) under the Securities Act and as of each Applicable Time, complied, complies and will comply in all material respects with the requirements of the Securities Act and did not, does not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, except that the representations and warranties set forth in this sentence do not apply to Agent's Information (as defined below). The Prospectus and any amendment or supplement thereto, when so filed with the Commission under Rule 424(b) under the Securities Act, complied, complies and as of each Applicable Time will comply in all material respects with the requirements of the Securities Act, and each Prospectus Supplement, Prospectus or issuer free writing prospectus (or any amendments or supplements to any of the foregoing) furnished to the Agent for use in connection with the offering of the Placement Shares was identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T. Neither the Prospectus nor any amendment or supplement thereto, as of its date and as of each Applicable Time, included, includes or will include an untrue statement of a material fact or omitted, omits or will omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading, except that the representations and warranties set forth in this sentence do not apply to Agent's Information. Each Incorporated Document heretofore filed, when it was filed (or, if any amendment with respect to any such document was filed, when such amendment was filed), conformed in all material respects with the requirements of the Exchange Act and were filed on a timely basis with the Commission, and any further Incorporated Documents so filed and incorporated after the date of this Agreement will be filed on a timely basis and, when so filed, will conform in all material respects with the requirements of the Exchange Act; no such Incorporated Document when it was filed (or, if an amendment with respect to any such document was filed, when such amendment was filed), contained an untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; and no such Incorporated Document, when it is filed, will contain an untrue statement of a material fact or will omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading.

(c) (i) At the time of filing the Registration Statement and (ii) at the time of the execution of this Agreement (with such date being used as the determination date for purposes of this clause (ii)), the Company will not be and was not an "ineligible issuer" (as defined in Rule 405), without taking account of any determination by the Commission pursuant to Rule 405 that it is not necessary that the Company be considered an ineligible issuer.

(d) The Company is an "emerging growth company," as defined in Section 2(a) of the Securities Act (an "**Emerging Growth Company**").

(e) Each issuer free writing prospectus, as of its issue date and as of each Applicable Time, did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement or the Prospectus, including any Incorporated Document deemed to be a part thereof that has not been superseded or modified. Each issuer free writing prospectus that the Company has filed, or is required to file, pursuant to Rule 433 or that was prepared by or on behalf of or used by the Company complies or will comply in all material respects with the requirements of the Securities Act.

(f) The Company has not distributed and, prior to the later to occur of each Settlement Date and completion of the Agent's distribution of the Placement Shares under this Agreement, will not distribute any offering material in connection with the offering and sale of the Placement Shares other than the Registration Statement, the Prospectus or any Permitted Free Writing Prospectus (as defined below).

(g) The interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement and the Prospectus fairly presents the information called for in all material respects and has been prepared in accordance with the Commission's rules and guidelines applicable thereto.

(h) The Company is subject to and in compliance in all material respects with the reporting requirements of Section 13 or Section 15(d) of the Exchange Act. The Common Stock is registered pursuant to Section 12(b) of the Exchange Act and is listed on Nasdaq, and the Company has taken no action designed to, or reasonably likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act or delisting the Common Stock from Nasdaq, nor has the Company received any notification that the Commission or Nasdaq is contemplating terminating such registration or listing. The Company is in compliance with the current listing standards of Nasdaq. The Company has filed a Notification of Listing of Additional Shares with Nasdaq with respect to the Placement Shares.

(i) No person (as such term is defined in Rule 1-02 of Regulation S-X promulgated under the Securities Act) has the right to act as an underwriter or as a financial advisor to the Company in connection with the offer and sale of the Placement Shares hereunder, whether as a result of the filing or effectiveness of the Registration Statement or the sale of the Placement Shares as contemplated hereby or otherwise. Except for the Agent, there is no broker, finder or other party that is entitled to receive from the Company any brokerage or finder's fee or other fee or commission as a result of any transactions contemplated by this Agreement.

(j) The Company has been duly incorporated, is validly existing as a corporation in good standing under the laws of the State of Delaware, has the corporate power and authority to own or lease its property and to conduct its business as described in each of the Registration Statement, and the Prospectus and is duly qualified to transact business and is in good standing in each jurisdiction in which the conduct of its business or its ownership or leasing of property requires such qualification, except to the extent that the failure to be so qualified or be in good standing would not, individually or in the aggregate, have a material adverse effect on the condition (financial or otherwise), earnings, results of operations, business, properties, operations, assets, liabilities or prospects of the Company, whether or not arising from transactions in the ordinary course of business (a "**Material Adverse Effect**").

(k) The Company has no subsidiaries as defined under the Securities Act.

(l) The Company has the authorized and outstanding capitalization as set forth in the Company's quarterly report on Form 10-Q for the most recent fiscal quarter, as of the dates referred to therein (subject, in each case, to the issuance of Placement Shares under this Agreement, the issuance of shares of Common Stock upon exercise of share options and warrants disclosed as outstanding as of the date hereof in the Registration Statement and the Prospectus and the grant of options under existing share option plans described in the Registration Statement and the Prospectus). The Common Stock conforms in all material respects to the description thereof contained in the Registration Statement and the Prospectus, including under the heading "Description of Capital Stock." All of the issued and outstanding share capital or other equity or ownership interest of the Company (including the Common Stock) has been duly authorized and validly issued and is fully paid and nonassessable, has been issued in

compliance with all federal, state and local securities laws and is free and clear of any security interest, mortgage, pledge, lien, encumbrance or adverse claim. None of the outstanding shares of capital stock of the Company were issued in violation of any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase securities of the Company. There are no authorized or outstanding options, warrants, preemptive rights, rights of first refusal or other rights to purchase or subscribe for, or equity or debt securities convertible into or exchangeable or exercisable for, any share capital of the Company or to which the Company is a party or by which it may be bound. The descriptions of the Company's equity incentive plan, stock option plans and other stock plans or arrangements described in the Prospectus and in effect as of the date hereof (collectively, the "**Stock Plans**") and the options or other rights granted thereunder, set forth in the Registration Statement and the Prospectus accurately and fairly present the information required to be shown with respect to such Stock Plans and the options or other rights granted thereunder.

(m) The Placement Shares have been duly authorized for issuance and sale pursuant to this Agreement and, when issued and delivered by the Company against payment therefor pursuant to this Agreement, will be validly issued, fully paid and nonassessable and will conform in all material respects to the description thereof contained in the Prospectus. The issuance and sale of the Placement Shares as contemplated hereby shall not be subject to any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase the Placement Shares. When issued and delivered by the Company against payment therefor pursuant to this Agreement, the purchasers of the Placement Shares issued and sold hereunder will acquire good, marketable and valid title to such Placement Shares, free and clear of all pledges, liens, security interests, charges, claims or encumbrances. The issuance and sale of the Placement Shares as contemplated hereby will not cause any holder of any share capital, securities convertible into or exchangeable or exercisable for share capital or options, warrants or other rights to purchase share capital or any other securities of the Company to have any right to acquire any preferred shares of the Company. There are no restrictions upon the voting or transfer of the Common Stock under the Company's amended and restated certificate of incorporation or amended and restated bylaws or any agreement or other instrument to which the Company is a party or otherwise filed as an exhibit to the Registration Statement.

(n) The statements set forth or incorporated by reference in the Prospectus, insofar as they purport to constitute summaries of the terms of the contracts, agreements or other documents described and filed, constitute accurate summaries of the terms thereof in all material respects. The statements set forth or incorporated by reference in the Prospectus under the headings "Risk Factors," "Business—Intellectual Property," "Business—Government Regulation," "Legal Proceedings," and "Description of Capital Stock," insofar as such statements summarize legal matters, agreements, documents or proceedings discussed therein, are accurate and fair summaries of such legal matters, agreements, documents or proceedings. The Company has not sent or received any communication regarding termination of, or intent not to renew or render performance under, any of the contracts or agreements referred to or described in the Prospectus or any free writing prospectus, or referred to or described in, or filed as an exhibit to, the Registration Statement, or any Incorporated Document, and no such termination or non-renewal has been threatened by the Company or, to the Company's knowledge, any other party to any such contract or agreement, which threat of termination or non-renewal has not been rescinded as of the date hereof.

(o) This Agreement has been duly and validly authorized, executed and delivered by the Company and constitutes a valid and legally binding obligation of the Company, enforceable against the Company in accordance with its terms, except as enforceability, including rights of indemnification, may be limited by bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and other similar laws relating to or affecting creditors' rights generally and by general principles of equity. This Agreement conforms in all material respects to the descriptions thereof in the Registration Statement and the Prospectus.

(p) The Company is not and, after giving effect to the offering and sale of the Placement Shares and the application of the proceeds thereof as described in the Prospectus, will not be an “investment company” as defined in the Investment Company Act of 1940, as amended.

(q) No consent, approval, license, permit, qualification, authorization or other order or decree of, or registration or filing with, any court or other governmental, taxing or regulatory authority or agency, is required for the Company’s execution, delivery and performance of this Agreement or consummation of the transactions contemplated hereby or by the Registration Statement and the Prospectus (including the issuance and sale of the Placement Shares hereunder), except such as have been already obtained or made or as may be required under the Securities Act, applicable state securities or Blue Sky laws, applicable rules of Nasdaq, or Rule 5110 of the Financial Industry Regulatory Authority, Inc. (“**FINRA**”).

(r) The execution and delivery by the Company of, and the performance by the Company of its obligations under, this Agreement will not contravene (i) any provision of applicable law, (ii) the certificate of incorporation or bylaws of the Company, (iii) any agreement or other instrument binding upon the Company that is material to the Company, or (iv) any judgment, order or decree of any governmental body, agency or court having jurisdiction over the Company, except, in the cases of clauses (i), (iii) and (iv), as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(s) Subsequent to the respective dates as of which information is given in the Registration Statement and the Prospectus: (i) the Company has not incurred any material liability or obligation, direct or contingent, nor entered into any material transaction; (ii) the Company has not purchased any of its outstanding capital stock, other than from employees or other service providers in connection with such person’s termination of service from the Company pursuant to the existing terms of the agreements or Stock Plans or in exercise of the Company’s right of first refusal upon a proposed transfer, nor declared, paid or otherwise made any dividend or distribution of any kind on its capital stock other than ordinary and customary dividends; and (iii) there has not been any material change in the capital stock (other than the exercise or conversion of equity awards, warrants or convertible notes or loans or grants of equity awards or forfeiture of equity awards outstanding as of such respective dates as of which information is given in each of the Registration Statement and the Prospectus, in each case granted pursuant to Stock Plans), short term debt or long term debt of the Company, except in each case as described in each of the Registration Statement and the Prospectus.

(t) There are no persons (as such term is defined in Rule 1-02 of Regulation S-X promulgated under the Securities Act) with registration or other similar rights to have any equity or debt securities of the Company registered for sale under the Registration Statement or included in the offering contemplated by this Agreement, except for such rights as have been duly waived in a writing previously furnished to the Agent.

(u) The financial statements included or incorporated by reference in the Registration Statement and the Prospectus, together with the related schedules and notes thereto, comply as to form in all material respects with the applicable requirements of the Securities Act and the Exchange Act and present fairly in all material respects the financial position of the Company as of the dates shown and its results of operations and cash flows for the periods shown, and such financial statements have been prepared in conformity with generally accepted accounting principles in the United States (“**U.S. GAAP**”) applied on a consistent basis throughout the periods covered thereby except for any normal

year-end adjustments in the Company's quarterly financial statements. The other financial information included in or incorporated by reference in the Registration Statement and the Prospectus has been derived from the accounting records of the Company and presents fairly in all material respects the information shown thereby. The statistical, industry-related and market-related data included or incorporated by reference in each of the Registration Statement and the Prospectus are based on or derived from sources which the Company reasonably and in good faith believes are reliable and accurate and such data is consistent with the sources from which they are derived, in each case in all material respects, and, to the extent required, the Company has obtained the written consent to the use of such data from such sources.

(v) There are no legal or governmental proceedings pending or, to the knowledge of the Company, threatened to which the Company is a party or to which any of the properties of the Company is subject (i) other than proceedings accurately described in all material respects in each of the Registration Statement and the Prospectus and proceedings that would not singly or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company or on the performance by the Company of its obligations under this Agreement or to consummate the transactions contemplated hereby or (ii) that are required to be described in the Registration Statement or the Prospectus and are not so described in all material respects; and there are no statutes, regulations, contracts or other documents that are required to be described in the Registration Statement or the Prospectus or to be filed as exhibits to the Registration Statement that are not described in all material respects or filed as required.

(w) The Company does not own any real property. The Company has good and marketable title to all personal property (excluding intellectual property) owned by it which is material to the business of the Company, in each case free and clear of all liens, encumbrances and defects except such as do not materially affect the value of such property and do not interfere in any material respect with the use made and proposed to be made of such property by the Company; and any real property and buildings held under lease by the Company is held by it under valid, subsisting and, to the knowledge of the Company, enforceable leases with such exceptions as are not material and do not materially interfere with the use made and proposed to be made of such property and buildings by the Company.

(x) The Company is not in violation or default of (i) any provision of its certificate of incorporation or bylaws, (ii) the terms of any indenture, contract, lease, mortgage, deed of trust, note agreement, loan agreement or other agreement, obligation, condition, covenant or instrument to which it is a party or bound or to which its property or assets is subject, or (iii) any statute, law, rule, regulation, judgment, order or decree of any court, regulatory body, administrative agency, governmental body, arbitrator or other authority having jurisdiction over the Company or any of its properties or assets, as applicable, except, in the case of clauses (ii) and (iii) above, for any such default or violation that would not, individually or in the aggregate, have a Material Adverse Effect.

(y) Deloitte & Touche LLP, whose report on the consolidated financial statements of the Company is filed with the Commission as part of the Company's most recent annual report on Form 10-K filed with the Commission and incorporated by reference in the Registration Statement and the Prospectus, is an independent registered public accounting firm with respect to the Company within the meaning of the Securities Act, the Exchange Act and the applicable rules and regulations thereunder adopted by the Commission and the Public Company Accounting Oversight Board (United States).

(z) Reserved.

(aa) The Company has filed all United States federal, state, local and foreign tax returns required to be filed through the date of this agreement or have requested extensions thereof (except where the failure to file would not, singly or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company) and has paid all taxes required to be paid thereon (except for cases in which the failure to file or pay would not, singly or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company, or, except as currently being contested in good faith and by appropriate proceedings and for which reserves required by U.S. GAAP have been created and maintained in the financial statements of the Company), and no tax deficiency has been determined adversely to the Company which, singly or in the aggregate, has had (nor does the Company have any notice or knowledge of any tax deficiency which could reasonably be expected to be determined adversely to the Company and which could reasonably be expected to have) a Material Adverse Effect on the Company.

(bb) No material labor dispute with the employees of the Company exists, or, to the knowledge of the Company, is imminent; and the Company is not aware of any existing, threatened or imminent labor disturbance by the employees of any of its principal suppliers, manufacturers or contractors that could, singly or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company.

(cc) The Company is insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as in the Company's reasonable judgement are prudent and customary in the businesses in which they are engaged; the Company has not been refused any insurance coverage sought or applied for; and the Company has no reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not, singly or in the aggregate, reasonably be expected have a Material Adverse Effect on the Company.

(dd) The Company maintains a system of internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with U.S. GAAP and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Except as described in the Registration Statement and Prospectus, since the end of the Company's most recent audited fiscal year, there has been (i) no material weakness in the Company's internal control over financial reporting (whether or not remediated) and (ii) no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting. The Company maintains disclosure controls and procedures (as defined in Rules 13a-15 and 15d-15 under the Exchange Act), which (i) are designed to ensure that information relating to the Company is made known to the Company's principal executive officer and its principal financial officer by others within those entities, particularly during the periods in which the periodic reports required under the Exchange Act are being prepared; (ii) have been evaluated by management of the Company for effectiveness as of the end of the Company's most recent fiscal quarter; and (iii) are effective in all material respects to perform the functions for which they were established.

(ee) Neither the Company, nor to the knowledge of the Company, any of its directors, officers or controlling persons has taken, directly or indirectly, without giving effect to any actions taken by the Agent, (i) any action designed to or that might constitute or reasonably be expected to cause or result in, under the Exchange Act or otherwise, stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Placement Shares or (ii) any action designed to or that might constitute or reasonably be expected to cause or result in a violation of Regulation M under the Exchange Act.

(ff) (A) The Company (i) is in compliance with any and all applicable foreign, federal, state and local laws and regulations relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants (“**Environmental Laws**”), (ii) has received all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct its respective businesses and (iii) is in compliance with all terms and conditions of any such permit, license or approval, except where such noncompliance with Environmental Laws, failure to receive required permits, licenses or other approvals or failure to comply with the terms and conditions of such permits, licenses or approvals would not, singly or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company; and (B) There are no costs or liabilities associated with Environmental Laws (including, without limitation, any capital or operating expenditures required for clean up, closure of properties or compliance with Environmental Laws or any permit, license or approval, any related constraints on operating activities and any potential liabilities to third parties) which would, singly or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company.

(gg) Except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company, (i) each employee benefit plan, within the meaning of Section 3(3) of the Employee Retirement Income Security Act of 1974, as amended (“**ERISA**”), that is sponsored, maintained, administered or contributed to by the Company has been maintained in compliance with its terms and the requirements of any applicable statutes, orders, rules and regulations, including but not limited to ERISA and the Internal Revenue Code of 1986, as amended (the “**Code**”), and (ii) neither the Company nor any member of its “Controlled Group” (defined as any trade or business, whether or not incorporated, that would be regarded as a single employer with the Company under Section 414 of the Code) (x) has ever sponsored, maintained, contributed to or has had any obligation to contribute to, any employee benefit plan that is subject to Title IV of ERISA or any “multiemployer plan” as defined in Section 3(37) of ERISA or (y) has incurred, or reasonably expects to incur, any liability under Title IV of ERISA.

(hh) The Company is in compliance with, and there is and has been no failure on the part of the Company and, to the Company’s knowledge, any of the Company’s directors or officers, in their capacities as such, to comply with, any provision of the Sarbanes-Oxley Act of 2002 and all rules and regulations promulgated thereunder or implementing the provisions thereof (the “**Sarbanes-Oxley Act**”) and the rules and regulations promulgated in connection therewith, including Section 402 relating to loans.

(ii) (i) None of the Company or any of its subsidiaries or any of its controlled affiliates, or any director, officer, or key employee thereof who is named in the Registration Statement or Prospectus, or, to the Company’s knowledge, any non-controlled affiliates, or any other employee, agent or representative of the Company or any of its subsidiaries or any of its controlled affiliates, has taken or will take any action in furtherance of an offer, payment, promise to pay, or authorization or approval of the payment, giving or receipt of money, property, gifts or anything else of value, directly or indirectly, to any government official (including any officer or employee of a government or government-owned or controlled entity or of a public international organization, or any person acting in an official capacity for or on behalf of any of the foregoing, or any political party or party official or candidate for political office) in order to influence official action, or to any person in violation of any applicable anti-corruption laws; (ii) the Company and each of its subsidiaries, if any, and each of its controlled affiliates, and to the Company’s knowledge, each of its non-controlled affiliates, have conducted their businesses in compliance with applicable anti-corruption laws and have instituted and maintained and will continue to maintain policies and procedures reasonably designed to promote and achieve compliance with such laws and with the representations and warranties contained herein; and (iii) neither the Company nor any of its subsidiaries will use, directly or indirectly, the proceeds of the offering in furtherance of an offer, payment, promise to pay, or authorization of the payment or giving of money, or anything else of value, to any person in violation of any applicable anti-corruption laws.

(jj) The operations of the Company and each of its subsidiaries, if any, are and have been conducted at all times in material compliance with all applicable financial recordkeeping and reporting requirements, including those of the Bank Secrecy Act, as amended by Title III of the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (USA PATRIOT Act), and the applicable anti-money laundering statutes of jurisdictions where the Company and each of its subsidiaries, if any, conduct business, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the “**Anti-Money Laundering Laws**”), and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its subsidiaries with respect to the Anti-Money Laundering Laws is pending or, to the best knowledge of the Company, threatened.

(kk) (i) None of the Company, any of its subsidiaries, or any director, officer, or key employee thereof who is named in the Registration Statement and Prospectus, or, to the Company’s knowledge, any other employee, agent, affiliate or representative of the Company or any of its subsidiaries, is an individual or entity (“**Person**”) that is, or is owned or controlled by one or more Persons that are:

- (a) the subject of any sanctions administered or enforced by the U.S. Department of the Treasury’s Office of Foreign Assets Control, the United Nations Security Council, the European Union, Her Majesty’s Treasury, or other relevant sanctions authority (collectively, “**Sanctions**”), or
- (b) located, organized or resident in a country or territory that is the subject of Sanctions (including, without limitation, the so-called Donetsk People’s Republic, the so-called Luhansk People’s Republic or any other Covered Region of Ukraine identified pursuant to Executive Order 14065, the Crimea region of Ukraine, Cuba, Iran, North Korea and Syria).

(ii) The Company will not, directly or indirectly, use the proceeds of the offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other Person:

- (a) to fund or facilitate any activities or business of or with any Person or in any country or territory that, at the time of such funding or facilitation, is the subject of Sanctions if that activity could reasonably be expected to result in a violation of Sanctions; or
- (b) in any other manner that could reasonably be expected to result in a violation of Sanctions by any Person (including any Person participating in the offering, whether as underwriter, advisor, investor or otherwise).

(iii) For the past five years, the Company and each of its subsidiaries, if any, have not knowingly engaged in, are not now knowingly engaged in, and will not engage in, any dealings or transactions with any Person, or in any country or territory, that at the time of the dealing or transaction is or was the subject of Sanctions.

(ll) Except in each case, as set forth in the Registration Statement or the Prospectus, or as would not, singly or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company: (i) the Company owns or has a valid and enforceable right or license to use, all patents, inventions, copyrights, know how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures), software, domain names, trademarks,

service marks, trade names, logos and any and all other worldwide intellectual property and proprietary rights (including all registrations and applications for, and all goodwill associated with, any of the foregoing) (collectively, "**Intellectual Property Rights**") used in, or reasonably necessary or expected to be material to the conduct of, its business as currently conducted and as proposed to be conducted, in each case as such business is described in the Registration Statement and the Prospectus; (ii) to the Company's knowledge, the Intellectual Property Rights owned by and exclusively licensed to the Company, are valid, subsisting and enforceable; (iii) no Intellectual Property Rights owned by the Company and, to the Company's knowledge, no Intellectual Property Rights licensed to the Company, have been held invalid or unenforceable by a final decision of a court or other governmental agency of competent jurisdiction which is unappealable or unappealed within the time allowed for appeal; (iv) all Intellectual Property Rights owned by the Company are owned free and clear of all liens and encumbrances, except such non-exclusive rights and licenses as are granted to third parties (including CROs and other vendors) in the ordinary course of business; (v) to the Company's knowledge, there are no defects in any of the patents or patent applications within the Intellectual Property Rights owned by and exclusively licensed to the Company; (vi) there is no pending, or to the Company's knowledge, threatened (in writing) action, suit, proceeding or claim by others, and the Company has not received any written notice, (A) challenging the Company's rights in or to any Intellectual Property Rights, (B) challenging the validity, scope or enforceability of any Intellectual Property Rights owned by or exclusively licensed to the Company, or (C) alleging any infringement, misappropriation or other violation by the Company of any Intellectual Property Rights of others, and in each case, the Company is unaware of any facts which the Company reasonably believes would form a reasonable basis for any such action, suit, proceeding or claim; (vii) to the Company's knowledge, there is no infringement, misappropriation or other violation, and there has been no infringement, misappropriation or other violation, by third parties of any of the Company's Intellectual Property Rights, whether owned by, or licensed to, the Company; (viii) to the Company's knowledge, the Company and the conduct of its business does not infringe, misappropriate or otherwise violate, and has not infringed, misappropriated or otherwise violated, any Intellectual Property Rights of others; (ix) the Company has taken reasonable steps necessary to secure its interests in the Intellectual Property Rights by requiring the execution of appropriate confidentiality and invention assignment agreements from the Company's current and former employees or contractors engaged in or formerly engaged in the development of Intellectual Property Rights for or on behalf of the Company, and to the Company's knowledge no such agreement has been breached or violated; and (x) the Company uses, and has used, commercially reasonable efforts in accordance with customary industry practice to appropriately maintain the confidentiality of all confidential information of the Company and all information intended by the Company to be maintained as a trade secret and no such information has been disclosed other than pursuant to written confidentiality agreements.

(mm) (i) Except as would not, singly or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company, and except as disclosed in the Registration Statement and the Prospectus, the Company has complied and is presently in compliance with all of its internal and external privacy policies, its privacy- and data protection-related contractual obligations, applicable laws, binding industry standards, statutes, binding rules, regulations, judgments and orders of any court or arbitrator or other governmental or regulatory authority, and any other legal obligations, in each case, relating to the collection, use, transfer, import, export, storage, protection, security, disposal, disclosure and other processing by or on behalf of the Company of personal, personally identifiable, household (in the case of household data, to the extent "Personal Information" under the California Consumer Privacy Act), sensitive or regulated information or data ("**Data Security Obligations**", and such information and data, "**Data**"); (ii) the Company has not received any written notification of or written complaint regarding, and is unaware of any other facts that the Company reasonably believes would indicate, its non-compliance with any Data Security Obligation; and (iii) there is no action, suit, proceeding or claim by or before any court or governmental agency, authority or body pending or, to the Company's knowledge, threatened in writing against the Company alleging non-compliance with any Data Security Obligation.

(nn) Except as would not, singly or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company (i) the Company has established, implemented and maintain technical and organizational measures reasonably designed to protect its information technology systems, assets, equipment, computers, systems, websites, networks, hardware, and associated software, applications and databases used in connection with the operation of the Company's business (collectively, "**IT Systems**") and Data; (ii) the Company has used reasonable efforts to implement, establish and maintain, and have established, implemented and maintained, and complied with, reasonable information technology, information security, cybersecurity and data protection controls, policies and procedures designed to maintain and protect the integrity, redundancy and security of all IT Systems and Data and to protect against and prevent security breaches and incidents resulting in destruction, loss, unauthorized distribution, use, access, disablement, misappropriation or modification, outages, or other compromise or misuse of any IT Systems or Data ("**Breach**"); (iii) to the knowledge of the Company, there has been no such Breach, and the Company has not been notified in writing of and has no knowledge of any event or condition that would reasonably be expected to result in, any such Breach; and (iv) the IT Systems are adequate in capacity and operation for, and operate and perform in all material respects as required in connection with the operation of the business of the Company and, to the knowledge of the Company, are free and clear of all bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants or malicious code.

(oo) The Company has operated at all times and is currently in compliance in all material respects with all applicable statutes, rules, regulations and policies of the U.S. Food and Drug Administration (the "**FDA**") and comparable U.S. and foreign regulatory authorities to which they are subject, including the European Medicines Agency (collectively, the "**Regulatory Authorities**"), including, without limitation:

- (i) the Federal Food, Drug, and Cosmetic Act and the regulations promulgated thereunder;
- (ii) all applicable federal, state, local and foreign health care laws, including, without limitation, the U.S. Anti-Kickback Statute (42 U.S.C. Section 1320a-7b(b)), the Civil Monetary Penalties Law (42 U.S.C. § 1320a-7a), the U.S. Civil False Claims Act (31 U.S.C. Section 3729 et seq.), all applicable federal, state, local and all foreign criminal laws relating to health care fraud and abuse, including but not limited to the U.S. False Statements Law (42 U.S.C. Section 1320a-7b(a)), 18 U.S.C. Sections 286 and 287, and the health care fraud criminal provisions under the U.S. Health Insurance Portability and Accountability Act of 1996 (42 U.S.C. Section 1320d et seq.), the Health Information Technology for Economic and Clinical Health Act (42 U.S.C. Section 17921 et seq.), the exclusion law (42 U.S.C. Section 1320a-7), the statutes, regulations and directives of applicable government funded or sponsored healthcare programs, and the regulations promulgated pursuant to such statutes;
- (iii) the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010, the regulations promulgated thereunder;
- (iv) the U.S. Controlled Substances Act (21 U.S.C. Section 801 et seq.);
- (v) current Good Manufacturing Practices and Good Laboratory Practices;
- (vi) licensure, quality, safety and accreditation requirements under applicable federal, state, local or foreign laws or regulatory bodies; and
- (vii) all other local, state, federal, national, supranational and foreign laws, relating to the regulation of the Company and the ownership, testing, development, manufacture, packaging, processing, use, distribution, marketing, labeling, promotion, sale, offer for sale, storage, import, export or disposal of any product under development, manufactured or distributed by the Company; (clauses (i) through (vii), collectively, "**Health Care Laws**").

(pp) (i) the studies, tests and preclinical and clinical trials conducted by or on behalf of or sponsored by the Company or in which the Company has participated, were, and if still pending are, being conducted in all material respects in accordance with legally required standard medical and experimental protocols, procedures and controls pursuant to accepted professional scientific research standards and procedures and all applicable Health Care Laws; (ii) the descriptions of the results of such studies, tests and trials contained in the Registration Statement or the Prospectus are accurate and complete in all material respects and fairly present the data derived from such trials; (iii) the Company has no knowledge of any other studies not described in the Registration Statement and the Prospectus, the results of which the Company reasonably believes call into question the results described or referred to in the Registration Statement and the Prospectus, except where such question would not, singly or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company; (iv) the Company has provided the Agent with all substantive written notices, correspondence and communications provided to the Company from the Regulatory Authorities; and (v) the Company has not received any written notices, correspondence or other communications from any Regulatory Authority or any other governmental entity requiring or threatening the termination, material modification or suspension of any studies or trials that are described in the Registration Statement and the Prospectus, or the results of which are referred to in the Registration Statement and the Prospectus, and, to the Company's knowledge, there are no reasonable grounds for the same.

(qq) (i) Except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company, the Company has filed, obtained, maintained or submitted all reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Health Care Laws, and, all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were timely, complete, accurate and not misleading on the date filed (or were corrected or supplemented by a subsequent submission); (ii) the Company has not received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any court or arbitrator or Regulatory Authority, other governmental entity or third party alleging that any Company or product operation or activity is in violation of any Health Care Laws, including, without limitation, any FDA Form 483, notice of adverse finding, warning letter, untitled letter or other correspondence or notice from the FDA or any other Regulatory Authority or governmental entity, nor, to the Company's knowledge, is any such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action threatened; (iii) the Company is not a party to any corporate integrity agreements, monitoring agreements, consent decrees, settlement orders, or similar agreements with or imposed by any Regulatory Authority or other governmental entity; and (iv) neither the Company nor any of its employees, officers or directors has been excluded, suspended or debarred from participation in any U.S. federal health care program or human clinical research or, to the knowledge of the Company, is subject to an inquiry, investigation, proceeding or other similar action by a Regulatory Authority or other governmental entity that could reasonably be expected to result in debarment, suspension, or exclusion.

(rr) The Company has not failed to file with the Regulatory Authorities any required filing, declaration, listing, registration, report or submission with respect to the Company's product candidates that are described or referred to in the Registration Statement and Prospectus; all such filings, declarations, listings, registrations, reports or submissions were in material compliance with applicable laws when filed, or amended or supplemented in material compliance with applicable laws; and no material deficiencies regarding compliance with applicable law have been asserted by any applicable regulatory authority with respect to any such filings, declarations, listings, registrations, reports or submissions, or amendments or supplements thereof.

(ss) The Company possesses all certificates, authorizations and permits issued by the appropriate federal, state or foreign regulatory authorities necessary to conduct its business as currently conducted, including, without limitation, from the Regulatory Authorities, and the Company has not received any notice of proceedings relating to the revocation or material modification of any such certificate, authorization or permit which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would reasonably be expected have a Material Adverse Effect on the Company, except as described in the Registration Statement and Prospectus.

(tt) The Company acknowledges and agrees that the Agent has informed the Company that the Agent may, to the extent permitted under the Securities Act and the Exchange Act, purchase and sell shares of Common Stock for its own account while this Agreement is in effect; *provided*, that (i) no such purchase or sales shall take place while a Placement Notice is in effect (except to the extent the Agent may engage in sales of Placement Shares purchased or deemed purchased from the Company as a “riskless principal” or in a similar capacity) and (ii) the Company shall not be deemed to have authorized or consented to any such purchases or sales by the Agent, except as may be otherwise agreed by the Company and the Agent.

(uu) The Company is not a party to any agreement with an agent or underwriter for any other “at the market” or continuous equity transaction.

(vv) The Company is not required to register as a “broker” or “dealer” in accordance with the provisions of the Exchange Act and does not, directly or indirectly through one or more intermediaries, control or have any other association with (within the meaning of Article I of the By-laws of FINRA) any member firm of FINRA. No relationship, direct or indirect, exists between or among the Company, on the one hand, and the directors, officers or shareholders of the Company, on the other hand, which is required by the rules of FINRA to be described in the Registration Statement and the Prospectus, which is not so described. All of the information (including, but not limited to, information regarding affiliations, security ownership and trading activity) provided to the Agent or its counsel by the Company, its officers and directors and the holders of any securities (debt or equity) or warrants, options or rights to acquire any securities of the Company in connection with the filing to be made and other supplemental information to be provided to FINRA pursuant to FINRA Rule 5110 in connection with the transactions contemplated by this Agreement is true, complete and correct.

(ww) As of the close of trading on Nasdaq on June 30, 2022, the aggregate market value of the outstanding voting and non-voting common equity (as defined in Rule 405) of the Company held by persons other than affiliates of the Company (pursuant to Rule 144 of the Securities Act, those that directly, or indirectly through one or more intermediaries, control, or are controlled by, or are under common control with, the Company) (the “**Non-Affiliate Shares**”), was approximately \$176 million (calculated by multiplying (x) the price at which the common equity of the Company was last sold on Nasdaq on June 23, 2022 by (y) the number of Non-Affiliate Shares outstanding on June 30, 2022). The Company is not a shell company (as defined in Rule 405) and has not been a shell company for at least 12 calendar months previously.

(xx) Neither the issuance, sale and delivery of the Placement Shares nor the application of the proceeds thereof by the Company as described in the Registration Statement and the Prospectus will violate Regulation T, U or X of the Board of Governors of the Federal Reserve System or any other regulation of such Board of Governors.

(yy) Each of the independent directors (or independent director nominees, once appointed, if applicable) named in the Registration Statement and Prospectus satisfies the independence standards established by Nasdaq and, with respect to members of the Company’s audit committee, the enhanced independence standards contained in Rule 10A-3(b)(1) promulgated by the Commission under the Exchange Act.

(zz) Except as described in the Registration Statement, the Company has not sold, issued or distributed any shares of Common Stock during the six month period preceding the date hereof, including any sales pursuant to Rule 144A under, or Regulation D or S of, the Securities Act, other than shares issued pursuant to employee benefit plans, qualified stock option plans or other employee compensation plans or pursuant to outstanding options, rights or warrants.

(aaa) The Company has not (i) failed to pay any dividend or sinking fund installment on preferred stock or (ii) defaulted on any installment or payment due on indebtedness for borrowed money or on any rental on one or more long-term leases, which defaults, individually or in the aggregate, could reasonably be expected to result in a Material Adverse Effect.

(bbb) Each financial or operational projection or other “forward-looking statement” (as defined by Section 27A of the Securities Act or Section 21E of the Exchange Act) contained in the Registration Statement or the Prospectus (i) was so included by the Company in good faith and with reasonable basis after due consideration by the Company of the underlying assumptions, estimates and other applicable facts and circumstances and (ii) as required, is accompanied by meaningful cautionary statements identifying those factors that could cause actual results to differ materially from those in such forward-looking statement. No such statement was made with the knowledge of a director or senior manager of the Company that was false or misleading.

(ccc) There are no relationships, direct or indirect, or related party transactions involving the Company or any other person (including any director, officer, stockholder, customer or supplier of the Company) required to be described in the Registration Statement or the Prospectus that have not been described as required. There are no material outstanding loans, advances (except normal advances for business expenses in the ordinary course of business) or guarantees of indebtedness by the Company to or for the benefit of any of the officers or directors of the Company, or any of the family members of any of such persons.

(ddd) The Company is not in or subject to a bankruptcy or insolvency proceeding in any jurisdiction.

Any certificate signed by any officer of the Company and delivered to the Agent or its counsel in connection with the offering of the Placement Shares shall be deemed a representation and warranty by the Company, as to matters covered thereby, to the Agent.

7. Covenants of the Company. The Company covenants and agrees with the Agent that:

(a) Registration Statement Amendments. After the date of this Agreement and during any period in which the Prospectus relating to any Placement Shares is required to be delivered by the Agent under the Securities Act (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act or a similar rule); (i) the Company will notify the Agent promptly of the time when any subsequent amendment to the Registration Statement, other than Incorporated Documents, has been filed with the Commission and/or has become effective or any subsequent supplement to the Prospectus, other than Incorporated Documents, has been filed and of any request by the Commission for any amendment or supplement to the Registration Statement or Prospectus or for additional information; (ii) the Company will prepare and file with the Commission, promptly upon the Agent’s request, any amendments or supplements to the Registration Statement or Prospectus that, in the Agent’s reasonable opinion, may be necessary or advisable in connection with the distribution of the Placement Shares by the Agent (provided, however, that the failure of the Agent to make such request shall not relieve the Company of any obligation or liability hereunder, or affect the Agent’s right to rely on the representations and warranties made by the Company in this Agreement and provided, further, that

the only remedy the Agent shall have with respect to the failure by the Company to make such filing (but without limiting the Agent's rights under Section 9 hereof) will be to cease making sales under this Agreement until such amendment or supplement is filed); (iii) the Company will not file any amendment or supplement to the Registration Statement or Prospectus, other than Incorporated Documents, relating to the Placement Shares or a security convertible into or exchangeable or exercisable for the Placement Shares unless a copy thereof has been submitted to the Agent within a reasonable period of time before the filing and the Agent has not reasonably objected thereto (provided, however, that the failure of the Agent to make such objection shall not relieve the Company of any obligation or liability hereunder, or affect the Agent's right to rely on the representations and warranties made by the Company in this Agreement and provided, further, that the only remedy the Agent shall have with respect to the Company's making such filing notwithstanding the Agent's objection (but without limiting the Agent's rights under Section 9 hereof) will be to cease making sales under this Agreement) and the Company will furnish to the Agent at the time of filing thereof a copy of any Incorporated Document, except for those documents available via EDGAR; and (iv) the Company will cause each amendment or supplement to the Prospectus, other than Incorporated Documents, to be filed with the Commission as required pursuant to the applicable paragraph of Rule 424(b) of the Securities Act and, in the case of any Incorporated Document, to be filed with the Commission as required pursuant to the Exchange Act, within the time period prescribed.

(b) Notice of Commission Stop Orders. The Company will advise the Agent, promptly after it receives notice or obtains knowledge thereof, of the issuance or threatened issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement, of the suspension of the qualification of the Placement Shares for offering or sale in any jurisdiction or of the initiation or threatening of any proceeding for any such purpose; and it will promptly use its commercially reasonable efforts to prevent the issuance of any stop order or to obtain its withdrawal if such a stop order should be issued. The Company will advise the Agent promptly after it receives any request by the Commission for any amendments to the Registration Statement or any amendment or supplements to the Prospectus or for additional information related to the offering of the Placement Shares or for additional information related to the Registration Statement or the Prospectus.

(c) Delivery of Prospectus; Subsequent Changes. During any period in which the Prospectus relating to the Placement Shares is required to be delivered by the Agent under the Securities Act with respect to the offer and sale of the Placement Shares (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act or a similar rule), the Company will comply with all requirements imposed upon it by the Securities Act, as from time to time in force, and will file on or before their respective due dates (taking into account any extensions available under the Exchange Act) all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Sections 13(a), 13(c), 14, 15(d) or any other provision of or under the Exchange Act. If during such period any event occurs as a result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances then existing, not misleading, or if during such period it is necessary to amend or supplement the Registration Statement or Prospectus to comply with the Securities Act, the Company will promptly notify the Agent to suspend the offering of Placement Shares during such period and the Company will promptly amend or supplement the Registration Statement or Prospectus (at the expense of the Company) so as to correct such statement or omission or effect such compliance. If the Company has omitted any information from the Registration Statement pursuant to Rule 430B under the Securities Act, it will use its reasonable best efforts to comply with the provisions thereof and make all requisite filings with the Commission pursuant to said Rule 430B and to notify the Agent promptly of all such filings if not available on EDGAR.

(d) Listing of Placement Shares. During any period in which the Prospectus relating to the Placement Shares is required to be delivered by the Agent under the Securities Act with respect to the offer and sale of the Placement Shares (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act or a similar rule), the Company will use its commercially reasonable efforts to cause the Placement Shares to be listed on Nasdaq. The Company will timely file with Nasdaq all material documents and notices required by Nasdaq of companies that have or will issue securities that are traded on Nasdaq.

(e) Delivery of Registration Statement and Prospectus. The Company will furnish to the Agent and its counsel (at the expense of the Company) copies of the Registration Statement, the Prospectus (including all Incorporated Documents) and all amendments and supplements to the Registration Statement or Prospectus that are filed with the Commission during any period in which the Prospectus relating to the Placement Shares is required to be delivered under the Securities Act (including all Incorporated Documents filed with the Commission during such period), in each case as soon as reasonably practicable and in such quantities as the Agent may from time to time reasonably request and, at the Agent's request, will also furnish copies of the Prospectus to each exchange or market on which sales of the Placement Shares may be made; *provided, however*, that the Company shall not be required to furnish any document (other than the Prospectus) to the Agent to the extent such document is available on EDGAR.

(f) Earnings Statement. The Company will make generally available to its security holders and to the Agent as soon as practicable, but in any event not later than 15 months after the end of the Company's current fiscal quarter, an earnings statement covering a 12-month period that satisfies the provisions of Section 11(a) of and Rule 158 under the Securities Act, which requirement shall be satisfied by the timely filing with the Commission of the Company's annual report on Form 10-K.

(g) Expenses. The Company, whether or not the transactions contemplated hereunder are consummated or this Agreement is terminated in accordance with the provisions of Section 11 hereunder, will pay all expenses incident to the performance of its obligations hereunder, including expenses relating to (i) the preparation, printing and filing of the Registration Statement and each amendment and supplement thereto, of the Prospectus and of each amendment and supplement thereto and of this Agreement and such other documents as may be required in connection with the offering, purchase, sale, issuance or delivery of the Placement Shares, (ii) the preparation, issuance, sale and delivery of the Placement Shares and any stamp, documentary or similar issue taxes due or payable in connection therewith, (iii) the qualification of the Placement Shares under securities laws in accordance with the provisions of Section 7(w) of this Agreement, including filing fees (provided, however, that any fees or disbursements of counsel for the Agent in connection therewith shall be paid by the Agent except as set forth in clauses (vii) and (viii) below), (iv) the printing and delivery to the Agent and its counsel of copies of the Prospectus and any amendments or supplements thereto, and of this Agreement, (v) the fees and expenses incurred in connection with the listing or qualification of the Placement Shares for trading on Nasdaq, (vi) the filing fees and expenses, if any, owed to the Commission or FINRA and the fees and expenses of any transfer agent or registrar for the Shares, , and (vii) the reasonable fees and disbursements of the Agent's outside legal counsel (A) in an amount not to exceed \$75,000 arising out of executing this Agreement and the Company's delivery of the initial certificate pursuant to Section 7(m), (B) in an amount not to exceed \$25,000 at each 10-K Filing Event (as defined below) on which the Company is required to provide a certificate pursuant to Section 7(m) (in addition to the fees and associated expenses referred to in clause (vii) above and (C) in an amount not to exceed \$15,000 in connection with each Representation Date (as defined below) that is not a 10-K Filing Event, on which the Company is required to provide a certificate pursuant to Section 7(m) (in addition to the fees and associated expenses referred to in clause (vii) above).

(h) Use of Proceeds. The Company will use the Net Proceeds as described in the Prospectus in the section entitled “Use of Proceeds.”

(i) Notice of Other Sales. Without the prior written consent of the Agent, the Company will not, directly or indirectly, offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any shares of Common Stock (other than the Placement Shares offered pursuant to this Agreement) or securities convertible into or exchangeable or exercisable for shares of Common Stock, warrants or any rights to purchase or acquire shares of Common Stock during the period beginning on the third Trading Day immediately prior to the date on which any Placement Notice is delivered to Agent hereunder and ending on the second Trading Day immediately following the final Settlement Date with respect to Placement Shares sold pursuant to such Placement Notice (or, if the Placement Notice has been terminated or suspended prior to the sale of all Placement Shares covered by a Placement Notice, the date of such suspension or termination); and will not directly or indirectly in any other “at the market offering” or continuous equity transaction offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any shares of Common Stock (other than the Placement Shares offered pursuant to this Agreement) or securities convertible into or exchangeable or exercisable for shares of Common Stock, warrants or any rights to purchase or acquire, shares of Common Stock prior to the later of the termination of this Agreement and the thirtieth day immediately following the final Settlement Date with respect to Placement Shares sold pursuant to such Placement Notice; *provided, however*, that such restrictions will not be required in connection with the Company’s issuance or sale of (i) shares of Common Stock, options to purchase shares of Common Stock, other securities under the Company’s existing equity incentive plans, or shares of Common Stock issuable upon the exercise of options or other equity awards or vesting of other securities, pursuant to any employee or director stock option or benefits plan, stock ownership plan, dividend reinvestment plan (but not shares of Common Stock subject to a waiver to exceed plan limits in its dividend reinvestment plan), inducement award under Nasdaq rules or other compensation plan of the Company whether now in effect or hereafter implemented, (ii) shares of Common Stock issuable upon the exchange, conversion or redemption of securities or the exercise or vesting of warrants, options or other rights in effect or outstanding, and disclosed in filings by the Company available on EDGAR or otherwise in writing to the Agent and (iii) shares of Common Stock or securities convertible into or exchangeable for shares of Common Stock as consideration for mergers; acquisitions; other business combinations; joint ventures; collaborations; licensing arrangements; manufacturing, distribution, marketing, supply, sponsored research, technology transfer or development or third party service arrangements; or strategic alliances occurring after the date of this Agreement which are not issued for capital raising purposes. Notwithstanding the foregoing provisions, subject to the Company’s compliance with the notice provisions set forth in this Section 7(i), nothing herein shall be construed to restrict the Company from entering into and/or consummating a committed underwritten equity offering or other similar offering of its registered securities, the Company’s ability to file, or require the Company to provide notice to Agent of the filing of, a registration statement under the Securities Act, or otherwise prohibit the issuance of its equity securities in a private placement transaction, or require that the Company provide notice of, or obtain prior written consent, to do any of the foregoing.

(j) Change of Circumstances. The Company will, at any time during a fiscal quarter in which the Company intends to tender a Placement Notice or sell Placement Shares, advise the Agent promptly after it shall have received notice or obtained knowledge of any information or fact that would alter or affect in any material respect any opinion, certificate, letter or other document provided or required to be provided to the Agent pursuant to this Agreement.

(k) Due Diligence Cooperation. During the term of this Agreement, the Company will cooperate with any reasonable due diligence review conducted by the Agent, its affiliates agents and counsel from time to time in connection with the transactions contemplated hereby, including providing information and making available documents and senior corporate officers, during regular business hours and at the Company’s principal offices, as the Agent may reasonably request.

(l) **Required Filings Relating to Placement of Placement Shares.** The Company agrees that on or prior to such dates as the Securities Act shall require, the Company will (i) file a prospectus supplement with the Commission under the applicable paragraph of Rule 424(b) under the Securities Act, which prospectus supplement will set forth, within the relevant period, the number or amount of Placement Shares sold through the Agent, the Net Proceeds to the Company and the compensation payable by the Company to the Agent with respect to such Placement Shares, and (ii) deliver such number of copies of each such prospectus supplement to each exchange or market on which such sales were effected as may be required by the rules or regulations of such exchange or market; *provided*, that, unless a prospectus supplement containing such information is required to be filed under the Securities Act, the requirement of this Section 7(l) may be satisfied by Company's inclusion in the Company's Form 10-K or Form 10-Q, as applicable, of the number or amount of Placement Shares sold through the Agent, the Net Proceeds to the Company and the compensation payable by the Company to the Agent with respect to such Placement Shares during the relevant period.

(m) **Representation Dates; Certificate.** On or prior to the date on which the Company first delivers a Placement Notice pursuant to this agreement (the "**First Placement Notice Date**") and each time the Company:

(i) amends or supplements the Registration Statement or the Prospectus relating to the Placement Shares (other than a prospectus supplement filed in accordance with Section 7(l) of this Agreement) by means of a post-effective amendment, sticker or supplement but not by means of incorporation of document(s) by reference into the Registration Statement or the Prospectus relating to the Placement Shares;

(ii) files an annual report on Form 10-K under the Exchange Act (including any Form 10-K/A containing amended financial information or a material amendment to the previously filed Form 10-K) (a "**10-K Filing Event**");

(iii) files a quarterly report on Form 10-Q under the Exchange Act; or

(iv) files a current report on Form 8-K containing amended financial information (other than an earnings release that is "furnished" pursuant to Item 2.02 or Item 7.01 of Form 8-K) under the Exchange Act (each date of filing of one or more of the documents referred to in clauses (i) through (iv) shall be a "**Representation Date**"),

the Company shall furnish the Agent (but in the case of clause (iv) above only if (1) a Placement Notice is pending or in effect and (2) the Agent requests such certificate within three Business Days after the filing of such Form 8-K with the Commission) with a certificate, in the form attached hereto as **Exhibit 7(m)** (modified, as necessary, to relate to the Registration Statement and the Prospectus as then amended or supplemented), within two Trading Days of any Representation Date. The requirement to provide a certificate under this Section 7(m) shall be waived for any Representation Date occurring at a time at which no Placement Notice is pending or in effect, which waiver shall continue until the earlier to occur of (1) the date the Company delivers a Placement Notice hereunder (which for such calendar quarter shall be considered a Representation Date) and (2) the next occurring Representation Date. Notwithstanding the foregoing, if the Company subsequently decides to sell Placement Shares following a Representation Date on which the Company relied on the waiver referred to in the previous sentence and did not provide the Agent with a certificate under this Section 7(m), then before the Company delivers a Placement Notice or the Agent sells any Placement Shares pursuant thereto, the Company shall provide the Agent with a certificate, in the form attached hereto as **Exhibit 7(m)**, dated the date of such Placement Notice. Within two Trading Days of each Representation Date, the Company shall have furnished to the Agent such further information, certificates and documents as the Agent may reasonably request.

(n) **Legal Opinions.** On or prior to the First Placement Notice Date and on any date which the Company is obligated to deliver a certificate pursuant to Section 7(m) for which no waiver is applicable, the Company shall cause to be furnished to the Agent the written opinion and negative assurance letter of Wilson Sonsini Goodrich & Rosati, P.C., counsel to the Company, or such other counsel satisfactory to the Agent (“**Company Counsel**”), in form and substance satisfactory to the Agent and its counsel, dated the date that the opinion and negative assurance letter are required to be delivered, modified, as necessary, to relate to the Registration Statement and the Prospectus as then amended or supplemented; *provided, however*, that in lieu of such opinion and negative assurance letter for subsequent Representation Dates, Company Counsel may furnish the Agent with a letter to the effect that the Agent may rely on a prior opinion or negative assurance letter delivered by such counsel under this Section 7(n) to the same extent as if it were dated the date of such letter (except that statements in such prior opinion or negative assurance letter shall be deemed to relate to the Registration Statement and the Prospectus as amended or supplemented at such Representation Date).

(o) **Intellectual Property Opinion.** On or prior to the First Placement Notice Date and on any date on which the Company is obligated to deliver a certificate pursuant to Section 7(m) for which no waiver is applicable, the Company shall cause to be furnished to the Agent the written opinions of (i) Cooley LLP and (ii) Wilson Sonsini Goodrich & Rosati, P.C., each counsel for the Company with respect to intellectual property matters, or such other intellectual property counsel satisfactory to the Agent (“**Intellectual Property Counsel**”), in form and substance satisfactory to the Agent and its counsel, dated the date that the opinion letters are required to be delivered, modified, as necessary, to relate to the Registration Statement and the Prospectus as then amended or supplemented; *provided, however*, that in lieu of such written opinions for subsequent Representation Dates, Intellectual Property Counsel may furnish the Agent with a letter to the effect that the Agent may rely on a prior opinion letter delivered by such counsel under this Section 7(o) to the same extent as if it were dated the date of such opinion letter (except that statements in such prior opinion letter shall be deemed to relate to the Registration Statement and the Prospectus as amended or supplemented at such Representation Date).

(p) **Comfort Letter.** On or prior to the First Placement Notice Date and on any date which the Company is obligated to deliver a certificate pursuant to Section 7(m) for which no waiver is applicable, the Company shall cause its independent registered public accounting firm (and any other independent accountants whose report is included in the Registration Statement or the Prospectus) to furnish the Agent a letter (a “**Comfort Letter**”), dated the date the Comfort Letter is delivered, which shall meet the requirements set forth in this Section 7(p); *provided*, that if requested by the Agent, the Company shall cause a Comfort Letter to be furnished to the Agent within 10 Trading Days of the occurrence of any material transaction or event that necessitates the filing of additional, pro forma, amended or revised financial statements (including any restatement of previously issued financial statements). Each Comfort Letter shall be in form and substance satisfactory to the Agent and each Comfort Letter from the Company’s independent registered public accounting firm shall (i) confirm that they are an independent registered public accounting firm within the meaning of the Securities Act and the PCAOB, (ii) state, as of such date, the conclusions and findings of such firm with respect to the financial information and other matters ordinarily covered by accountants’ “comfort letters” to underwriters in connection with registered public offerings (the first such letter, the “**Initial Comfort Letter**”) and (iii) update the Initial Comfort Letter with any information that would have been included in the Initial Comfort Letter had it been given on such date and modified as necessary to relate to the Registration Statement and the Prospectus, as amended and supplemented to the date of such letter.

(q) Market Activities. The Company will not, directly or indirectly, (i) take any action designed to cause or result in, or that constitutes or might reasonably be expected to constitute, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of shares of Common Stock or (ii) sell, bid for, or purchase shares of Common Stock in violation of Regulation M, or pay anyone any compensation for soliciting purchases of the Placement Shares other than the Agent; *provided, however*, that the Company may bid for and purchase shares of Common Stock in accordance with Rule 10b-18 under the Exchange Act.

(r) Insurance. The Company shall maintain, or cause to be maintained, insurance in such amounts and covering such risks as is reasonable and customary for the business for which it is engaged.

(s) Compliance with Laws. The Company shall maintain, or cause to be maintained, all material environmental certificates, authorizations or permits required by federal, state and local law in order to conduct its business as described in the Prospectus (collectively, “**Permits**”), and the Company shall conduct its business, or cause its business to be conducted, in substantial compliance with such Permits and with applicable Environmental Laws, except where the failure to maintain or be in compliance with such Permits could not reasonably be expected to result in a Material Adverse Effect.

(t) Investment Company Act. The Company will conduct its affairs in such a manner so as to reasonably ensure that neither it nor any of its subsidiaries, if any, will be or become, at any time prior to the termination of this Agreement, an “investment company,” as such term is defined in the Investment Company Act.

(u) Securities Act and Exchange Act. The Company will use its reasonable best efforts to comply with all requirements imposed upon it by the Securities Act and the Exchange Act as from time to time in force, so far as necessary to permit the sales of, or dealings in, the Placement Shares as contemplated by the provisions hereof and the Prospectus.

(v) No Offer to Sell. Other than a free writing prospectus (as defined in Rule 405 under the Securities Act) approved in advance by the Company and the Agent, neither the Agent nor the Company (including its agents and representatives, other than the Agent in its capacity as agent) will make, use, prepare, authorize, approve or refer to any written communication (as defined in Rule 405 under the Securities Act), required to be filed with the Commission, that constitutes an offer to sell or solicitation of an offer to buy Placement Shares hereunder.

(w) Blue Sky and Other Qualifications. The Company will use its commercially reasonable efforts, in cooperation with the Agent, to qualify the Placement Shares for offering and sale, or to obtain an exemption for the Placement Shares to be offered and sold, under the applicable securities laws of such states and other jurisdictions (domestic or foreign) as the Agent may designate and to maintain such qualifications and exemptions in effect for so long as required for the distribution of the Placement Shares (but in no event for less than one year from the date of this Agreement); *provided, however*, that the Company shall not be obligated to file any general consent to service of process or to qualify as a foreign corporation or as a dealer in securities in any jurisdiction in which it is not so qualified or to subject itself to taxation in respect of doing business in any jurisdiction in which it is not otherwise so subject. In each jurisdiction in which the Placement Shares have been so qualified or exempt, the Company will file such statements and reports as may be required by the laws of such jurisdiction to continue such qualification or exemption, as the case may be, in effect for so long as required for the distribution of the Placement Shares (but in no event for less than one year from the date of this Agreement).

(x) Sarbanes-Oxley Act. As applicable, the Company will comply with any provision of the Sarbanes-Oxley Act and the rules and regulations promulgated in connection therewith with which the Company is required to comply.

(y) Emerging Growth Company. The Company will promptly notify the Agent if the company ceases to be an Emerging Growth Company at any time prior to the completion of the Agent's distribution of the Placement Shares pursuant to this Agreement.

(z) Renewal of Registration Statement. If, immediately prior to the third anniversary of the initial effective date of the Registration Statement (the "**Renewal Date**"), any of the Placement Shares remain unsold and this Agreement has not been terminated, the Company will, prior to the Renewal Date, file a new shelf registration statement or, if applicable, an automatic shelf registration statement relating to the Common Stock that may be offered and sold pursuant to this Agreement (which shall include a prospectus reflecting the number or amount of Placement Shares that may be offered and sold pursuant to this Agreement), in a form satisfactory to the Agent and its counsel, and, if such registration statement is not an automatic shelf registration statement, will use its reasonable best efforts to cause such registration statement to be declared effective within 180 days after the Renewal Date. The Company will take all other reasonable actions necessary or appropriate to permit the public offer and sale of the Placement Shares to continue as contemplated in the expired registration statement and this Agreement. From and after the effective date thereof, references herein to the "Registration Statement" shall include such new shelf registration statement or such new automatic shelf registration statement, as the case may be.

(aa) General Instruction I.B.6. of Form S-3. If, from and after the date of this Agreement, the Company is no longer eligible to use Form S-3 (including pursuant to General Instruction I.B.6.) at the time it files with the Commission an annual report on Form 10-K or any post-effective amendment to the Registration Statement, then it shall promptly notify the Agent and, within two Business Days after the date of filing of such annual report on Form 10-K or amendment to the Registration Statement, the Company shall file a new prospectus supplement with the Commission reflecting the number of shares of Common Stock available to be offered and sold by the Company under this Agreement pursuant to General Instruction I.B.6. of Form S-3; *provided, however*, that the Company may delay the filing of any such prospectus supplement, provided that no Placement Notice is in effect or pending during such time. Until such time as the Company shall have corrected such misstatement or omission or effected such compliance, the Company shall not notify the Agent to resume the offering of Placement Shares.

(bb) Tax Indemnity. The Company will indemnify and hold harmless the Agent against any documentary, stamp or similar issue tax, including any interest and penalties, on the issue and sale of the Placement Shares.

(cc) Transfer Agent. The Company has engaged and will maintain, at its sole expense, a transfer agent and registrar for the Common Stock.

8. Conditions to the Agent's Obligations. The obligations of the Agent hereunder with respect to a Placement will be subject to the continuing accuracy and completeness of the representations and warranties made by the Company herein, to the due performance by the Company of its obligations hereunder, to the completion by the Agent of a due diligence review satisfactory to the Agent in its reasonable judgment, and to the continuing satisfaction (or waiver by the Agent in its sole discretion) of the following additional conditions:

(a) Registration Statement Effective. The Registration Statement shall be effective and shall be available for all offers and sales of Placement Shares (i) that have been issued pursuant to all prior Placement Notices and (ii) that will be issued pursuant to any Placement Notice.

(b) Prospectus Supplement. The Company shall have filed with the Commission the Prospectus Supplement pursuant to Rule 424(b) under the Securities Act not later than the Commission's close of business on the second Business Day following the date of this Agreement.

(c) No Material Notices. None of the following events shall have occurred and be continuing: (i) receipt by the Company of any request for additional information from the Commission or any other federal or state governmental authority during the period of effectiveness of the Registration Statement, the response to which would require any post-effective amendments or supplements to the Registration Statement or the Prospectus; (ii) the issuance by the Commission or any other federal or state governmental authority of any stop order suspending the effectiveness of the Registration Statement or the initiation of any proceedings for that purpose; (iii) receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Placement Shares for sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose; or (iv) the occurrence of any event that makes any material statement made in the Registration Statement or the Prospectus or any material Incorporated Document untrue in any material respect or that requires the making of any changes in the Registration Statement, the Prospectus or Incorporated Documents so that, in the case of the Registration Statement, it will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading and, in the case of the Prospectus, so that it will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(d) No Misstatement or Material Omission. The Agent shall not have advised the Company that the Registration Statement or Prospectus, or any amendment or supplement thereto, contains an untrue statement of fact that in the Agent's opinion is material, or omits to state a fact that in the Agent's opinion is material and is required to be stated therein or is necessary to make the statements therein not misleading.

(e) Material Changes. Except as contemplated in the Prospectus, or disclosed in the Company's reports filed with the Commission, there shall not have been any material adverse change, on a consolidated basis, in the authorized capital stock of the Company or any Material Adverse Effect or any development that could reasonably be expected to result in a Material Adverse Effect, or any downgrading in or withdrawal of the rating assigned to any of the Company's securities (other than asset backed securities), if any, by any rating organization or a public announcement by any rating organization that it has under surveillance or review its rating of any of the Company's securities (other than asset backed securities), if any, the effect of which, in the judgment of the Agent (without relieving the Company of any obligation or liability it may otherwise have), is so material as to make it impracticable or inadvisable to proceed with the offering of the Placement Shares on the terms and in the manner contemplated in the Prospectus.

(f) Company Counsel Legal Opinions. The Agent shall have received the opinions and negative assurance letters, as applicable, of Company Counsel and Intellectual Property Counsel required to be delivered pursuant to Section 7(n) and Section 7(o), as applicable, on or before the date on which such delivery of such opinions and negative assurance letters are required pursuant to Section 7(n) and Section 7(o), as applicable.

(g) Agent's Counsel Legal Opinion. The Agent shall have received from Davis Polk & Wardwell LLP, counsel for the Agent, such opinion or opinions, on or before the date on which the delivery of the Company Counsel legal opinion is required pursuant to Section 7(n), with respect to such matters as the Agent may reasonably require, and the Company shall have furnished to such counsel such documents as they may request to enable them to pass upon such matters.

(h) Comfort Letter. The Agent shall have received the Comfort Letter required to be delivered pursuant to Section 7(p) on or before the date on which such delivery of such Comfort Letter is required pursuant to Section 7(p).

(i) Representation Certificate. The Agent shall have received the certificate required to be delivered pursuant to Section 7(m) on or before the date on which delivery of such certificate is required pursuant to Section 7(m).

(j) Secretary's Certificate. On or prior to the First Placement Notice Date, the Agent shall have received a certificate, signed on behalf of the Company by the Secretary of the Company and attested to by an executive officer of the Company, dated as of such date and in form and substance satisfactory to the Agent and its counsel, certifying as to (i) the amended and restated certificate of incorporation of the Company, (ii) the amended and restated bylaws of the Company, (iii) the resolutions of the board of directors of the Company or duly authorized committee thereof authorizing the execution, delivery and performance of this Agreement and the issuance and sale of the Placement Shares and (iv) the incumbency of the officers of the Company duly authorized to execute this Agreement and the other documents contemplated by this Agreement (including each of the officers set forth on **Schedule 2**).

(k) No Suspension. The Common Stock shall be duly listed, and admitted and authorized for trading, subject to official notice of issuance, on Nasdaq. Trading in the Common Stock shall not have been suspended on, and the Common Stock shall not have been delisted from, Nasdaq.

(l) Other Materials. On each date on which the Company is required to deliver a certificate pursuant to Section 7(m), the Company shall have furnished to the Agent such appropriate further information, opinions, certificates, letters and other documents as the Agent may have reasonably requested. All such information, opinions, certificates, letters and other documents shall have been in compliance with the provisions hereof. The Company shall have furnished the Agent with conformed copies of such opinions, certificates, letters and other documents as the Agent may have reasonably requested.

(m) Securities Act Filings Made. All filings with the Commission required by Rule 424(b) or Rule 433 under the Securities Act to have been filed prior to the issuance of any Placement Notice hereunder shall have been made within the applicable time period prescribed for such filing by Rule 424(b) (without reliance on Rule 424(b)(8) of the Securities Act) or Rule 433, as applicable.

(n) Approval for Listing. Either (i) the Placement Shares shall have been approved for listing on Nasdaq, subject only to notice of issuance, or (ii) the Company shall have filed an application for listing of the Placement Shares on Nasdaq at, or prior to, the First Placement Notice Date and Nasdaq shall have reviewed such application and not provided any objections thereto.

(o) FINRA. FINRA shall have raised no objection to the terms of the offering contemplated hereby and the amount of compensation allowable or payable to the Agent as described in the Prospectus.

(p) No Termination Event. There shall not have occurred any event that would permit the Agent to terminate this Agreement pursuant to Section 11(a).

9. Indemnification and Contribution.

(a) Company Indemnification. The Company agrees to indemnify and hold harmless the Agent, its affiliates and their respective partners, members, directors, officers, employees and agents, and each person, if any, who (i) controls the Agent within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act or (ii) is controlled by or is under common control with the Agent, in each case from and against any and all losses, claims, liabilities, expenses and damages (including any and all investigative, legal and other expenses reasonably incurred in connection with, and any and all amounts paid in settlement (in accordance with this Section 9), any action, suit, investigation or proceeding between any of the indemnified parties and any indemnifying parties or between any indemnified party and any third party (including any governmental or self-regulatory authority, or otherwise, or any claim asserted or threatened), as and when incurred, to which the Agent, or any such other person may become subject under the Securities Act, the Exchange Act or other federal or state statutory law or regulation, at common law or otherwise, insofar as such losses, claims, liabilities, expenses or damages arise out of or are based, directly or indirectly, on (x) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement or the Prospectus (or any amendment or supplement to the Registration Statement or the Prospectus) or in any free writing prospectus or in any application or other document executed by or on behalf of the Company or based on written information furnished by or on behalf of the Company filed in any jurisdiction in order to qualify the Common Stock under the securities laws thereof or filed with the Commission, (y) the omission or alleged omission to state in any such document a material fact required to be stated therein or necessary to make the statements therein (solely with respect to the Prospectus, in light of the circumstances under which they were made) not misleading or (z) any breach by any of the indemnifying parties of any of their respective representations, warranties or agreements contained in this Agreement; *provided, however*, that this indemnity agreement shall not apply to the extent that such loss, claim, liability, expense or damage arises from the sale of the Placement Shares pursuant to this Agreement and is caused, directly or indirectly, by an untrue statement or omission, or alleged untrue statement or omission, made in reliance upon and in conformity with the Agent's Information. This indemnity agreement will be in addition to any liability that the Company might otherwise have.

(b) Agent Indemnification. The Agent agrees to indemnify and hold harmless the Company and its directors and each officer of the Company who signed the Registration Statement, and each person, if any, who (i) controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act or (ii) is controlled by or is under common control with the Company against any and all loss, liability, claim, damage and expense described in the indemnity contained in Section 9(a), as incurred, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions, made in the Registration Statement (or any amendments thereto) or the Prospectus (or any amendment or supplement thereto) in reliance upon and in conformity with the Agent's Information.

(c) Procedure. Any party that proposes to assert the right to be indemnified under this Section 9 will, promptly after receipt of notice of commencement of any action against such party in respect of which a claim is to be made against an indemnifying party or parties under this Section 9, notify each such indemnifying party of the commencement of such action, enclosing a copy of all papers served, but the omission so to notify such indemnifying party will not relieve the indemnifying party from (i) any liability that it might have to any indemnified party otherwise than under this Section 9 and (ii) any liability that it may have to any indemnified party under the foregoing provision of this Section 9 unless, and only to the extent that, such omission results in the forfeiture of substantive rights or defenses by the indemnifying party. If any such action is brought against any indemnified party and it notifies the indemnifying party of its commencement, the indemnifying party will be entitled to participate in and, to the extent that it elects by delivering written notice to the indemnified party promptly after receiving notice of the commencement of the action from the indemnified party, jointly with any other indemnifying party similarly notified, to assume the defense of the action, with counsel reasonably

satisfactory to the indemnified party, and after notice from the indemnifying party to the indemnified party of its election to assume the defense, the indemnifying party will not be liable to the indemnified party for any other legal expenses except as provided below and except for the reasonable documented costs of investigation subsequently incurred by the indemnified party in connection with the defense. The indemnified party will have the right to employ its own counsel in any such action, but the fees, expenses and other charges of such counsel will be at the expense of such indemnified party unless (1) the employment of counsel by the indemnified party has been authorized in writing by the indemnifying party, (2) the indemnified party has reasonably concluded (based on advice of counsel) that there may be legal defenses available to it or other indemnified parties that are different from or in addition to those available to the indemnifying party, (3) a conflict or potential conflict exists (based on advice of counsel to the indemnified party) between the indemnified party and the indemnifying party (in which case the indemnifying party will not have the right to direct the defense of such action on behalf of the indemnified party) or (4) the indemnifying party has not in fact employed counsel reasonably satisfactory to the indemnified party to assume the defense of such action within a reasonable time after receiving notice of the commencement of the action, in each of which cases the reasonable fees, disbursements and other charges of counsel will be at the expense of the indemnifying party or parties. It is understood that the indemnifying party or parties shall not, in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the reasonable fees, disbursements and other charges of more than one separate firm (plus local counsel) admitted to practice in such jurisdiction at any one time for all such indemnified party or parties. All such fees, disbursements and other charges will be reimbursed by the indemnifying party promptly after the indemnifying party receives a written invoice relating to such fees, disbursements and other charges in reasonable detail. An indemnifying party will not, in any event, be liable for any settlement of any action or claim effected without its written consent. No indemnifying party shall, without the prior written consent of each indemnified party, settle or compromise or consent to the entry of any judgment in any pending or threatened claim, action or proceeding relating to the matters contemplated by this Section 9 (whether or not any indemnified party is a party thereto), unless such settlement, compromise or consent (1) includes an unconditional release of each indemnified party, in form and substance reasonably satisfactory to such indemnified party, from all liability arising out of such claim, action or proceeding and (2) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party.

(d) Settlement Without Consent if Failure to Reimburse. If an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for reasonable fees and expenses of counsel for which it is entitled to be reimbursed under this Section 9, such indemnifying party agrees that it shall be liable for any settlement of the nature contemplated by Section 9(a) effected without its written consent if (i) such settlement is entered into more than 45 days after receipt by such indemnifying party of the aforesaid request, (ii) such indemnifying party shall have received notice of the terms of such settlement at least 30 days prior to such settlement being entered into and (iii) such indemnifying party shall not have reimbursed such indemnified party in accordance with such request prior to the date of such settlement.

(e) Contribution. In order to provide for just and equitable contribution in circumstances in which the indemnification provided for in the foregoing paragraphs of this Section 9 is applicable in accordance with its terms but for any reason is held to be unavailable or insufficient from the Company or the Agent, the Company and the Agent will contribute to the total losses, claims, liabilities, expenses and damages (including any documented investigative, legal and other expenses reasonably incurred in connection with, and any amount paid in settlement of, any action, suit, investigation or proceeding or any claim asserted, but after deducting any contribution received by the Company from persons other than the Agent, such as persons who control the Company within the meaning of the Securities Act, officers of the Company who signed the Registration Statement and directors of the Company, who also may be liable for contribution) to which the Company and the Agent may be subject in such proportion as shall be

appropriate to reflect the relative benefits received by the Company on the one hand and the Agent on the other hand. The relative benefits received by the Company on the one hand and the Agent on the other hand shall be deemed to be in the same proportion as the total Net Proceeds from the sale of the Placement Shares (before deducting expenses) received by the Company bear to the total compensation received by the Agent from the sale of Placement Shares on behalf of the Company. If, but only if, the allocation provided by the foregoing sentence is not permitted by applicable law, the allocation of contribution shall be made in such proportion as is appropriate to reflect not only the relative benefits referred to in the foregoing sentence but also the relative fault of the Company, on the one hand, and the Agent, on the other hand, with respect to the statements or omission that resulted in such loss, claim, liability, expense or damage, or action, suit, investigation or proceeding in respect thereof, as well as any other relevant equitable considerations with respect to such offering. Such relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company or the Agent, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Agent agree that it would not be just and equitable if contributions pursuant to this Section 9(e) were to be determined by *pro rata* allocation or by any other method of allocation that does not take into account the equitable considerations referred to herein. The amount paid or payable by an indemnified party as a result of the loss, claim, liability, expense or damage, or action, suit, investigation or proceeding in respect thereof, referred to above in this Section 9(e) shall be deemed to include, for the purpose of this Section 9(e), any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action, suit, investigation, proceeding or claim to the extent consistent with this Section 9. Notwithstanding the foregoing provisions of this Section 9(e), the Agent shall not be required to contribute any amount in excess of the commissions received by it under this Agreement and no person found guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. For purposes of this Section 9(e), any person who controls a party to this Agreement within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, any affiliates of the Agent, any partners, members, directors, officers, employees and agents of the Agent and each person that is controlled by or under common control with the Agent will have the same rights to contribution as that party, and each officer of the Company who signed the Registration Statement will have the same rights to contribution as the Company, subject in each case to the provisions hereof. Any party entitled to contribution, promptly after receipt of notice of commencement of any action against such party in respect of which a claim for contribution may be made under this Section 9(e), will notify any such party or parties from whom contribution may be sought, but the omission to so notify will not relieve that party or parties from whom contribution may be sought from any other obligation it or they may have under this Section 9(e) except to the extent that the failure to so notify such other party materially prejudiced the substantive rights or defenses of the party from whom contribution is sought. Except for a settlement entered into pursuant to the last sentence of Section 9(c) hereof or pursuant to Section 9(d) hereof, no party will be liable for contribution with respect to any action or claim settled without its written consent if such consent is required pursuant to Section 9(c) hereof.

10. Representations and Agreements to Survive Delivery. The indemnity and contribution agreements contained in Section 9 of this Agreement and all representations and warranties of the Company herein or in certificates delivered pursuant hereto shall survive, as of their respective dates, regardless of (i) any investigation made by or on behalf of the Agent, any controlling persons, or the Company (or any of their respective officers, directors, employees or controlling persons), (ii) delivery and acceptance of the Placement Shares and payment therefor or (iii) any termination of this Agreement.

11. Termination.

(a) The Agent shall have the right, by giving notice as hereinafter specified, at any time to terminate this Agreement if (i) any Material Adverse Effect, or any development that could reasonably be expected to result in a Material Adverse Effect, has occurred that, in the judgment of the Agent, may materially impair the ability of the Agent to sell the Placement Shares hereunder, (ii) the Company shall have failed, refused or been unable to perform any agreement on its part to be performed hereunder; *provided, however*, in the case of any failure of the Company to deliver (or cause another person to deliver) any certification, opinion or letter required under Section 7(m), Section 7(n), Section 7(o) or Section 7(p), the Agent's right to terminate shall not arise unless such failure to deliver (or cause to be delivered) continues for more than 30 calendar days from the date such delivery was required, (iii) any other condition of the Agent's obligations hereunder is not fulfilled, (iv) any suspension or limitation of trading in the Placement Shares or in securities generally on Nasdaq shall have occurred, (v) a general banking moratorium shall have been declared by any of United States federal or New York authorities, or (vi) there shall have occurred any outbreak or escalation of national or international hostilities or any crisis or calamity, or any change in the United States or international financial markets, or any substantial change or development involving a prospective substantial change in United States or international political, financial or economic conditions that, in the judgment of the Agent, may materially impair the ability of the Agent to sell the Placement Shares hereunder or to enforce contracts for the sale of securities. Any such termination shall be without liability of any party to any other party except that the provisions of Section 7(g), Section 9, Section 10, Section 11(f), Section 16 and Section 17 hereof shall remain in full force and effect notwithstanding such termination. If the Agent elects to terminate this Agreement as provided in this Section 11(a), the Agent shall provide the required notice as specified in Section 12.

(b) The Company shall have the right, by giving 10 days' prior notice as hereinafter specified, to terminate this Agreement in its sole discretion at any time after the date of this Agreement. Any such termination shall be without liability of any party to any other party except that the provisions of Section 7(g), Section 9, Section 10, Section 11(f), Section 16 and Section 17 hereof shall remain in full force and effect notwithstanding such termination.

(c) The Agent shall have the right, by giving 10 days' prior notice as hereinafter specified, to terminate this Agreement in its sole discretion at any time after the date of this Agreement. Any such termination shall be without liability of any party to any other party except that the provisions of Section 7(g), Section 9, Section 10, Section 11(f), Section 16 and Section 17 hereof shall remain in full force and effect notwithstanding such termination.

(d) Unless earlier terminated pursuant to this Section 11, this Agreement shall automatically terminate upon the issuance and sale of all of the Placement Shares through the Agent on the terms and subject to the conditions set forth herein; *provided* that the provisions of Section 7(g), Section 9, Section 10, Section 11(f), Section 16 and Section 17 hereof shall remain in full force and effect notwithstanding such termination.

(e) This Agreement shall remain in full force and effect unless terminated pursuant to Sections 11(a), (b), (c), or (d) above or otherwise by mutual agreement of the parties; *provided, however*, that any such termination by mutual agreement shall in all cases be deemed to provide that Section 7(g), Section 9, Section 10, Section 11(f), Section 16 and Section 17 shall remain in full force and effect.

(f) Any termination of this Agreement shall be effective on the date specified in such notice of termination; *provided, however*, that such termination shall not be effective until the close of business on the date of receipt of such notice by the Agent or the Company, as the case may be. If such termination shall occur prior to the Settlement Date for any sale of Placement Shares, such Placement Shares shall settle in accordance with the provisions of this Agreement. Upon termination of this Agreement, the Company shall not be required to pay to the Agent any discount or commission with respect to any Placement Shares not otherwise sold by the Agent under this Agreement; *provided, however*, that the Company shall remain obligated to reimburse the Agent's expenses pursuant to Section 7(g).

12. **Notices.** All notices or other communications required or permitted to be given by any party to any other party pursuant to the terms of this Agreement shall be in writing, unless otherwise specified in this Agreement, and if sent to the Agent, shall be delivered to:

SVB Securities LLC
1301 Avenue of the Americas, 12th Floor
New York, New York 10019
Attention: Peter M. Fry
E-mail: peter.fry@svbsecurities.com

with a copy (which shall not constitute notice) to:

SVB Securities LLC
1301 Avenue of the Americas, 12th Floor
New York, New York 10019
Attention: Stuart R. Nayman, Esq.
E-mail: stuart.nayman@svbsecurities.com

and if to the Company, shall be delivered to:

Tenaya Therapeutics, Inc.,
171 Oyster Point Boulevard, 5th Floor,
South San Francisco, CA, 94080.

Each party to this Agreement may change such address for notices by sending to the parties to this Agreement written notice of a new address for such purpose. Each such notice or other communication shall be deemed given (i) when delivered personally on or before 4:30 P.M., New York City time, on a Business Day, or, if such day is not a Business Day, on the next succeeding Business Day, (ii) by Electronic Notice as set forth in the next paragraph, (iii) on the next Business Day after timely delivery to a nationally-recognized overnight courier or (iv) on the Business Day actually received if deposited in the U.S. mail (certified or registered mail, return receipt requested, postage prepaid). For purposes of this Agreement, "**Business Day**" shall mean any day on which the Nasdaq and commercial banks in the City of New York are open for business.

An electronic communication ("**Electronic Notice**") shall be deemed written notice for purposes of this Section 12 if sent to the electronic mail address specified by the receiving party in Section 12. Electronic Notice shall be deemed received at the time the party sending Electronic Notice receives actual acknowledgment of receipt from the person whom the notice is sent, other than via auto-reply. Any party receiving Electronic Notice may request and shall be entitled to receive the notice on paper, in a nonelectronic form ("**Nonelectronic Notice**"), which shall be sent to the requesting party within 10 days of receipt of the written request for Nonelectronic Notice.

13. **Successors and Assigns.** This Agreement shall inure to the benefit of and be binding upon the Company and the Agent and their respective successors and the affiliates, controlling persons, officers, directors and other persons referred to in Section 9 hereof. References to any of the parties contained in this Agreement shall be deemed to include the successors and permitted assigns of each such

party. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto, the persons referred to in the preceding sentence and their respective successors and permitted assigns any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement. Neither party may assign its rights or obligations under this Agreement without the prior written consent of the other party; *provided, however*, that the Agent may assign its rights and obligations hereunder to an affiliate of the Agent without obtaining the Company's consent, so long as such affiliate is a registered broker-dealer.

14. Adjustments for Share Splits. The parties acknowledge and agree that all share-related numbers contained in this Agreement shall be adjusted to take into account any share split, share dividend or similar event effected with respect to the Common Stock.

15. Entire Agreement; Amendment; Severability; Waiver. This Agreement (including all schedules (as amended pursuant to this Agreement) and exhibits attached hereto and Placement Notices issued pursuant hereto) constitutes the entire agreement and supersedes all other prior and contemporaneous agreements and undertakings, both written and oral, among the parties hereto with regard to the subject matter hereof. Neither this Agreement nor any term hereof may be amended except pursuant to a written instrument executed by the Company and the Agent; *provided, however*, that **Schedule 2** of this Agreement may be amended by either party from time to time by sending a notice containing a revised **Schedule 2** to the other party in the manner provided in Section 12 and, upon such amendment, all references herein to **Schedule 2** shall automatically be deemed to refer to such amended **Schedule 2**. In the event that any one or more of the provisions contained herein, or the application thereof in any circumstance, is held invalid, illegal or unenforceable as written by a court of competent jurisdiction, then such provision shall be given full force and effect to the fullest possible extent that it is valid, legal and enforceable, and the remainder of the terms and provisions herein shall be construed as if such invalid, illegal or unenforceable term or provision was not contained herein, but only to the extent that giving effect to such provision and the remainder of the terms and provisions hereof shall be in accordance with the intent of the parties as reflected in this Agreement. No implied waiver by a party shall arise in the absence of a waiver in writing signed by such party. No failure or delay in exercising any right, power, or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any right, power, or privilege hereunder.

16. GOVERNING LAW AND TIME; WAIVER OF JURY TRIAL. THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO THE PRINCIPLES OF CONFLICTS OF LAWS. SPECIFIED TIMES OF DAY REFER TO NEW YORK CITY TIME. EACH PARTY HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY.

17. Consent to Jurisdiction. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan, for the adjudication of any dispute hereunder or in connection with any of the transactions contemplated hereby, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum, or that the venue of such suit, action or proceeding is improper. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy (certified or registered mail, return receipt requested) to such party at the address in effect for notices under Section 12 of this Agreement and agrees that such service shall constitute good and sufficient notice of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law.

18. Construction.

(a) The section and exhibit headings herein are for convenience only and shall not affect the construction hereof.

(b) Words defined in the singular shall have a comparable meaning when used in the plural, and vice versa.

(c) The words “hereof,” “hereto,” “herein” and “hereunder” and words of similar import, when used in this Agreement, shall refer to this Agreement as a whole and not to any particular provision of this Agreement.

(d) Wherever the word “include,” “includes” or “including” is used in this Agreement, it shall be deemed to be followed by the words “without limitation.”

(e) References herein to any gender shall include each other gender.

(f) References herein to any law, statute, ordinance, code, regulation, rule or other requirement of any governmental authority shall be deemed to refer to such law, statute, ordinance, code, regulation, rule or other requirement of any governmental authority as amended, reenacted, supplemented or superseded in whole or in part and in effect from time to time and also to all rules and regulations promulgated thereunder.

19. Permitted Free Writing Prospectuses. Each of the Company and the Agent represents, warrants and agrees that, unless it obtains the prior written consent of the other party, which consent shall not be unreasonably withheld, conditioned or delayed, it has not made and will not make any offer relating to the Placement Shares that would constitute an issuer free writing prospectus, or that would otherwise constitute a free writing prospectus (as defined in Rule 405), required to be filed with the Commission. Any such free writing prospectus consented to by the Agent or by the Company, as the case may be, is hereinafter referred to as a “**Permitted Free Writing Prospectus**.” The Company represents and warrants that it has treated and agrees that it will treat each Permitted Free Writing Prospectus as an issuer free writing prospectus, and that it has complied and will comply with the requirements of Rule 433 applicable to any Permitted Free Writing Prospectus, including timely filing with the Commission where required, legending and record keeping.

20. Absence of Fiduciary Relationship. The Company acknowledges and agrees that:

(a) the Agent has been retained to act as sales agent in connection with the sale of the Placement Shares, the Agent has acted at arms’ length and no fiduciary or advisory relationship between the Company or any of its respective affiliates, stockholders (or other equity holders), creditors or employees or any other party, on the one hand, and the Agent, on the other hand, has been or will be created in respect of any of the transactions contemplated by this Agreement, irrespective of whether the Agent has advised or is advising the Company on other matters and the Agent has no duties or obligations to the Company with respect to the transactions contemplated by this Agreement except the obligations expressly set forth herein;

(b) the Company is capable of evaluating, and understanding and understands and accepts, the terms, risks and conditions of the transactions contemplated by this Agreement;

(c) neither the Agent nor its affiliates have provided any legal, accounting, regulatory or tax advice with respect to the transactions contemplated by this Agreement and it has consulted its own legal, accounting, regulatory and tax advisors to the extent it has deemed appropriate;

(d) the Company has been advised and is aware that the Agent and its affiliates are engaged in a broad range of transactions which may involve interests that differ from those of the Company and that the Agent and its affiliates have no obligation to disclose such interests and transactions to the Company by virtue of any fiduciary, advisory or agency relationship or otherwise; and

(e) the Company waives, to the fullest extent permitted by law, any claims it may have against the Agent or its affiliates for breach of fiduciary duty or alleged breach of fiduciary duty in connection with the transactions contemplated by this Agreement and agrees that the Agent and its affiliates shall have no liability (whether direct or indirect) to the Company in respect of such a fiduciary claim or to any person asserting a fiduciary duty claim on behalf of or in right of the Company, including stockholders (or other equity holders), creditors or employees of the Company.

21. Recognition of the U.S. Special Resolution Regimes. In the event that the Agent is a Covered Entity and becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer from the Agent of this Agreement, and any interest and obligation in or under this Agreement, will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if this Agreement, and any such interest and obligation, were governed by the laws of the United States or a state of the United States.

In the event that the Agent is a Covered Entity and the Agent or a BHC Act Affiliate of the Agent becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under this Agreement that may be exercised against the Agent are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Agreement were governed by the laws of the United States or a state of the United States.

For purposes of this Agreement, (A) “BHC Act Affiliate” has the meaning assigned to the term “affiliate” in, and shall be interpreted in accordance with, 12 U.S.C. § 1841(k); (B) “Covered Entity” means any of the following: (i) a “covered entity” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b); (ii) a “covered bank” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or (iii) a “covered FSI” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b); (C) “Default Right” has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable; and (D) “U.S. Special Resolution Regime” means each of (i) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (ii) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder.

22. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Delivery of an executed Agreement by one party to the other may be made by facsimile or electronic transmission. Counterparts may be delivered via facsimile, electronic mail (including any electronic signature covered by the U.S. federal ESIGN Act of 2000, Uniform Electronic Transactions Act, the Electronic Signatures and Records Act or other applicable law, e.g., www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

23. Use of Information. The Agent may not provide any information gained in connection with this Agreement and the transactions contemplated by this Agreement, including due diligence, to any third party other than its legal counsel advising it on this Agreement and the transactions contemplated by this Agreement unless expressly approved by the Company in writing.

24. Agent's Information. As used in this Agreement, "Agent's Information" means solely the following information in the Registration Statement and the Prospectus: the eighth paragraph under the heading "Plan of Distribution" in the Prospectus Supplement.

All references in this Agreement to the Registration Statement, the Prospectus or any amendment or supplement to any of the foregoing shall be deemed to include the copy filed with the Commission pursuant to EDGAR. All references in this Agreement to financial statements and schedules and other information that is "contained," "included" or "stated" in the Registration Statement or the Prospectus (and all other references of like import) shall be deemed to mean and include all such financial statements and schedules and other information that is incorporated by reference in the Registration Statement or the Prospectus, as the case may be.

All references in this Agreement to "supplements" to the Prospectus shall include any supplements, "wrappers" or similar materials prepared in connection with any offering, sale or private placement of any Placement Shares by the Agent outside of the United States.

[Remainder of Page Intentionally Blank]

If the foregoing correctly sets forth the understanding between the Company and the Agent, please so indicate in the space provided below for that purpose, whereupon this letter shall constitute a binding agreement between the Company and the Agent.

Very truly yours,

Tenaya Therapeutics, Inc.

By: /s/ Leone D. Patterson, M.B.A.

Name: Leone D. Patterson, M.B.A.

Title: Chief Financial and Business Officer

ACCEPTED as of the date first-above written:

SVB Securities LLC

By: /s/ Peter M. Fry

Name: Peter M. Fry

Title: Head of Alternative Equities

FORM OF PLACEMENT NOTICE

From: []
[TITLE]
Tenaya Therapeutics, Inc.
Cc: []
To: SVB Securities LLC
Subject: SVB Securities—At the Market Offering—Placement Notice

Ladies and Gentlemen:

Pursuant to the terms and subject to the conditions contained in the Sales Agreement, dated August 10, 2022 (the “**Agreement**”), by and between Tenaya Therapeutics, Inc., a Delaware corporation (the “**Company**”), and SVB Securities LLC (“**SVB Securities**”), I hereby request on behalf of the Company that SVB Securities sell up to [] shares of common stock, \$0.0001 par value per share, of the Company (the “**Shares**”), at a minimum market price of \$ per share[; *provided* that no more than [] Shares shall be sold in any one Trading Day (as such term is defined in Section 3 of the Agreement)]. Sales should begin [on the date of this Placement Notice] and end on [DATE] [until all Shares that are the subject of this Placement Notice are sold].

The Company

Faraz Ali (fali@tenayathera.com)

Leone D. Patterson (lpatterson@tenayathera.com)

SVB Securities

Anurag Jindal (anurag.jindal@svbsecurities.com)

Tim Wang (tim.wang@svbsecurities.com)

atm@svbsecurities.com

Compensation

The Company shall pay SVB Securities compensation in cash equal to 3.0% of the gross proceeds from the sales of Placement Shares pursuant to the terms of the Sales Agreement of which this **Schedule 3** forms a part.

OFFICERS' CERTIFICATE

Each of Leone D. Patterson, the duly qualified and elected Chief Financial and Business Officer of Tenaya Therapeutics, Inc., a Delaware corporation (the "**Company**"), and Jennifer Drimmer, the duly qualified and elected General Counsel and Secretary of the Company, does hereby certify in her respective capacity and on behalf of the Company, pursuant to Section 7(m) of the Sales Agreement, dated August 10, 2022 (the "**Sales Agreement**"), by and between the Company and SVB Securities LLC, that, after due inquiry, to the best of the knowledge of the undersigned:

(i) The representations and warranties of the Company in Section 6 of the Sales Agreement (A) to the extent such representations and warranties are subject to qualifications and exceptions contained therein relating to materiality or Material Adverse Effect, are true and correct on and as of the date hereof with the same force and effect as if expressly made on and as of the date hereof, and (B) to the extent such representations and warranties are not subject to any qualifications or exceptions relating to materiality or Material Adverse Effect, are true and correct in all material respects as of the date hereof as if made on and as of the date hereof with the same force and effect as if expressly made on and as of the date hereof.

(ii) The Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied pursuant to the Sales Agreement at or prior to the date hereof.

(iii) As of the date hereof, (A) the Registration Statement complies in all material respects with the requirements of the Securities Act and does not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein not misleading, (B) the Prospectus complies in all material respects with the requirements of the Securities Act does not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading and (C) no event has occurred as a result of which it is necessary to amend or supplement the Registration Statement or the Prospectus in order to make the statements therein not untrue or misleading or for clauses (A) and (B) above, to be true and correct.

(iv) There has been no material adverse change, or any development that could reasonably be expected to result in a material adverse change, in the condition (financial or otherwise), earnings, results of operations, business, properties, operations, assets, liabilities or prospects of the Company, taken as a whole, whether or not arising from transactions in the ordinary course of business, since the date as of which information is given in the Prospectus, as amended or supplemented to the date hereof.

(v) The Company does not possess any material non-public information.

(vi) The maximum amount of Placement Shares that may be sold pursuant to the Sales Agreement has been duly authorized by the Company's board of directors or a duly authorized committee thereof pursuant to a resolution or unanimous written consent in accordance with the Company's amended and restated articles of incorporation, amended and restated bylaws and applicable law.

Capitalized terms used but not defined herein shall have the meanings ascribed to them in the Sales Agreement.

IN WITNESS WHEREOF, each of the undersigned, in such individual's respective capacity as Chief Financial and Business Officer or General Counsel and Secretary of the Company, has executed this Officers' Certificate on behalf of the Company.

By: _____
Name: Leone D. Patterson, M.B.A.
Title: Chief Financial and Business Officer
Date:

By: _____
Name: Jennifer Drimmer, J.D.
Title: General Counsel and Secretary
Date:

[Company Signature Page to Officers' Certificate]

TENAYA THERAPEUTICS, INC.

INDENTURE

Dated as of _____, 20____

[_____]

Trustee

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TENAYA THERAPEUTICS, INC.

Reconciliation and tie between Trust Indenture Act of 1939 and Indenture, dated as of , 20

| | |
|-------------|----------------|
| § 310(a)(1) | 7.10 |
| (a)(2) | 7.10 |
| (a)(3) | Not Applicable |
| (a)(4) | Not Applicable |
| (a)(5) | 7.10 |
| (b) | 7.10 |
| § 311(a) | 7.11 |
| (b) | 7.11 |
| (c) | Not Applicable |
| § 312(a) | 2.6 |
| (b) | 10.3 |
| (c) | 10.3 |
| § 313(a) | 7.6 |
| (b)(1) | 7.6 |
| (b)(2) | 7.6 |
| (c)(1) | 7.6 |
| (d) | 7.6 |
| § 314(a) | 4.2, 10.5 |
| (b) | Not Applicable |
| (c)(1) | 10.4 |
| (c)(2) | 10.4 |
| (c)(3) | Not Applicable |
| (d) | Not Applicable |
| (e) | 10.5 |
| (f) | Not Applicable |
| § 315(a) | 7.1 |
| (b) | 7.5 |
| (c) | 7.1 |
| (d) | 7.1 |
| (e) | 6.14 |
| § 316(a) | 2.10 |
| (a)(1)(A) | 6.12 |
| (a)(1)(B) | 6.13 |
| (b) | 6.8 |
| § 317(a)(1) | 6.3 |
| (a)(2) | 6.4 |
| (b) | 2.5 |
| § 318(a) | 10.1 |

Note: This reconciliation and tie shall not, for any purpose, be deemed to be part of the Indenture.

Indenture dated as of _____, 20____ between Tenaya Therapeutics, Inc., a company incorporated under the laws of Delaware (the “*Company*”), and [____], a national banking association organized under the laws of the United States, as trustee (the “*Trustee*”).

Each party agrees as follows for the benefit of the other party and for the equal and ratable benefit of the Holders of the Securities issued under this Indenture.

ARTICLE I DEFINITIONS AND INCORPORATION BY REFERENCE

Section 1.1 Definitions.

“*Additional Amounts*” means any additional amounts which are required hereby or by any Security, under circumstances specified herein or therein, to be paid by the Company in respect of certain taxes imposed on Holders specified herein or therein and which are owing to such Holders.

“*Affiliate*” of any specified person means any other person directly or indirectly controlling or controlled by or under common control with such specified person. For the purposes of this definition, “control” (including, with correlative meanings, the terms “controlled by” and “under common control with”), as used with respect to any person, shall mean the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of such person, whether through the ownership of voting securities or by agreement or otherwise.

“*Agent*” means any Registrar, Paying Agent or Notice Agent.

“*Board of Directors*” means the board of directors of the Company or any duly authorized committee thereof.

“*Board Resolution*” means a copy of a resolution certified by the Secretary or an Assistant Secretary of the Company to have been adopted by the Board of Directors or pursuant to authorization by the Board of Directors and to be in full force and effect on the date of the certificate and delivered to the Trustee.

“*Business Day*” means, any day except a Saturday, Sunday or a Legal Holiday in The City of New York, New York (or in connection with any payment, the place of payment) on which banking institutions are authorized or required by law, regulation or executive order to close.

“*Capital Stock*” means any and all shares, interests, participations, rights or other equivalents (however designated) of corporate stock.

“*Company*” means the party named as such above until a successor replaces it and thereafter means the successor.

“*Company Order*” means a written order signed in the name of the Company by an Officer.

“*Corporate Trust Office*” means the principal office of the Trustee at which at any time this Indenture shall be administered, which office as of the date hereof is located at the address specified in Section 10.2. With respect to presentation for transfer or exchange, conversions or principal payment, such address shall be at the address specified in Section 10.2, or such other address as the Trustee may designate from time to time by written notice to the Holders and the Company, or the principal corporate trust office of any successor Trustee (or such other address as such successor Trustee may designate from time to time by written notice to the Holders and the Company).

“*Default*” means any event which is, or after notice or passage of time or both would be, an Event of Default.

“*Depository*” means, with respect to the Securities of any Series issuable or issued in whole or in part in the form of one or more Global Securities, the person designated as Depository for such Series by the Company, which Depository shall be a clearing agency registered under the Exchange Act; and if at any time there is more than one such person, “*Depository*” as used with respect to the Securities of any Series shall mean the Depository with respect to the Securities of such Series.

“*Discount Security*” means any Security that provides for an amount less than the stated principal amount thereof to be due and payable upon declaration of acceleration of the maturity thereof pursuant to Section 6.2.

“*Dollars*” and “*\$*” means the currency of The United States of America.

“*Exchange Act*” means the Securities Exchange Act of 1934, as amended.

“*Foreign Currency*” means any currency or currency unit issued by a government other than the government of The United States of America.

“*Foreign Government Obligations*” means, with respect to Securities of any Series that are denominated in a Foreign Currency, direct obligations of, or obligations guaranteed by, the government that issued or caused to be issued such currency for the payment of which obligations its full faith and credit is pledged and which are not callable or redeemable at the option of the issuer thereof.

“*GAAP*” means accounting principles generally accepted in the United States of America set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other entity as have been approved by a significant segment of the accounting profession, which are in effect as of the date of determination.

“*Global Security*” or “*Global Securities*” means a Security or Securities, as the case may be, in the form established pursuant to Section 2.2 evidencing all or part of a Series of Securities, issued to the Depository for such Series or its nominee, and registered in the name of such Depository or nominee.

“*Holder*” or “*Securityholder*” means a person in whose name a Security is registered on the books of the Registrar.

“*Indenture*” means this Indenture as amended or supplemented from time to time and shall include the form and terms of particular Series of Securities established as contemplated hereunder.

“*interest*” with respect to any Discount Security which by its terms bears interest only after Maturity, means interest payable after Maturity.

“*Maturity*,” when used with respect to any Security, means the date on which the principal of such Security becomes due and payable as therein or herein provided, whether at the Stated Maturity or by declaration of acceleration, call for redemption or otherwise.

“*Officer*” means the Chief Executive Officer, President, the Chief Financial Officer, the Treasurer or any Assistant Treasurer, the Secretary or any Assistant Secretary, and any Vice President of the Company.

“*Officer’s Certificate*” means a certificate signed by any Officer that meets the requirements of Section 10.5.

“*Opinion of Counsel*” means a written opinion of legal counsel who is acceptable to the Trustee. The opinion may contain customary limitations, qualifications, conditions and exceptions. The counsel may be an employee of or counsel to the Company.

“*person*” means any individual, corporation, partnership, joint venture, association, limited liability company, joint-stock company, trust, unincorporated organization or government or any agency or political subdivision thereof.

“*principal*” of a Security means the principal of the Security plus, when appropriate, the premium, if any, on, and any Additional Amounts in respect of, the Security.

“*Responsible Officer*” means any officer of the Trustee in its Corporate Trust Office having direct responsibility for the administration of this Indenture and also means, with respect to a particular corporate trust matter, any other officer to whom any corporate trust matter is referred because of his or her knowledge of and familiarity with a particular subject.

“*SEC*” means the Securities and Exchange Commission.

“*Securities*” means the debentures, notes or other debt instruments of the Company of any Series authenticated and delivered under this Indenture.

“*Series*” or “*Series of Securities*” means each series of debentures, notes or other debt instruments of the Company created pursuant to Sections 2.1 and 2.2 hereof.

“*Stated Maturity*” when used with respect to any Security, means the date specified in such Security as the fixed date on which the principal of such Security or interest is due and payable.

“*Subsidiary*” of any specified person means any corporation, association or other business entity of which more than 50% of the total voting power of shares of Capital Stock entitled (without regard to the occurrence of any contingency) to vote in the election of directors, managers or trustees thereof is at the time owned or controlled, directly or indirectly, by such person or one or more of the other Subsidiaries of that person or a combination thereof.

“*TIA*” means the Trust Indenture Act of 1939 (15 U.S. Code §§ 77aaa-77bbbb) as in effect on the date of this Indenture; provided, however, that in the event the Trust Indenture Act of 1939 is amended after such date, “*TIA*” means, to the extent required by any such amendment, the Trust Indenture Act as so amended.

“*Trustee*” means the person named as the “Trustee” in the first paragraph of this instrument until a successor Trustee shall have become such pursuant to the applicable provisions of this Indenture, and thereafter “Trustee” shall mean or include each person who is then a Trustee hereunder, and if at any time there is more than one such person, “Trustee” as used with respect to the Securities of any Series shall mean the Trustee with respect to Securities of that Series.

“*U.S. Government Obligations*” means securities which are direct obligations of, or guaranteed by, The United States of America for the payment of which its full faith and credit is pledged and which are not callable or redeemable at the option of the issuer thereof, and shall also include a depository receipt issued by a bank or trust company as custodian with respect to any such U.S. Government Obligation or a specific payment of interest on or principal of any such U.S. Government Obligation held by such custodian for the account of the holder of a depository receipt, *provided* that (except as required by law) such custodian is not authorized to make any deduction from the amount payable to the holder of such depository receipt from any amount received by the custodian in respect of the U.S. Government Obligation evidenced by such depository receipt.

Section 1.2 Other Definitions.

| <u>TERM</u> | <u>DEFINED IN SECTION</u> |
|---|---------------------------|
| “ <i>Bankruptcy Law</i> ” | 6.1 |
| “ <i>Custodian</i> ” | 6.1 |
| “ <i>Event of Default</i> ” | 6.1 |
| “ <i>Judgment Currency</i> ” | 10.16 |
| “ <i>Legal Holiday</i> ” | 10.7 |
| “ <i>mandatory sinking fund payment</i> ” | 11.1 |
| “ <i>New York Banking Day</i> ” | 10.16 |
| “ <i>Notice Agent</i> ” | 2.4 |
| “ <i>optional sinking fund payment</i> ” | 11.1 |
| “ <i>Paying Agent</i> ” | 2.4 |
| “ <i>Registrar</i> ” | 2.4 |
| “ <i>Required Currency</i> ” | 10.16 |
| “ <i>Specified Courts</i> ” | 10.10 |
| “ <i>successor person</i> ” | 5.1 |

Section 1.3 Incorporation by Reference of Trust Indenture Act.

Whenever this Indenture refers to a provision of the TIA, the provision is incorporated by reference in and made a part of this Indenture. The following TIA terms used in this Indenture have the following meanings:

“*Commission*” means the SEC.

“*indenture securities*” means the Securities.

“*indenture security holder*” means a Securityholder.

“*indenture to be qualified*” means this Indenture.

“*indenture trustee*” or “*institutional trustee*” means the Trustee.

“*obligor*” on the indenture securities means the Company and any successor obligor upon the Securities.

All other terms used in this Indenture that are defined by the TIA, defined by TIA reference to another statute or defined by SEC rule under the TIA and not otherwise defined herein are used herein as so defined.

Section 1.4 Rules of Construction.

Unless the context otherwise requires:

- (a) a term has the meaning assigned to it;
- (b) an accounting term not otherwise defined has the meaning assigned to it in accordance with GAAP;
- (c) “*or*” is not exclusive;
- (d) words in the singular include the plural, and in the plural include the singular; and
- (e) provisions apply to successive events and transactions.

ARTICLE II
THE SECURITIES

Section 2.1 Issuable in Series.

The aggregate principal amount of Securities that may be authenticated and delivered under this Indenture is unlimited. The Securities may be issued in one or more Series. All Securities of a Series shall be identical except as may be set forth or determined in the manner provided in a Board Resolution, a supplemental indenture or an Officer’s Certificate detailing the adoption of the

terms thereof pursuant to authority granted under a Board Resolution. In the case of Securities of a Series to be issued from time to time, the Board Resolution, Officer's Certificate or supplemental indenture detailing the adoption of the terms thereof pursuant to authority granted under a Board Resolution may provide for the method by which specified terms (such as interest rate, maturity date, record date or date from which interest shall accrue) are to be determined. Securities may differ between Series in respect of any matters, provided that all Series of Securities shall be equally and ratably entitled to the benefits of the Indenture.

Section 2.2 Establishment of Terms of Series of Securities.

At or prior to the issuance of any Securities within a Series, the following shall be established (as to the Series generally, in the case of Subsection 2.2.1 and either as to such Securities within the Series or as to the Series generally in the case of Subsections 2.2.2 through 2.2.23) by or pursuant to a Board Resolution, and set forth or determined in the manner provided in a Board Resolution, supplemental indenture hereto or Officer's Certificate:

- 2.2.1. the title (which shall distinguish the Securities of that particular Series from the Securities of any other Series) and ranking (including the terms of any subordination provisions) of the Series;
- 2.2.2. the price or prices (expressed as a percentage of the principal amount thereof) at which the Securities of the Series will be issued;
- 2.2.3. any limit upon the aggregate principal amount of the Securities of the Series which may be authenticated and delivered under this Indenture (except for Securities authenticated and delivered upon registration of transfer of, or in exchange for, or in lieu of, other Securities of the Series pursuant to Section 2.7, 2.8, 2.11, 3.6 or 9.6);
- 2.2.4. the date or dates on which the principal of the Securities of the Series is payable;
- 2.2.5. the rate or rates (which may be fixed or variable) per annum or, if applicable, the method used to determine such rate or rates (including, but not limited to, any commodity, commodity index, stock exchange index or financial index) at which the Securities of the Series shall bear interest, if any, the date or dates from which such interest, if any, shall accrue, the date or dates on which such interest, if any, shall commence and be payable and any regular record date for the interest payable on any interest payment date;
- 2.2.6. the place or places where the principal of and interest, if any, on the Securities of the Series shall be payable, where the Securities of such Series may be surrendered for registration of transfer or exchange and where notices and demands to or upon the Company in respect of the Securities of such Series and this Indenture may be delivered, and the method of such payment, if by wire transfer, mail or other means;
- 2.2.7. if applicable, the period or periods within which, the price or prices at which and the terms and conditions upon which the Securities of the Series may be redeemed, in whole or in part, at the option of the Company;

2.2.8. the obligation, if any, of the Company to redeem or purchase the Securities of the Series pursuant to any sinking fund or analogous provisions or at the option of a Holder thereof and the period or periods within which, the price or prices at which and the terms and conditions upon which Securities of the Series shall be redeemed or purchased, in whole or in part, pursuant to such obligation;

2.2.9. the dates, if any, on which and the price or prices at which the Securities of the Series will be repurchased by the Company at the option of the Holders thereof and other detailed terms and provisions of such repurchase obligations;

2.2.10. if other than denominations of \$1,000 and any integral multiple thereof, the denominations in which the Securities of the Series shall be issuable;

2.2.11. the forms of the Securities of the Series and whether the Securities will be issuable as Global Securities;

2.2.12. if other than the principal amount thereof, the portion of the principal amount of the Securities of the Series that shall be payable upon declaration of acceleration of the maturity thereof pursuant to Section 6.2;

2.2.13. the currency of denomination of the Securities of the Series, which may be Dollars or any Foreign Currency, and if such currency of denomination is a composite currency, the agency or organization, if any, responsible for overseeing such composite currency;

2.2.14. the designation of the currency, currencies or currency units in which payment of the principal of and interest, if any, on the Securities of the Series will be made;

2.2.15. if payments of principal of or interest, if any, on the Securities of the Series are to be made in one or more currencies or currency units other than that or those in which such Securities are denominated, the manner in which the exchange rate with respect to such payments will be determined;

2.2.16. the manner in which the amounts of payment of principal of or interest, if any, on the Securities of the Series will be determined, if such amounts may be determined by reference to an index based on a currency or currencies or by reference to a commodity, commodity index, stock exchange index or financial index;

2.2.17. the provisions, if any, relating to any security provided for the Securities of the Series;

2.2.18. any addition to, deletion of or change in the Events of Default which applies to any Securities of the Series and any change in the right of the Trustee or the requisite Holders of such Securities to declare the principal amount thereof due and payable pursuant to Section 6.2;

2.2.19. any addition to, deletion of or change in the covenants set forth in Articles IV or V which applies to Securities of the Series;

2.2.20. any Depositaries, interest rate calculation agents, exchange rate calculation agents, conversion agents or other agents with respect to Securities of such Series if other than those appointed herein;

2.2.21. the provisions, if any, relating to conversion or exchange of any Securities of such Series, including if applicable, the conversion or exchange price, the conversion or exchange period, provisions as to whether conversion or exchange will be mandatory, at the option of the Holders thereof or at the option of the Company, the events requiring an adjustment of the conversion price or exchange price and provisions affecting conversion or exchange if such Series of Securities are redeemed;

2.2.22. any other terms of the Series (which may supplement, modify or delete any provision of this Indenture insofar as it applies to such Series), including any terms that may be required under applicable law or regulations or advisable in connection with the marketing of Securities of that Series; and

2.2.23. whether any of the Company's direct or indirect Subsidiaries will guarantee the Securities of that Series, including the terms of subordination, if any, of such guarantees.

All Securities of any one Series need not be issued at the same time and may be issued from time to time, consistent with the terms of this Indenture, if so provided by or pursuant to the Board Resolution, supplemental indenture hereto or Officer's Certificate referred to above. No Board Resolution, supplemental indenture hereto or Officer's Certificate may affect the Trustee's own rights, duties or immunities under this Indenture or otherwise with respect to any Series of Securities except as the Trustee may agree in writing.

Section 2.3 Execution and Authentication.

An Officer shall sign the Securities for the Company by manual or facsimile signature.

If an Officer whose signature is on a Security no longer holds that office at the time the Security is authenticated, the Security shall nevertheless be valid.

A Security shall not be valid until authenticated by the manual signature of the Trustee or an authenticating agent. The signature shall be conclusive evidence that the Security has been authenticated under this Indenture.

The Trustee shall at any time, and from time to time, authenticate Securities for original issue in the principal amount provided in the Board Resolution, supplemental indenture hereto or Officer's Certificate, upon receipt by the Trustee of a Company Order. Each Security shall be dated the date of its authentication.

The aggregate principal amount of Securities of any Series outstanding at any time may not exceed any limit upon the maximum principal amount for such Series set forth in the Board Resolution, supplemental indenture hereto or Officer's Certificate delivered pursuant to Section 2.2, except as provided in Section 2.8.

Prior to the issuance of Securities of any Series, the Trustee shall have received and (subject to Section 7.2) shall be fully protected in relying on: (a) the Board Resolution, supplemental indenture hereto or Officer's Certificate establishing the form of the Securities of that Series or of Securities within that Series and the terms of the Securities of that Series or of Securities within that Series, (b) an Officer's Certificate complying with Section 10.4, (c) an Opinion of Counsel complying with Section 10.4 and (d) an Opinion of Counsel (which may be the same Opinion of Counsel referred to in the preceding clause (c)) that such Securities, when they have been duly executed, issued, and authenticated in accordance with the terms of the Indenture and delivered against payment therefor in the circumstances described in such Opinion of Counsel, will be legally valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

The Trustee shall have the right to decline to authenticate and deliver any Securities of such Series: (a) if the Trustee, being advised by counsel, determines that such action may not be taken lawfully; or (b) if the Trustee in good faith shall determine that such action would expose the Trustee to personal liability to Holders of any then-outstanding Series of Securities.

The Trustee may appoint an authenticating agent acceptable to the Company to authenticate Securities. An authenticating agent may authenticate Securities whenever the Trustee may do so. Each reference in this Indenture to authentication by the Trustee includes authentication by such agent. An authenticating agent has the same rights as an Agent to deal with the Company or an Affiliate of the Company.

Section 2.4 Registrar and Paying Agent.

The Company shall maintain, with respect to each Series of Securities, at the place or places specified with respect to such Series pursuant to Section 2.2, an office or agency where Securities of such Series may be presented or surrendered for payment ("*Paying Agent*"), where Securities of such Series may be surrendered for registration of transfer or exchange ("*Registrar*") and where notices and demands to or upon the Company in respect of the Securities of such Series and this Indenture may be delivered ("*Notice Agent*"). The Registrar shall keep a register with respect to each Series of Securities and to their transfer and exchange. The Company will give prompt written notice to the Trustee of the name and address, and any change in the name or address, of each Registrar, Paying Agent or Notice Agent. If at any time the Company shall fail to maintain any such required Registrar, Paying Agent or Notice Agent or shall fail to furnish the Trustee with the name and address thereof, such presentations, surrenders, notices and demands may be made or served at the Corporate Trust Office of the Trustee, and the Company hereby appoints the Trustee as its agent to receive all such presentations, surrenders, notices and demands; provided, however, that any appointment of the Trustee as the Notice Agent shall exclude the appointment of the Trustee or any office of the Trustee as an agent to receive the service of legal process on the Company.

The Company may also from time to time designate one or more co-registrars, additional paying agents or additional notice agents and may from time to time rescind such designations; provided, however, that no such designation or rescission shall in any manner relieve the Company of its obligations to maintain a Registrar, Paying Agent and Notice Agent in each place so specified

pursuant to Section 2.2 for Securities of any Series for such purposes. The Company will give prompt written notice to the Trustee of any such designation or rescission and of any change in the name or address of any such co-registrar, additional paying agent or additional notice agent. The term “*Registrar*” includes any co-registrar; the term “*Paying Agent*” includes any additional paying agent; and the term “*Notice Agent*” includes any additional notice agent. The Company or any of its Affiliates may serve as Registrar or Paying Agent.

The Company hereby appoints the Trustee the initial Registrar, Paying Agent and Notice Agent for each Series unless another Registrar, Paying Agent or Notice Agent, as the case may be, is appointed prior to the time Securities of that Series are first issued.

Section 2.5 Paying Agent to Hold Money in Trust.

The Company shall require each Paying Agent other than the Trustee to agree in writing that the Paying Agent will hold in trust, for the benefit of Securityholders of any Series of Securities, or the Trustee, all money held by the Paying Agent for the payment of principal of or interest on the Series of Securities, and will notify the Trustee in writing of any default by the Company in making any such payment. While any such default continues, the Trustee may require a Paying Agent to pay all money held by it to the Trustee. The Company at any time may require a Paying Agent to pay all money held by it to the Trustee. Upon payment over to the Trustee, the Paying Agent (if other than the Company or a Subsidiary of the Company) shall have no further liability for the money. If the Company or a Subsidiary of the Company acts as Paying Agent, it shall segregate and hold in a separate trust fund for the benefit of Securityholders of any Series of Securities all money held by it as Paying Agent. Upon any bankruptcy, reorganization or similar proceeding with respect to the Company, the Trustee shall serve as Paying Agent for the Securities.

Section 2.6 Securityholder Lists.

The Trustee shall preserve in as current a form as is reasonably practicable the most recent list available to it of the names and addresses of Securityholders of each Series of Securities and shall otherwise comply with TIA § 312(a). If the Trustee is not the Registrar, the Company shall furnish to the Trustee at least ten days before each interest payment date and at such other times as the Trustee may request in writing a list, in such form and as of such date as the Trustee may reasonably require, of the names and addresses of Securityholders of each Series of Securities.

Section 2.7 Transfer and Exchange.

Where Securities of a Series are presented to the Registrar or a co-registrar with a request to register a transfer or to exchange them for an equal principal amount of Securities of the same Series, the Registrar shall register the transfer or make the exchange if its requirements for such transactions are met. To permit registrations of transfers and exchanges, the Trustee shall authenticate Securities at the Registrar’s request. No service charge shall be made for any registration of transfer or exchange (except as otherwise expressly permitted herein), but the Company may require payment of a sum sufficient to cover any transfer tax or similar governmental charge payable in connection therewith (other than any such transfer tax or similar governmental charge payable upon exchanges pursuant to Sections 2.11, 3.6 or 9.6).

Neither the Company nor the Registrar shall be required (a) to issue, register the transfer of, or exchange Securities of any Series for the period beginning at the opening of business fifteen days immediately preceding the sending of a notice of redemption of Securities of that Series selected for redemption and ending at the close of business on the day such notice is sent, or (b) to register the transfer of or exchange Securities of any Series selected, called or being called for redemption as a whole or the portion being redeemed of any such Securities selected, called or being called for redemption in part.

Section 2.8 Mutilated, Destroyed, Lost and Stolen Securities.

If any mutilated Security is surrendered to the Trustee, the Company shall execute and the Trustee shall authenticate and deliver in exchange therefor a new Security of the same Series and of like tenor and principal amount and bearing a number not contemporaneously outstanding.

If there shall be delivered to the Company and the Trustee (i) evidence to their satisfaction of the destruction, loss or theft of any Security and (ii) such security or indemnity bond as may be required by each of them to hold itself and any of its agents harmless, then, in the absence of notice to the Company or the Trustee that such Security has been acquired by a bona fide purchaser, the Company shall execute and upon receipt of a Company Order the Trustee shall authenticate and make available for delivery, in lieu of any such destroyed, lost or stolen Security, a new Security of the same Series and of like tenor and principal amount and bearing a number not contemporaneously outstanding.

In case any such mutilated, destroyed, lost or stolen Security has become or is about to become due and payable, the Company in its discretion may, instead of issuing a new Security, pay such Security.

Upon the issuance of any new Security under this Section, the Company may require the payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in relation thereto and any other expenses (including the fees and expenses of the Trustee) connected therewith.

Every new Security of any Series issued pursuant to this Section in lieu of any destroyed, lost or stolen Security shall constitute an original additional contractual obligation of the Company, whether or not the destroyed, lost or stolen Security shall be at any time enforceable by anyone, and shall be entitled to all the benefits of this Indenture equally and proportionately with any and all other Securities of that Series duly issued hereunder.

The provisions of this Section are exclusive and shall preclude (to the extent lawful) all other rights and remedies with respect to the replacement or payment of mutilated, destroyed, lost or stolen Securities.

Section 2.9 Outstanding Securities.

The Securities outstanding at any time are all the Securities authenticated by the Trustee except for those canceled by it, those delivered to it for cancellation, those reductions in the interest on a Global Security effected by the Trustee in accordance with the provisions hereof and those described in this Section as not outstanding.

If a Security is replaced pursuant to Section 2.8, it ceases to be outstanding until the Trustee receives proof satisfactory to it that the replaced Security is held by a bona fide purchaser.

If the Paying Agent (other than the Company, a Subsidiary of the Company or an Affiliate of the Company) holds on the Maturity of Securities of a Series money sufficient to pay such Securities payable on that date, then on and after that date such Securities of the Series cease to be outstanding and interest on them ceases to accrue.

The Company may purchase or otherwise acquire the Securities, whether by open market purchases, negotiated transactions or otherwise. A Security does not cease to be outstanding because the Company or an Affiliate of the Company holds the Security (but see Section 2.10 below).

In determining whether the Holders of the requisite principal amount of outstanding Securities have given any request, demand, authorization, direction, notice, consent or waiver hereunder, the principal amount of a Discount Security that shall be deemed to be outstanding for such purposes shall be the amount of the principal thereof that would be due and payable as of the date of such determination upon a declaration of acceleration of the Maturity thereof pursuant to Section 6.2.

Section 2.10 Treasury Securities.

In determining whether the Holders of the required principal amount of Securities of a Series have concurred in any request, demand, authorization, direction, notice, consent or waiver, Securities of a Series owned by the Company or any Affiliate of the Company shall be disregarded, except that for the purposes of determining whether the Trustee shall be protected in relying on any such request, demand, authorization, direction, notice, consent or waiver only Securities of a Series that a Responsible Officer of the Trustee actually knows are so owned shall be so disregarded.

Section 2.11 Temporary Securities.

Until definitive Securities are ready for delivery, the Company may prepare and the Trustee shall authenticate temporary Securities upon a Company Order. Temporary Securities shall be substantially in the form of definitive Securities but may have variations that the Company considers appropriate for temporary Securities. Without unreasonable delay, the Company shall prepare and the Trustee upon receipt of a Company Order shall authenticate definitive Securities of the same Series and date of maturity in exchange for temporary Securities. Until so exchanged, temporary securities shall have the same rights under this Indenture as the definitive Securities.

Section 2.12 Cancellation.

The Company at any time may deliver Securities to the Trustee for cancellation. The Registrar and the Paying Agent shall forward to the Trustee any Securities surrendered to them for registration of transfer, exchange or payment. The Trustee shall cancel all Securities surrendered for transfer, exchange, payment, replacement or cancellation in accordance with its customary procedures (subject to the record retention requirement of the Exchange Act and the Trustee) and deliver a certificate of such cancellation to the Company upon written request of the Company. The Company may not issue new Securities to replace Securities that it has paid or delivered to the Trustee for cancellation.

Section 2.13 Defaulted Interest.

If the Company defaults in a payment of interest on a Series of Securities, it shall pay the defaulted interest, plus, to the extent permitted by law, any interest payable on the defaulted interest, to the persons who are Securityholders of the Series on a subsequent special record date. The Company shall fix the record date and payment date. At least 10 days before the special record date, the Company shall send to the Trustee and to each Securityholder of the Series a notice that states the special record date, the payment date and the amount of interest to be paid. The Company may pay defaulted interest in any other lawful manner.

Section 2.14 Global Securities.

2.14.1. Terms of Securities. A Board Resolution, a supplemental indenture hereto or an Officer's Certificate shall establish whether the Securities of a Series shall be issued in whole or in part in the form of one or more Global Securities and the Depositary for such Global Security or Securities.

2.14.2. Transfer and Exchange. Notwithstanding any provisions to the contrary contained in Section 2.7 of the Indenture and in addition thereto, any Global Security shall be exchangeable pursuant to Section 2.7 of the Indenture for Securities registered in the names of Holders other than the Depositary for such Security or its nominee only if (i) such Depositary notifies the Company that it is unwilling or unable to continue as Depositary for such Global Security or if at any time such Depositary ceases to be a clearing agency registered under the Exchange Act, and, in either case, the Company fails to appoint a successor Depositary registered as a clearing agency under the Exchange Act within 90 days of such event or (ii) the Company executes and delivers to the Trustee an Officer's Certificate to the effect that such

Global Security shall be so exchangeable. Any Global Security that is exchangeable pursuant to the preceding sentence shall be exchangeable for Securities registered in such names as the Depositary shall direct in writing in an aggregate principal amount equal to the principal amount of the Global Security with like tenor and terms.

Except as provided in this Section 2.14.2, a Global Security may not be transferred except as a whole by the Depositary with respect to such Global Security to a nominee of such Depositary, by a nominee of such Depositary to such Depositary or another nominee of such Depositary or by the Depositary or any such nominee to a successor Depositary or a nominee of such a successor Depositary.

Neither the Trustee nor any Agent shall have any responsibility for any actions taken or not taken by the Depositary.

2.14.3. Legends. Any Global Security issued hereunder shall bear a legend in substantially the following form:

“THIS SECURITY IS A GLOBAL SECURITY WITHIN THE MEANING OF THE INDENTURE HEREINAFTER REFERRED TO AND IS REGISTERED IN THE NAME OF THE DEPOSITARY OR A NOMINEE OF THE DEPOSITARY. THIS SECURITY IS EXCHANGEABLE FOR SECURITIES REGISTERED IN THE NAME OF A PERSON OTHER THAN THE DEPOSITARY OR ITS NOMINEE ONLY IN THE LIMITED CIRCUMSTANCES DESCRIBED IN THE INDENTURE, AND MAY NOT BE TRANSFERRED EXCEPT AS A WHOLE BY THE DEPOSITARY TO A NOMINEE OF THE DEPOSITARY, BY A NOMINEE OF THE DEPOSITARY TO THE DEPOSITARY OR ANOTHER NOMINEE OF THE DEPOSITARY OR BY THE DEPOSITARY OR ANY SUCH NOMINEE TO A SUCCESSOR DEPOSITARY OR A NOMINEE OF SUCH A SUCCESSOR DEPOSITARY.”

In addition, so long as the Depository Trust Company (“DTC”) is the Depository, each Global Note registered in the name of DTC or its nominee shall bear a legend in substantially the following form:

“UNLESS THIS GLOBAL NOTE IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITORY TRUST COMPANY, A NEW YORK CORPORATION (“DTC”), TO THE COMPANY OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE OR PAYMENT, AND ANY GLOBAL NOTE ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR IN SUCH OTHER NAME AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC (AND ANY PAYMENT IS MADE TO CEDE & CO. OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN.”

2.14.4. Acts of Holders. The Depository, as a Holder, may appoint agents and otherwise authorize participants to give or take any request, demand, authorization, direction, notice, consent, waiver or other action which a Holder is entitled to give or take under the Indenture.

(a) Any request, demand, authorization, direction, notice, consent, waiver or other action provided by this Indenture to be given or taken by Holders may be embodied in and evidenced by one or more instruments of substantially similar tenor signed by such Holders in person or by agent duly appointed in writing; and, except as herein otherwise expressly provided, such action shall become effective when such instrument or instruments are delivered to the Trustee and, where it is hereby expressly required, to the Company. Such instrument or instruments (and the action embodied therein and evidenced thereby) are herein sometimes referred to as the “Act” of Holders signing such instrument or instruments. Proof of execution of any such instrument or of a writing appointing any such agent shall be sufficient for any purpose of this Indenture and conclusive in favor of the Trustee and the Company, if made in the manner provided in this Section.

(b) The fact and date of the execution by any Person of any such instrument or writing may be proved by the affidavit of a witness of such execution or by a certificate of a notary public or other officer authorized by law to take acknowledgments of deeds, certifying that the individual signing such instrument or writing acknowledged to such officer the execution thereof. Where such execution is by a signer acting in a capacity other than such signer's individual capacity, such certificate or affidavit shall also constitute sufficient proof of such signer's authority. The fact and date of the execution of any such instrument or writing, or the authority of the Person executing the same, may also be proved in any other manner which the Trustee deems sufficient.

(c) The ownership of Global Securities or any Securities issued in certificated form shall be proved by the Registrar.

(d) Any request, demand, authorization, direction, notice, consent, waiver or other Act of the Holder of any Security shall bind every future Holder of the same Security and the holder of every Security issued upon the registration of transfer thereof or in exchange therefor or in lieu thereof in respect of anything done, omitted or suffered to be done by the Trustee or the Company in reliance thereon, whether or not notation of such action is made upon such Security.

(e) If the Company shall solicit from the Holders any request, demand, authorization, direction, notice, consent, waiver or other Act, the Company may, at its option, by or pursuant to a Board Resolution, fix in advance a record date for the determination of Holders entitled to give such request, demand, authorization, direction, notice, consent, waiver or other Act, but the Company shall have no obligation to do so. If such a record date is fixed, such request, demand, authorization, direction, notice, consent, waiver or other Act may be given before or after such record date, but only the Holders of record at the close of business on such record date shall be deemed to be Holders for the purposes of determining whether Holders of the requisite proportion of Outstanding Securities have authorized or agreed or consented to such request, demand, authorization, direction, notice, consent, waiver or other Act, and for that purpose the Outstanding Securities shall be computed as of such record date; provided that no such authorization, agreement or consent by the Holders on such record date shall be deemed effective unless it shall become effective pursuant to the provisions of this Indenture not later than six months after the record date.

2.14.5. Payments. Notwithstanding the other provisions of this Indenture, unless otherwise specified as contemplated by Section 2.2, payment of the principal of and interest, if any, on any Global Security shall be made to the Holder thereof.

2.14.6. Consents, Declaration and Directions. The Company, the Trustee and any Agent shall treat a person as the Holder of such principal amount of outstanding Securities of such Series represented by a Global Security as shall be specified in a written statement of the Depository or by the applicable procedures of such Depository with respect to such Global Security, for purposes of obtaining any consents, declarations, waivers or directions required to be given by the Holders pursuant to this Indenture.

Section 2.15 CUSIP Numbers.

The Company in issuing the Securities may use “CUSIP” numbers (if then generally in use), and, if so, the Trustee shall use “CUSIP” numbers in notices of redemption as a convenience to Holders; provided that any such notice may state that no representation is made as to the correctness of such numbers either as printed on the Securities or as contained in any notice of a redemption and that reliance may be placed only on the other elements of identification printed on the Securities, and any such redemption shall not be affected by any defect in or omission of such numbers. The Company shall promptly notify the Trustee of any change that the Company is aware of in the CUSIP numbers.

**ARTICLE III
REDEMPTION**

Section 3.1 Notice to Trustee.

The Company may, with respect to any Series of Securities, reserve the right to redeem and pay the Series of Securities or may covenant to redeem and pay the Series of Securities or any part thereof prior to the Stated Maturity thereof at such time and on such terms as provided for in such Securities. If a Series of Securities is redeemable and the Company wants or is obligated to redeem prior to the Stated Maturity thereof all or part of the Series of Securities pursuant to the terms of such Securities, it shall notify the Trustee in writing of the redemption date and the principal amount of Series of Securities to be redeemed. The Company shall give the notice at least 5 days before the notice is delivered to the Holders, unless a shorter period is satisfactory to the Trustee.

Section 3.2 Selection of Securities to be Redeemed.

Unless otherwise indicated for a particular Series by a Board Resolution, a supplemental indenture hereto or an Officer’s Certificate, if less than all the Securities of a Series are to be redeemed, the Securities of the Series to be redeemed will be selected as follows: (a) if the Securities are in the form of Global Securities, in accordance with the procedures of the Depository, (b) if the Securities are listed on any national securities exchange, in compliance with the requirements of the principal national securities exchange, if any, on which the Securities are listed, or (c) if not otherwise provided for under clause (a) or (b) in the manner that the Trustee deems fair and appropriate, including *pro rata*, by lot or other method, unless otherwise required by law or applicable stock exchange requirements, subject, in the case of Global Securities, to the applicable rules and procedures of the Depository. The Securities to be redeemed shall be selected from Securities of the Series outstanding not previously called for redemption. Portions of the principal of Securities of the Series that have denominations larger than \$1,000 may be selected for redemption. Securities of the Series and portions of them it selected for redemption shall be in amounts of \$1,000 or whole multiples of \$1,000 or, with respect to Securities of any Series issuable in other denominations pursuant to Section 2.2.10, the minimum principal denomination for each Series and the authorized integral multiples thereof. Provisions of this Indenture that apply to Securities of a Series called for redemption also apply to portions of Securities of that Series called for redemption.

Section 3.3 Notice of Redemption.

Unless otherwise indicated for a particular Series by Board Resolution, a supplemental indenture hereto or an Officer’s Certificate, at least 15 days but not more than 60 days before a redemption date, the Company shall send or cause to be sent by first-class mail or electronically, in accordance with the procedures of the Depository, a notice of redemption to each Holder whose Securities are to be redeemed.

The notice shall identify the Securities of the Series to be redeemed and shall state:

- (a) the redemption date;
- (b) the redemption price (or manner of calculation if not then known);
- (c) the name and address of the Paying Agent;
- (d) if any Securities are being redeemed in part, the portion of the principal amount of such Securities to be redeemed and that, after the redemption date and upon surrender of such Security, a new Security or Securities in principal amount equal to the unredeemed portion of the original Security shall be issued in the name of the Holder thereof upon cancellation of the original Security;
- (e) that Securities of the Series called for redemption must be surrendered to the Paying Agent to collect the redemption price;
- (f) that interest on Securities of the Series called for redemption ceases to accrue on and after the redemption date unless the Company defaults in the deposit of the redemption price;
- (g) the CUSIP number, if any; and
- (h) any other information as may be required by the terms of the particular Series or the Securities of a Series being redeemed.

At the Company's request, the Trustee shall give the notice of redemption in the Company's name and at its expense, provided, however, that the Company has delivered to the Trustee, at least 5 days (unless a shorter time shall be acceptable to the Trustee) prior to the notice date, an Officer's Certificate requesting that the Trustee give such notice and setting forth the information to be stated in such notice.

Section 3.4 Effect of Notice of Redemption.

Once notice of redemption is sent as provided in Section 3.3, Securities of a Series called for redemption become due and payable on the redemption date and at the redemption price. Except as otherwise provided in the supplemental indenture, Board Resolution or Officer's Certificate for a Series, a notice of redemption may not be conditional. Upon surrender to the Paying Agent, such Securities shall be paid at the redemption price plus accrued interest to the redemption date.

Section 3.5 Deposit of Redemption Price.

On or before 11:00 a.m., New York City time, on the redemption date, the Company shall irrevocably deposit with the Paying Agent money sufficient (as determined by the Company) to pay the redemption price of and accrued interest, if any, on all Securities to be redeemed on that date.

Section 3.6 Securities Redeemed in Part.

Upon surrender of a Security that is redeemed in part, the Trustee shall authenticate for the Holder a new Security of the same Series and the same maturity equal in principal amount to the unredeemed portion of the Security surrendered.

**ARTICLE IV
COVENANTS**

Section 4.1 Payment of Principal and Interest.

The Company covenants and agrees for the benefit of the Holders of each Series of Securities that it will duly and punctually pay the principal of and interest, if any, on the Securities of that Series in accordance with the terms of such Securities and this Indenture. On or before 11:00 a.m., New York City time, on the applicable payment date, the Company shall deposit with the Paying Agent money sufficient to pay the principal of and interest, if any, on the Securities of each Series in accordance with the terms of such Securities and this Indenture.

Section 4.2 SEC Reports.

To the extent any Securities of a Series are outstanding, the Company shall deliver to the Trustee within 15 days after it files them with the SEC copies of the annual reports and of the information, documents, and other reports (or copies of such portions of any of the foregoing as the SEC may by rules and regulations prescribe) which the Company is required to file with the SEC pursuant to Section 13 or 15(d) of the Exchange Act. The Company also shall comply with the other provisions of TIA § 314(a). Reports, information and documents filed with the SEC via the EDGAR system (or any successor system thereto) will be deemed to be delivered to the Trustee as of the time of such filing via EDGAR for purposes of this Section 4.2, it being understood that the Trustee shall have no responsibility whatsoever to determine if such filings have been made, and that the Trustee shall not be deemed to have knowledge of the information contained therein.

Delivery of reports, information and documents to the Trustee under this Section 4.2 are for informational purposes only and the Trustee's receipt of the foregoing shall not constitute constructive or actual notice of any information contained therein or determinable from information contained therein, including the Company's compliance with any of their covenants hereunder (as to which the Trustee is entitled to rely exclusively on Officer's Certificates).

Section 4.3 Compliance Certificate.

To the extent any Securities of a Series are outstanding, the Company shall deliver to the Trustee, within 120 days after the end of each fiscal year of the Company, an Officer's Certificate stating that a review of the activities of the Company and its Subsidiaries during the preceding fiscal year has been made under the supervision of the signing Officers with a view to determining whether the Company has kept, observed, performed and fulfilled its obligations under this Indenture, and further stating, as to each such Officer signing such certificate, that to the best of his/her knowledge the Company has kept, observed, performed and fulfilled each and every covenant contained in this Indenture and is not in default in the performance or observance of any of the terms, provisions and conditions hereof (or, if a Default or Event of Default shall have occurred, describing all such Defaults or Events of Default of which the Officer may have knowledge).

Section 4.4 Stay, Extension and Usury Laws.

The Company covenants (to the extent that it may lawfully do so) that it will not at any time insist upon, plead, or in any manner whatsoever claim or take the benefit or advantage of, any stay, extension or usury law wherever enacted, now or at any time hereafter in force, which may affect the covenants or the performance of this Indenture or the Securities; and the Company (to the extent it may lawfully do so) hereby expressly waives all benefit or advantage of any such law and covenants that it will not, by resort to any such law, hinder, delay or impede the execution of any power herein granted to the Trustee, but will suffer and permit the execution of every such power as though no such law has been enacted.

**ARTICLE V
SUCCESSORS**

Section 5.1 When Company May Merge, Etc.

The Company shall not consolidate with or merge with or into, or convey, transfer or lease all or substantially all of its properties and assets to, any person (a “*successor person*”) unless:

(a) the Company is the surviving corporation or the successor person (if other than the Company) is a corporation organized and validly existing under the laws of any U.S. domestic jurisdiction and expressly assumes, by a supplemental indenture, executed and delivered to the Trustee, the Company’s obligations on the Securities and under this Indenture; and

(b) immediately after giving effect to the transaction, no Default or Event of Default, shall have occurred and be continuing.

Where the Company is not the surviving corporation, the Company shall deliver to the Trustee prior to the consummation of the proposed transaction an Officer’s Certificate to the foregoing effect and an Opinion of Counsel stating that the proposed transaction and any supplemental indenture comply with this Indenture.

Notwithstanding the above, any Subsidiary of the Company may consolidate with, merge into or transfer all or part of its properties to the Company. Neither an Officer’s Certificate nor an Opinion of Counsel shall be required to be delivered in connection therewith.

Section 5.2 Successor Corporation Substituted.

Upon any consolidation or merger, or any sale, lease, conveyance or other disposition of all or substantially all of the assets of the Company in accordance with Section 5.1, the successor corporation formed by such consolidation or into or with which the Company is merged or to which such sale, lease, conveyance or other disposition is made shall succeed to, and be substituted for, and may exercise every right and power of, the Company under this Indenture with the same effect as if such successor person has been named as the Company herein; provided, however, that the predecessor Company in the case of a sale, conveyance or other disposition (other than a lease) shall be released from all obligations and covenants under this Indenture and the Securities.

**ARTICLE VI
DEFAULTS AND REMEDIES**

Section 6.1 Events of Default.

“*Event of Default*,” wherever used herein with respect to Securities of any Series, means any one of the following events, unless in the establishing Board Resolution, supplemental indenture or Officer’s Certificate, it is provided that such Series shall not have the benefit of said Event of Default:

(a) default in the payment of any interest on any Security of that Series when it becomes due and payable, and continuance of such default for a period of 30 days (unless the entire amount of such payment is deposited by the Company with the Trustee or with a Paying Agent prior to 11:00 a.m., New York City time, on the 30th day of such period); or

(b) default in the payment of principal of any Security of that Series at its Maturity; or

(c) default in the performance or breach of any covenant or warranty of the Company in this Indenture (other than defaults pursuant to paragraphs (a) or (b) above or pursuant to a covenant or warranty that has been included in this Indenture solely for the benefit of Series of Securities other than that Series), which default continues uncured for a period of 60 days after there has been given, by registered or certified mail, to the Company by the Trustee or to the Company and the Trustee by the Holders of at least 25% in principal amount of the outstanding Securities of that Series a written notice specifying such default or breach and requiring it to be remedied and stating that such notice is a “Notice of Default” hereunder; or

(d) the Company pursuant to or within the meaning of any Bankruptcy Law:

- (i) commences a voluntary case,
- (ii) consents to the entry of an order for relief against it in an involuntary case,
- (iii) consents to the appointment of a Custodian of it or for all or substantially all of its property,
- (iv) makes a general assignment for the benefit of its creditors, or
- (v) generally is unable to pay its debts as the same become due; or

(e) a court of competent jurisdiction enters an order or decree under any Bankruptcy Law that:

- (i) is for relief against the Company in an involuntary case,
- (ii) appoints a Custodian of the Company or for all or substantially all of its property, or
- (iii) orders the liquidation of the Company,

and the order or decree remains unstayed and in effect for 60 days; or

(f) any other Event of Default provided with respect to Securities of that Series, which is specified in a Board Resolution, a supplemental indenture hereto or an Officer's Certificate, in accordance with Section 2.2.18.

The term "*Bankruptcy Law*" means title 11, U.S. Code or any similar U.S. Federal or State law for the relief of debtors. The term "*Custodian*" means any receiver, trustee, assignee, liquidator or similar official under any Bankruptcy Law.

The Company will provide the Trustee written notice of any Default or Event of Default within 30 days of becoming aware of the occurrence of such Default or Event of Default, which notice will describe in reasonable detail the status of such Default or Event of Default and what action the Company is taking or proposes to take in respect thereof.

Section 6.2 Acceleration of Maturity; Rescission and Annulment.

If an Event of Default with respect to Securities of any Series at the time outstanding occurs and is continuing (other than an Event of Default referred to in Section 6.1(d) or (e)) then in every such case the Trustee or the Holders of not less than 25% in principal amount of the outstanding Securities of that Series may declare the principal amount (or, if any Securities of that Series are Discount Securities, such portion of the principal amount as may be specified in the terms of such Securities) of and accrued and unpaid interest, if any, on all of the Securities of that Series to be due and payable immediately, by a notice in writing to the Company (and to the Trustee if given by Holders), and upon any such declaration such principal amount (or specified amount) and accrued and unpaid interest, if any, shall become immediately due and payable. If an Event of Default specified in Section 6.1(d) or (e) shall occur, the principal amount (or specified amount) of and accrued and unpaid interest, if any, on all outstanding Securities shall *ipso facto* become and be immediately due and payable without any declaration or other act on the part of the Trustee or any Holder.

At any time after such a declaration of acceleration with respect to any Series has been made and before a judgment or decree for payment of the money due has been obtained by the Trustee as hereinafter in this Article provided, the Holders of a majority in principal amount of the outstanding Securities of that Series, by written notice to the Company and the Trustee, may rescind and annul such declaration and its consequences if all Events of Default with respect to Securities of that Series, other than the non-payment of the principal and interest, if any, of Securities of that Series which have become due solely by such declaration of acceleration, have been cured or waived as provided in Section 6.13.

No such rescission shall affect any subsequent Default or impair any right consequent thereon.

Section 6.3 Collection of Indebtedness and Suits for Enforcement by Trustee.

The Company covenants that if

(a) default is made in the payment of any interest on any Security when such interest becomes due and payable and such default continues for a period of 30 days, or

(b) default is made in the payment of principal of any Security at the Maturity thereof, or

(c) default is made in the deposit of any sinking fund payment, if any, when and as due by the terms of a Security,

then, the Company will, upon demand of the Trustee, pay to it, for the benefit of the Holders of such Securities, the whole amount then due and payable on such Securities for principal and interest and, to the extent that payment of such interest shall be legally enforceable, interest on any overdue principal and any overdue interest at the rate or rates prescribed therefor in such Securities, and, in addition thereto, such further amount as shall be sufficient to cover the costs and expenses of collection, including the compensation, reasonable expenses, disbursements and advances of the Trustee, its agents and counsel.

If the Company fails to pay such amounts forthwith upon such demand, the Trustee, in its own name and as trustee of an express trust, may institute a judicial proceeding for the collection of the sums so due and unpaid, may prosecute such proceeding to judgment or final decree and may enforce the same against the Company or any other obligor upon such Securities and collect the moneys adjudged or deemed to be payable in the manner provided by law out of the property of the Company or any other obligor upon such Securities, wherever situated.

If an Event of Default with respect to any Securities of any Series occurs and is continuing, the Trustee may in its discretion proceed to protect and enforce its rights and the rights of the Holders of Securities of such Series by such appropriate judicial proceedings as the Trustee shall deem most effectual to protect and enforce any such rights, whether for the specific enforcement of any covenant or agreement in this Indenture or in aid of the exercise of any power granted herein, or to enforce any other proper remedy.

Section 6.4 Trustee May File Proofs of Claim.

In case of the pendency of any receivership, insolvency, liquidation, bankruptcy, reorganization, arrangement, adjustment, composition or other judicial proceeding relative to the Company or any other obligor upon the Securities or the property of the Company or of such other obligor or their creditors, the Trustee (irrespective of whether the principal of the Securities shall then be due and payable as therein expressed or by declaration or otherwise and irrespective of whether the Trustee shall have made any demand on the Company for the payment of overdue principal or interest) shall be entitled and empowered, by intervention in such proceeding or otherwise,

(a) to file and prove a claim for the whole amount of principal and interest owing and unpaid in respect of the Securities and to file such other papers or documents as may be necessary or advisable in order to have the claims of the Trustee (including any claim for the compensation, reasonable expenses, disbursements and advances of the Trustee, its agents and counsel) and of the Holders allowed in such judicial proceeding, and

(b) to collect and receive any moneys or other property payable or deliverable on any such claims and to distribute the same, and any custodian, receiver, assignee, trustee, liquidator, sequestrator or other similar official in any such judicial proceeding is hereby authorized by each Holder to make such payments to the Trustee and, in the event that the Trustee shall consent to the making of such payments directly to the Holders, to pay to the Trustee any amount due it for the compensation, reasonable expenses, disbursements and advances of the Trustee, its agents and counsel, and any other amounts due the Trustee under Section 7.7.

Nothing herein contained shall be deemed to authorize the Trustee to authorize or consent to or accept or adopt on behalf of any Holder any plan of reorganization, arrangement, adjustment or composition affecting the Securities or the rights of any Holder thereof or to authorize the Trustee to vote in respect of the claim of any Holder in any such proceeding.

Section 6.5 Trustee May Enforce Claims Without Possession of Securities.

All rights of action and claims under this Indenture or the Securities may be prosecuted and enforced by the Trustee without the possession of any of the Securities or the production thereof in any proceeding relating thereto, and any such proceeding instituted by the Trustee shall be brought in its own name as trustee of an express trust, and any recovery of judgment shall, after provision for the payment of the compensation, reasonable expenses, disbursements and advances of the Trustee, its agents and counsel, be for the ratable benefit of the Holders of the Securities in respect of which such judgment has been recovered.

Section 6.6 Application of Money Collected.

Any money or property collected by the Trustee pursuant to this Article shall be applied in the following order, at the date or dates fixed by the Trustee and, in case of the distribution of such money or property on account of principal or interest, upon presentation of the Securities and the notation thereon of the payment if only partially paid and upon surrender thereof if fully paid:

First: To the payment of all amounts due the Trustee under Section 7.7; and

Second: To the payment of the amounts then due and unpaid for principal of and interest on the Securities in respect of which or for the benefit of which such money has been collected, ratably, without preference or priority of any kind, according to the amounts due and payable on such Securities for principal and interest, respectively; and

Third: To the Company.

Section 6.7 Limitation on Suits.

No Holder of any Security of any Series shall have any right to institute any proceeding, judicial or otherwise, with respect to this Indenture, or for the appointment of a receiver or trustee, or for any other remedy hereunder, unless

- (a) such Holder has previously given written notice to the Trustee of a continuing Event of Default with respect to the Securities of that Series;
- (b) the Holders of not less than 25% in principal amount of the outstanding Securities of that Series shall have made written request to the Trustee to institute proceedings in respect of such Event of Default in its own name as Trustee hereunder;
- (c) such Holder or Holders have offered to the Trustee indemnity or security satisfactory to the Trustee against the costs, expenses and liabilities which might be incurred by the Trustee in compliance with such request;
- (d) the Trustee for 60 days after its receipt of such notice, request and offer of indemnity has failed to institute any such proceeding; and
- (e) no direction inconsistent with such written request has been given to the Trustee during such 60-day period by the Holders of a majority in principal amount of the outstanding Securities of that Series;

it being understood, intended and expressly covenanted by the Holder of every Security with every other Holder and the Trustee that no one or more of such Holders shall have any right in any manner whatever by virtue of, or by availing of, any provision of this Indenture to affect, disturb or prejudice the rights of any other of such Holders, or to obtain or to seek to obtain priority or preference over any other of such Holders or to enforce any right under this Indenture, except in the manner herein provided and for the equal and ratable benefit of all such Holders of the applicable Series.

Section 6.8 Unconditional Right of Holders to Receive Principal and Interest.

Notwithstanding any other provision in this Indenture, the Holder of any Security shall have the right, which is absolute and unconditional, to receive payment of the principal of and interest, if any, on such Security on the Maturity of such Security, including the Stated Maturity expressed in such Security (or, in the case of redemption, on the redemption date) and to institute suit for the enforcement of any such payment, and such rights shall not be impaired without the consent of such Holder.

Section 6.9 Restoration of Rights and Remedies.

If the Trustee or any Holder has instituted any proceeding to enforce any right or remedy under this Indenture and such proceeding has been discontinued or abandoned for any reason, or has been determined adversely to the Trustee or to such Holder, then and in every such case, subject to any determination in such proceeding, the Company, the Trustee and the Holders shall be restored severally and respectively to their former positions hereunder and thereafter all rights and remedies of the Trustee and the Holders shall continue as though no such proceeding had been instituted.

Section 6.10 Rights and Remedies Cumulative.

Except as otherwise provided with respect to the replacement or payment of mutilated, destroyed, lost or stolen Securities in Section 2.8, no right or remedy herein conferred upon or reserved to the Trustee or to the Holders is intended to be exclusive of any other right or remedy, and every right and remedy shall, to the extent permitted by law, be cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or employment of any right or remedy hereunder, or otherwise, shall not, to the extent permitted by law, prevent the concurrent assertion or employment of any other appropriate right or remedy.

Section 6.11 Delay or Omission Not Waiver.

No delay or omission of the Trustee or of any Holder of any Securities to exercise any right or remedy accruing upon any Event of Default shall impair any such right or remedy or constitute a waiver of any such Event of Default or an acquiescence therein. Every right and remedy given by this Article or by law to the Trustee or to the Holders may be exercised from time to time, and as often as may be deemed expedient, by the Trustee or by the Holders, as the case may be.

Section 6.12 Control by Holders.

The Holders of a majority in principal amount of the outstanding Securities of any Series shall have the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred on the Trustee, with respect to the Securities of such Series, provided that

- (a) such direction shall not be in conflict with any rule of law or with this Indenture,
- (b) the Trustee may take any other action deemed proper by the Trustee which is not inconsistent with such direction,
- (c) subject to the provisions of Section 7.1, the Trustee shall have the right to decline to follow any such direction if the Trustee in good faith shall, by a Responsible Officer of the Trustee, determine that the proceeding so directed would involve the Trustee in personal liability, and
- (d) prior to taking any action as directed under this Section 6.12, the Trustee shall be entitled to indemnity satisfactory to it against the losses, costs, expenses and liabilities which might be incurred by it in compliance with such request or direction.

Section 6.13 Waiver of Past Defaults.

The Holders of not less than a majority in principal amount of the outstanding Securities of any Series may on behalf of the Holders of all the Securities of such Series, by written notice to the Trustee and the Company, waive any past Default hereunder with respect to such Series and its consequences, except a Default in the payment of the principal of or interest on any Security of such Series (provided, however, that the Holders of a majority in principal amount of the outstanding Securities of any Series may rescind an acceleration and its consequences, including any related payment default that resulted from such acceleration). Upon any such waiver, such Default shall cease to exist, and any Event of Default arising therefrom shall be deemed to have been cured, for every purpose of this Indenture; but no such waiver shall extend to any subsequent or other Default or impair any right consequent thereon.

Section 6.14 Undertaking for Costs.

All parties to this Indenture agree, and each Holder of any Security by his acceptance thereof shall be deemed to have agreed, that any court may in its discretion require, in any suit for the enforcement of any right or remedy under this Indenture, or in any suit against the Trustee for any action taken, suffered or omitted by it as Trustee, the filing by any party litigant in such suit of an undertaking to pay the costs of such suit, and that such court may in its discretion assess reasonable costs, including reasonable attorneys' fees, against any party litigant in such suit, having due regard to the merits and good faith of the claims or defenses made by such party litigant; but the provisions of this Section shall not apply to any suit instituted by the Company, to any suit instituted by the Trustee, to any suit instituted by any Holder, or group of Holders, holding in the aggregate more than 10% in principal amount of the outstanding Securities of any Series, or to any suit instituted by any Holder for the enforcement of the payment of the principal of or interest on any Security on or after the Maturity of such Security, including the Stated Maturity expressed in such Security (or, in the case of redemption, on the redemption date).

**ARTICLE VII
TRUSTEE**

Section 7.1 Duties of Trustee.

(a) If an Event of Default has occurred and is continuing, the Trustee shall exercise the rights and powers vested in it by this Indenture and use the same degree of care and skill in their exercise as a prudent person would exercise or use under the circumstances in the conduct of such person's own affairs.

(b) Except during the continuance of an Event of Default:

(i) The Trustee need perform only those duties that are specifically set forth in this Indenture and no others, and no implied covenants or obligations shall be read into this Indenture against the Trustee.

(ii) In the absence of bad faith on its part, the Trustee may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon Officer's Certificates or Opinions of Counsel furnished to the Trustee and conforming to the requirements of this Indenture; however, in the case of any such Officer's Certificates or Opinions of Counsel which by any provisions hereof are specifically required to be furnished to the Trustee, the Trustee shall examine such Officer's Certificates and Opinions of Counsel to determine whether or not they conform to the form requirements of this Indenture (but need not confirm or investigate the accuracy of mathematical calculations or other facts stated therein).

(c) The Trustee may not be relieved from liability for its own negligent action, its own negligent failure to act or its own willful misconduct, except that:

(i) This paragraph does not limit the effect of paragraph (b) of this Section.

(ii) The Trustee shall not be liable for any error of judgment made in good faith by a Responsible Officer, unless it is proved in a court of competent jurisdiction that the Trustee was negligent in ascertaining the pertinent facts.

(iii) The Trustee shall not be liable with respect to any action taken, suffered or omitted to be taken by it with respect to Securities of any Series in good faith in accordance with the direction of the Holders of a majority in principal amount of the outstanding Securities of such Series relating to the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred upon the Trustee, under this Indenture with respect to the Securities of such Series in accordance with Section 6.12.

(d) Every provision of this Indenture that in any way relates to the Trustee is subject to paragraph (a), (b) and (c) of this Section.

(e) The Trustee may refuse to perform any duty or exercise any right or power unless it receives indemnity satisfactory to it against the losses, costs, expenses and liabilities which might be incurred by it in performing such duty or exercising such right or power.

(f) The Trustee shall not be liable for interest or investment on any money received by it except as the Trustee may agree in writing with the Company. Money held in trust by the Trustee need not be segregated from other funds except to the extent required by law.

(g) No provision of this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties, or in the exercise of any of its rights or powers.

(h) The Paying Agent, the Registrar and any authenticating agent shall be entitled to the protections and immunities as are set forth in paragraphs (e), (f) and (g) of this Section and in Section 7.2, each with respect to the Trustee.

Section 7.2 Rights of Trustee.

(a) The Trustee may conclusively rely on and shall be protected in acting or refraining from acting upon any document (whether in its original or facsimile form) believed by it to be genuine and to have been signed or presented by the proper person. The Trustee need not investigate any fact or matter stated in the document.

(b) Before the Trustee acts or refrains from acting, it may require an Officer's Certificate or an Opinion of Counsel or both. The Trustee shall not be liable for any action it takes or omits to take in good faith in reliance on such Officer's Certificate or Opinion of Counsel.

(c) The Trustee may act through its attorneys and agents and shall not be responsible for the misconduct or negligence of any attorney or agent appointed with due care. No Depository shall be deemed an agent of the Trustee and the Trustee shall not be responsible for any act or omission by any Depository.

(d) The Trustee shall not be liable for any action it takes or omits to take in good faith which it believes to be authorized or within its rights or powers, provided that the Trustee's conduct does not constitute willful misconduct or negligence.

(e) The Trustee may consult with counsel and the advice of such counsel or any Opinion of Counsel shall be full and complete authorization and protection in respect of any action taken, suffered or omitted by it hereunder without willful misconduct or negligence, and in reliance thereon.

(f) The Trustee shall be under no obligation to exercise any of the rights or powers vested in it by this Indenture at the request or direction of any of the Holders of Securities unless such Holders shall have offered (and, if requested, provided) to the Trustee security or indemnity satisfactory to it against the losses, costs, expenses and liabilities which might be incurred by it in compliance with such request or direction.

(g) The Trustee shall not be bound to make any investigation into the facts or matters stated in any resolution, certificate, statement, instrument, opinion, report, notice, request, direction, consent, order, bond, debenture, note, other evidence of indebtedness or other paper or document, but the Trustee, in its discretion, may make such further inquiry or investigation into such facts or matters as it may see fit.

(h) The Trustee shall not be deemed to have notice of any Default or Event of Default unless a Responsible Officer of the Trustee has actual knowledge thereof or unless written notice of any event which is in fact such a default is received by the Trustee at the Corporate Trust Office of the Trustee, and such notice references the existence of a Default or Event of Default, the Securities generally or the Securities of a particular Series and this Indenture.

(i) In no event shall the Trustee be responsible or liable to any person for special, punitive, indirect, consequential or incidental loss or damage of any kind whatsoever (including but not limited to lost profits), even if the Trustee has been advised of the likelihood of such loss or damage and regardless of the form of action.

(j) The permissive right of the Trustee to take the actions permitted by this Indenture shall not be construed as an obligation or duty to do so.

(k) No bond or surety shall be required with respect to performance of Trustee's duties and powers.

(l) Under no circumstances shall the Trustee be liable in its individual capacity for the obligations evidenced by the Securities.

(m) Any request or direction of the Company mentioned herein shall be sufficiently evidenced by a Company Order and any resolution of the Board of Directors may be sufficiently evidenced by a Board Resolution.

(n) The Trustee may request that the Company deliver a certificate setting forth the names of individuals and/or titles of officers authorized at such time to take specified actions pursuant to this Indenture.

(o) The rights, privileges, protections, immunities and benefits given to the Trustee, including, without limitation, its right to be indemnified, are extended to, and shall be enforceable by, the Trustee in each of its capacities hereunder, and each agent, custodian and other Person employed to act hereunder.

Section 7.3 Individual Rights of Trustee.

The Trustee in its individual or any other capacity may become the owner or pledgee of Securities and may otherwise deal with the Company or an Affiliate of the Company with the same rights it would have if it were not Trustee. Any Agent may do the same with like rights. The Trustee is also subject to Sections 7.10 and 7.11.

Section 7.4 Trustee's Disclaimer.

The Trustee shall not be responsible for and makes no representation as to the validity or adequacy of this Indenture or the Securities, it shall not be accountable for the Company's use of the proceeds from the Securities, or any money paid to the Company or upon the Company's direction under any provision of this Indenture, it shall not be responsible for the use or application of any money received by any Paying Agent other than the Trustee, and it shall not be responsible for any statement herein or in the Securities or any other document in connection with the sale of the Securities other than its authentication. The recitals contained herein and in the Securities, except the Trustee's certificates of authentication, shall be taken as the statements of the Company, and the Trustee or any Authenticating Agent assumes no responsibility for their correctness.

Section 7.5 Notice of Defaults.

If a Default or Event of Default occurs and is continuing with respect to the Securities of any Series and if it is actually known to a Responsible Officer of the Trustee, the Trustee shall send to each Securityholder of the Securities of that Series notice of a Default or Event of Default within 90 days after it occurs or, if later, after a Responsible Officer of the Trustee has knowledge of such Default or Event of Default. Except in the case of a Default or Event of Default in payment of principal of or interest on any Security of any Series, the Trustee may withhold the notice if and so long as it in good faith determines that withholding the notice is in the interests of Securityholders of that Series.

Section 7.6 Reports by Trustee to Holders.

Within 60 days after each _____, commencing _____, 20____, the Trustee shall transmit by mail to all Securityholders, as their names and addresses appear on the register kept by the Registrar, a brief report dated as of such anniversary date, in accordance with, and to the extent required under, TIA § 313.

A copy of each report at the time of its sending to Securityholders of any Series shall be filed with the SEC and each national securities exchange on which the Securities of that Series are listed. The Company shall promptly notify the Trustee in writing when Securities of any Series are listed on any national securities exchange or delisted from any national securities exchange.

Section 7.7 Compensation and Indemnity.

The Company shall pay to the Trustee from time to time compensation for its services as the Company and the Trustee shall from time to time agree upon in writing. The Trustee's compensation shall not be limited by any law on compensation of a trustee of an express trust. The Company shall reimburse the Trustee upon request for all reasonable out of pocket expenses incurred by it. Such expenses shall include the reasonable compensation and expenses of the Trustee's agents and counsel.

The Company shall indemnify each of the Trustee and any predecessor Trustee (including for the cost of defending itself) against any cost, damages, losses, expense or liability, including taxes (other than taxes based upon, measured by or determined by the income of the Trustee) incurred by it except as set forth in the next paragraph in the performance of its duties under this Indenture or in connection with its acceptance of its obligations hereunder, as Trustee or Agent. The Trustee shall notify the Company promptly of any claim for which it may seek indemnity. Failure by the Trustee to so notify the Company shall not relieve the Company of its obligations hereunder, unless and to the extent that the Company is materially prejudiced thereby. The Company shall defend the claim and the Trustee shall cooperate in the defense. The Trustee may have separate counsel and the Company shall pay the reasonable fees and expenses of such counsel. The Company need not pay for any settlement made without its consent, which consent will not be unreasonably withheld. This indemnification shall apply to officers, directors, employees, shareholders and agents of the Trustee.

The Company need not reimburse any expense or indemnify against any loss or liability incurred by the Trustee or by any officer, director, employee, shareholder or agent of the Trustee through willful misconduct or negligence, as finally adjudicated by a court of competent jurisdiction.

To secure the Company's payment obligations in this Section, the Trustee shall have a lien prior to the Securities of any Series on all money or property held or collected by the Trustee, except that held in trust to pay principal of and interest on particular Securities of that Series.

When the Trustee incurs expenses or renders services after an Event of Default specified in Section 6.1(d) or (e) occurs, the expenses and the compensation for the services are intended to constitute expenses of administration under any Bankruptcy Law.

The provisions of this Section shall survive the termination of this Indenture or the resignation or removal of the Trustee.

Section 7.8 Replacement of Trustee.

A resignation or removal of the Trustee and appointment of a successor Trustee shall become effective only upon the successor Trustee's acceptance of appointment as provided in this Section.

The Trustee may resign with respect to the Securities of one or more Series by so notifying the Company at least 30 days prior to the date of the proposed resignation. The Holders of a majority in principal amount of the Securities of any Series may remove the Trustee with respect to that Series by so notifying the Trustee and the Company in writing at least 30 days prior to such removal. The Company may remove the Trustee with respect to Securities of one or more Series with at least 30 days written notice if:

- (a) the Trustee fails to comply with Section 7.10;
- (b) the Trustee is adjudged a bankrupt or an insolvent or an order for relief is entered with respect to the Trustee under any Bankruptcy Law;
- (c) a Custodian or public officer takes charge of the Trustee or its property; or
- (d) the Trustee becomes incapable of acting.

If the Trustee resigns or is removed or if a vacancy exists in the office of Trustee for any reason, the Company shall promptly appoint a successor Trustee. Within one year after the successor Trustee takes office, the Holders of a majority in principal amount of the then-outstanding Securities may appoint a successor Trustee to replace the successor Trustee appointed by the Company.

If a successor Trustee with respect to the Securities of any one or more Series does not take office within 60 days after the retiring Trustee resigns or is removed, the retiring Trustee, the Company or the Holders of at least a majority in principal amount of the Securities of the applicable Series may petition any court of competent jurisdiction for the appointment of a successor Trustee.

A successor Trustee shall deliver a written acceptance of its appointment to the retiring Trustee and to the Company. Promptly after that, the retiring Trustee shall transfer all property held by it as Trustee to the successor Trustee subject to the lien provided for in Section 7.7, the resignation or removal of the retiring Trustee shall become effective, and the successor Trustee shall have all the rights, powers and duties of the Trustee with respect to each Series of Securities for which it is acting as Trustee under this Indenture. A successor Trustee shall send a notice of its succession to each Securityholder of each such Series. Notwithstanding replacement of the Trustee pursuant to this Section 7.8, the Company's obligations under Section 7.7 hereof shall continue for the benefit of the retiring Trustee with respect to expenses and liabilities incurred by it for actions taken or omitted to be taken in accordance with its rights, powers and duties under this Indenture prior to such replacement.

Section 7.9 Successor Trustee by Merger, Etc.

If the Trustee consolidates with, merges or converts into, or transfers all or substantially all of its corporate trust business to, another corporation, or national banking association, the successor corporation or national banking association without any further act shall be the successor Trustee, subject to Section 7.10.

Section 7.10 Eligibility; Disqualification.

This Indenture shall always have a Trustee who satisfies the requirements of TIA § 310(a)(1), (2) and (5). The Trustee shall always have a combined capital and surplus of at least \$50,000,000 as set forth in its most recent published annual report of condition. The Trustee shall comply with TIA § 310(b).

Section 7.11 Preferential Collection of Claims Against Company.

The Trustee is subject to TIA § 311(a), excluding any creditor relationship listed in TIA § 311(b). A Trustee who has resigned or been removed shall be subject to TIA § 311(a) to the extent indicated.

ARTICLE VIII
SATISFACTION AND DISCHARGE; DEFEASANCE

Section 8.1 Satisfaction and Discharge of Indenture.

This Indenture shall upon Company Order be discharged with respect to the Securities of any Series and cease to be of further effect as to all Securities of such Series (except as hereinafter provided in this Section 8.1), and the Trustee, at the expense of the Company, shall execute instruments acknowledging satisfaction and discharge of this Indenture, when

(a) either

(i) all Securities of such Series theretofore authenticated and delivered (other than Securities that have been destroyed, lost or stolen and that have been replaced or paid) have been delivered to the Trustee for cancellation; or

(ii) all such Securities of such Series not theretofore delivered to the Trustee for cancellation

(1) have become due and payable by reason of sending a notice of redemption or otherwise, or

(2) will become due and payable at their Stated Maturity within one year, or

(3) have been called for redemption or are to be called for redemption within one year under arrangements satisfactory to the Trustee for the giving of notice of redemption by the Trustee in the name, and at the expense, of the Company, or

(4) are deemed paid and discharged pursuant to Section 8.3, as applicable;

and the Company, in the case of (1), (2) or (3) above, shall have irrevocably deposited or caused to be deposited with the Trustee as trust funds in trust an amount of money or U.S. Government Obligations, which amount shall be sufficient (as determined by the Company) for the purpose of paying and discharging each installment of principal (including mandatory sinking fund or analogous payments) of and interest on all the Securities of such Series on the dates such installments of principal or interest are due;

(b) the Company has paid or caused to be paid all other sums payable hereunder by the Company; and

(c) the Company shall have delivered to the Trustee an Officer's Certificate and an Opinion of Counsel, each stating that all conditions precedent provided for relating to the satisfaction and discharge contemplated by this Section have been complied with.

Notwithstanding the satisfaction and discharge of this Indenture, the obligations of the Company to the Trustee under Section 7.7, and, if money shall have been deposited with the Trustee pursuant to clause (a) of this Section, the provisions of Sections 2.4, 2.7, 2.8, 8.2 and 8.5 shall survive.

Section 8.2 Application of Trust Funds; Indemnification.

(a) Subject to the provisions of Section 8.5, all money and U.S. Government Obligations or Foreign Government Obligations deposited with the Trustee pursuant to Section 8.1, 8.3 or 8.4 and all money received by the Trustee in respect of U.S. Government Obligations or Foreign Government Obligations deposited with the Trustee pursuant to Section 8.1, 8.3 or 8.4, shall be held in trust and applied by it, in accordance with the provisions of the Securities and this Indenture, to the payment, either directly or through any Paying Agent (including the Company acting as its own Paying Agent) as the Trustee may determine, to the persons entitled thereto, of the principal and interest for whose payment such money has been deposited with or received by the Trustee or to make mandatory sinking fund payments or analogous payments as contemplated by Sections 8.1, 8.3 or 8.4.

(b) The Company shall pay and shall indemnify the Trustee against any tax, fee or other charge imposed on or assessed against U.S. Government Obligations or Foreign Government Obligations deposited pursuant to Sections 8.1, 8.3 or 8.4 or the interest and principal received in respect of such obligations other than any payable by or on behalf of Holders.

(c) The Trustee shall deliver or pay to the Company from time to time upon Company Order any U.S. Government Obligations or Foreign Government Obligations or money held by it as provided in Sections 8.3 or 8.4 which, in the opinion of a nationally recognized firm of independent certified public accountants or investment bank expressed in a written certification thereof delivered to the Trustee, are then in excess of the amount thereof which then would have been required to be deposited for the purpose for which such U.S. Government Obligations or Foreign Government Obligations or money were deposited or received. This provision shall not authorize the sale by the Trustee of any U.S. Government Obligations or Foreign Government Obligations held under this Indenture.

Section 8.3 Legal Defeasance of Securities of any Series.

Unless this Section 8.3 is otherwise specified, pursuant to Section 2.2, to be inapplicable to Securities of any Series, the Company shall be deemed to have paid and discharged the entire indebtedness on all the outstanding Securities of any Series on the 91st day after the date of the deposit referred to in subparagraph (d) hereof, and the provisions of this Indenture, as it relates to such outstanding Securities of such Series, shall no longer be in effect (and the Trustee, at the expense of the Company, shall, upon receipt of a Company Order, execute instruments acknowledging the same), except as to:

(a) the rights of Holders of Securities of such Series to receive, from the trust funds described in subparagraph (d) hereof, (i) payment of the principal of and each installment of principal of and interest on the outstanding Securities of such Series on the Maturity of such principal or installment of principal or interest and (ii) the benefit of any mandatory sinking fund payments applicable to the Securities of such Series on the day on which such payments are due and payable in accordance with the terms of this Indenture and the Securities of such Series;

(b) the provisions of Sections 2.4, 2.5, 2.7, 2.8, 7.7, 8.2, 8.3, 8.5 and 8.6; and

(c) the rights, powers, trusts and immunities of the Trustee hereunder and the Company's obligations in connection therewith;

provided that, the following conditions shall have been satisfied:

(d) the Company shall have irrevocably deposited or caused to be deposited (except as provided in Section 8.2(c)) with the Trustee as trust funds specifically pledged as security for and dedicated solely to the benefit of the Holders of such Securities (i) in the case of Securities of such Series denominated in Dollars, cash in Dollars and/or U.S. Government Obligations, or (ii) in the case of Securities of such Series denominated in a Foreign Currency (other than a composite currency), money and/or Foreign Government Obligations, which through the payment of interest and principal in respect thereof in accordance with their terms, will provide (and without reinvestment and assuming no tax liability will be imposed on such Trustee), not later than one day before the due date of any payment of money, an amount in cash, sufficient, in the opinion of a nationally recognized firm of independent public accountants or investment bank expressed in a written certification thereof delivered to the Trustee, to pay and discharge each installment of principal of and interest, on and any mandatory sinking fund payments in respect of all the Securities of such Series on the dates such installments of principal or interest and such sinking fund payments are due;

(e) such deposit will not result in a breach or violation of, or constitute a default under, this Indenture or any other agreement or instrument to which the Company is a party or by which it is bound;

(f) no Default or Event of Default with respect to the Securities of such Series shall have occurred and be continuing on the date of such deposit or during the period ending on the 91st day after such date;

(g) the Company shall have delivered to the Trustee an Officer's Certificate and an Opinion of Counsel to the effect that (i) the Company has received from, or there has been published by, the Internal Revenue Service a ruling, or (ii) since the date of execution of this Indenture, there has been a change in the applicable Federal income tax law, in either case to the effect that, and based thereon such Opinion of Counsel shall confirm that, the Holders of the Securities of such Series will not recognize income, gain or loss for Federal income tax purposes as a result of such deposit, defeasance and discharge and will be subject to Federal income tax on the same amount and in the same manner and at the same times as would have been the case if such deposit, defeasance and discharge had not occurred;

(h) the Company shall have delivered to the Trustee an Officer's Certificate stating that the deposit was not made by the Company with the intent of defeating, hindering, delaying or defrauding any other creditors of the Company; and

(i) the Company shall have delivered to the Trustee an Officer's Certificate and an Opinion of Counsel, each stating that all conditions precedent provided for relating to the defeasance contemplated by this Section have been complied with.

Section 8.4 Covenant Defeasance.

Unless this Section 8.4 is otherwise specified pursuant to Section 2.2 to be inapplicable to Securities of any Series, the Company may omit to comply with respect to the Securities of any Series with any term, provision or condition set forth under Sections 4.2, 4.3, 4.4 and 5.1 and, unless otherwise specified therein, any additional covenants specified in a supplemental indenture for such Series of Securities or a Board Resolution or an Officer's Certificate delivered pursuant to Section 2.2 (and the failure to comply with any such covenants shall not constitute a Default or Event of Default with respect to such Series under Section 6.1) and the occurrence of any event specified in a supplemental indenture for such Series of Securities or a Board Resolution or an Officer's Certificate delivered pursuant to Section 2.2.18 and designated as an Event of Default shall not constitute a Default or Event of Default hereunder, with respect to the Securities of such Series, but, except as specified above, the remainder of this Indenture and such Securities will be unaffected thereby; provided that the following conditions shall have been satisfied:

(a) with reference to this Section 8.4, the Company has irrevocably deposited or caused to be irrevocably deposited (except as provided in Section 8.2(c)) with the Trustee as trust funds in trust for the purpose of making the following payments specifically pledged as security for, and dedicated solely to, the benefit of the Holders of such Securities (i) in the case of Securities of such Series denominated in Dollars, cash in Dollars and/or U.S. Government Obligations, or (ii) in the case of Securities of such Series denominated in a Foreign Currency (other than a composite currency), money and/or Foreign Government Obligations, which through the payment of interest and principal in respect thereof in accordance with their terms, will provide (and without reinvestment and assuming no tax liability will be imposed on such Trustee), not later than one day before the due date of any payment of money, an amount in cash, sufficient, in the opinion of a nationally recognized firm of independent certified public accountants or investment bank expressed in a written certification thereof delivered to the Trustee, to pay and discharge each installment of principal (including mandatory sinking fund or analogous payments) of and interest on all the Securities of such Series on the dates such installments of principal or interest are due;

(b) such deposit will not result in a breach or violation of, or constitute a default under, this Indenture or any other agreement or instrument to which the Company is a party or by which it is bound;

(c) no Default or Event of Default with respect to the Securities of such Series shall have occurred and be continuing on the date of such deposit;

(d) the Company shall have delivered to the Trustee an Officers' Certificate and an Opinion of Counsel to the effect that (i) the Company has received from, or there has been published by, the Internal Revenue Service a ruling, or (ii) since the date of execution of this Indenture, there has been a change in the applicable Federal income tax law, in either case to the effect that, and based thereon such Opinion of Counsel shall confirm, subject to customary exclusions, that the Holders of the Securities of such Series will not recognize income, gain or loss for Federal income tax purposes as a result of such deposit, covenant defeasance and discharge and will be subject to Federal income tax on the same amount and in the same manner and at the same times as would have been the case if such deposit, covenant defeasance and discharge had not occurred;

(e) The Company shall have delivered to the Trustee an Officer's Certificate stating the deposit was not made by the Company with the intent of defeating, hindering, delaying or defrauding any other creditors of the Company; and

(f) The Company shall have delivered to the Trustee an Officer's Certificate and an Opinion of Counsel, each stating that all conditions precedent herein provided for relating to the covenant defeasance contemplated by this Section have been complied with.

Section 8.5 Repayment to Company.

Subject to applicable abandoned property law, the Trustee and the Paying Agent shall pay to the Company upon request any money held by them for the payment of principal and interest that remains unclaimed for two years. After that, Securityholders entitled to the money must look to the Company for payment as general creditors unless an applicable abandoned property law designates another person, and the Trustee shall have no further liability with respect to such money.

Section 8.6 Reinstatement.

If the Trustee or the Paying Agent is unable to apply any money deposited with respect to Securities of any Series in accordance with Section 8.1 by reason of any legal proceeding or by reason of any order or judgment of any court or governmental authority enjoining, restraining or otherwise prohibiting such application, the obligations of the Company under this Indenture with respect to the Securities of such Series and under the Securities of such Series shall be revived and reinstated as though no deposit had occurred pursuant to Section 8.1 until such time as the Trustee or the Paying Agent is permitted to apply all such money in accordance with Section 8.1; provided, however, that if the Company has made any payment of principal of or interest on or any Additional Amounts with respect to any Securities because of the reinstatement of its obligations, the Company shall be subrogated to the rights of the Holders of such Securities to receive such payment from the money or U.S. Government Obligations held by the Trustee or Paying Agent after payment in full to the Holders.

**ARTICLE IX
AMENDMENTS AND WAIVERS**

Section 9.1 Without Consent of Holders.

The Company and the Trustee may amend or supplement this Indenture or the Securities of one or more Series without the consent of any Securityholder:

- (a) to cure any ambiguity, defect or inconsistency as evidenced by an Officer Certificate;
- (b) to comply with Article V;
- (c) to provide for uncertificated Securities in addition to or in place of certificated Securities;
- (d) to add guarantees with respect to Securities of any Series or secure Securities of any Series;
- (e) to surrender any of the Company's rights or powers under this Indenture;
- (f) to add covenants or events of default for the benefit of the holders of Securities of any Series;
- (g) to comply with the applicable procedures of the applicable depository;
- (h) to make any change that does not adversely affect the rights of any Securityholder;
- (i) to provide for the issuance of and establish the form and terms and conditions of Securities of any Series as permitted by this

Indenture;

(j) to evidence and provide for the acceptance of appointment hereunder by a successor Trustee with respect to the Securities of one or more Series and to add to or change any of the provisions of this Indenture as shall be necessary to provide for or facilitate the administration of the trusts hereunder by more than one Trustee;

(k) to comply with requirements of the SEC in order to effect or maintain the qualification of this Indenture under the TIA;

(l) to add to, change or eliminate any provision of this Indenture or the Securities of such Series in accordance with the TIA, or to comply with the provisions of DTC, Euroclear or Clearstream or the Trustee with respect to provisions of this Indenture or the Securities of such Series relating to transfers or exchanges of the Securities of such Series or beneficial interests in the Securities of such Series; or

(m) to conform any provision of this Indenture, in so far as it relates to the Securities of such Series, to the description of the Securities of such Series in the prospectus supplement relation to the offering of the Securities of such Series.

Section 9.2 With Consent of Holders.

The Company and the Trustee may enter into a supplemental indenture with the written consent of the Holders of at least a majority in aggregate principal amount of the outstanding Securities of each Series affected by such supplemental indenture (including consents obtained in connection with a tender offer or exchange offer for the Securities of such Series), for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of this Indenture or of any supplemental indenture or of modifying in any manner the rights of the Securityholders of each such Series. Except as provided in Section 6.13, the Holders of at least a majority in aggregate principal amount of the outstanding Securities of any Series by notice to the Trustee (including consents obtained in connection with a tender offer or exchange offer for the Securities of such Series) may waive compliance by the Company with any provision of this Indenture or the Securities with respect to such Series.

It shall not be necessary for the consent of the Holders of Securities under this Section 9.2 to approve the particular form of any proposed supplemental indenture or waiver, but it shall be sufficient if such consent approves the substance thereof. After a supplemental indenture or waiver under this section becomes effective, the Company shall send to the Holders of Securities affected thereby, a notice briefly describing the supplemental indenture or waiver. Any failure by the Company to send such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such supplemental indenture or waiver.

Section 9.3 Limitations.

Without the consent of each Securityholder affected, an amendment or waiver may not:

(a) reduce the principal amount of Securities whose Holders must consent to an amendment, supplement or waiver;

- (b) reduce the rate of or extend the time for payment of interest (including default interest) on any Security;
- (c) reduce the principal or change the Stated Maturity of any Security or reduce the amount of, or postpone the date fixed for, the payment of any sinking fund or analogous obligation;
- (d) reduce the principal amount of Discount Securities payable upon acceleration of the maturity thereof;
- (e) waive a Default or Event of Default in the payment of the principal of or interest, if any, on any Security (except a rescission of acceleration of the Securities of any Series by the Holders of at least a majority in principal amount of the outstanding Securities of such Series and a waiver of the payment default that resulted from such acceleration);
- (f) make the principal of or interest, if any, on any Security payable in any currency other than that stated in the Security;
- (g) make any change in Sections 6.8, 6.13 or 9.3 (this sentence); or
- (h) waive a redemption payment with respect to any Security, provided that such redemption is made at the Company's option.

Section 9.4 Compliance with Trust Indenture Act.

Every amendment to this Indenture or the Securities of one or more Series shall be set forth in a supplemental indenture hereto that complies with the TIA as then in effect.

Section 9.5 Revocation and Effect of Consents.

Until an amendment is set forth in a supplemental indenture or a waiver becomes effective, a consent to it by a Holder of a Security is a continuing consent by the Holder and every subsequent Holder of a Security or portion of a Security that evidences the same debt as the consenting Holder's Security, even if notation of the consent is not made on any Security. However, any such Holder or subsequent Holder may revoke the consent as to his Security or portion of a Security if the Trustee receives the notice of revocation before the date of the supplemental indenture or the date the waiver becomes effective.

Any amendment or waiver once effective shall bind every Securityholder of each Series affected by such amendment or waiver unless it is of the type described in any of clauses (a) through (h) of Section 9.3. In that case, the amendment or waiver shall bind each Holder of a Security who has consented to it and every subsequent Holder of a Security or portion of a Security that evidences the same debt as the consenting Holder's Security.

The Company may, but shall not be obligated to, fix a record date for the purpose of determining the Holders entitled to give their consent or take any other action described above or required or permitted to be taken pursuant to this Indenture. If a record date is fixed, then notwithstanding the second immediately preceding paragraph, those Persons who were Holders at such record date (or their duly designated proxies), and only those persons, shall be entitled to give such consent or to revoke any consent previously given or take any such action, whether or not such Persons continue to be Holders after such record date. No such consent shall be valid or effective for more than 120 days after such record date.

Section 9.6 Notation on or Exchange of Securities.

The Company or the Trustee may place an appropriate notation about an amendment or waiver on any Security of any Series thereafter authenticated. The Company in exchange for Securities of that Series may issue and the Trustee shall authenticate upon receipt of a Company Order in accordance with Section 2.3 new Securities of that Series that reflect the amendment or waiver.

Section 9.7 Trustee Protected.

In executing, or accepting the additional trusts created by, any supplemental indenture permitted by this Article or the modifications thereby of the trusts created by this Indenture, the Trustee shall be entitled to receive, and (subject to Section 7.1) shall be fully protected in relying upon, an Officer's Certificate or an Opinion of Counsel or both complying with Section 10.4 and stating that the supplemental indenture is authorized or permitted by this Indenture and constitutes a legal valid and binding obligation of the Company, enforceable against it in accordance with its terms. The Trustee shall sign all supplemental indentures upon delivery of such an Officer's Certificate or Opinion of Counsel or both, except that the Trustee need not sign any supplemental indenture that adversely affects its rights, duties, liabilities or immunities under this Indenture.

**ARTICLE X
MISCELLANEOUS**

Section 10.1 Trust Indenture Act Controls.

If any provision of this Indenture limits, qualifies, or conflicts with another provision which is required or deemed to be included in this Indenture by the TIA, such required or deemed provision shall control.

Section 10.2 Notices.

Any notice or communication by the Company or the Trustee to the other, or by a Holder to the Company or the Trustee, is duly given if in writing and delivered in person or mailed by first-class mail (registered or certified, return receipt requested), facsimile transmission, email or overnight air courier guaranteeing next day delivery, to the others' address:

if to the Company:

Tenaya Therapeutics, Inc.
171 Oyster Point Boulevard, 5th Floor
South San Francisco, California 94080
Attention: General Counsel

with a copy to:

Wilson Sonsini Goodrich & Rosati, Professional Corporation
650 Page Mill Road
Palo Alto, CA 94304
Attention: Jennifer D. Knapp

if to the Trustee:

[_____]
[_____]
Attention: [_____]

The Company or the Trustee by notice to the other may designate additional or different addresses for subsequent notices or communications. Any notice or communication delivered to the Trustee shall be deemed effective upon actual receipt thereof.

Any notice or communication to a Securityholder shall be sent electronically or by first-class mail to his address shown on the register kept by the Registrar, in accordance with the procedures of the Depository. Failure to send a notice or communication to a Securityholder of any Series or any defect in it shall not affect its sufficiency with respect to other Securityholders of that or any other Series.

If a notice or communication is sent or published in the manner provided above, within the time prescribed, it is duly given, whether or not the Securityholder receives it.

If the Company sends a notice or communication to Securityholders, it shall send a copy to the Trustee and each Agent at the same time.

Notwithstanding any other provision of this Indenture or any Security, where this Indenture or any Security provides for notice of any event (including any notice of redemption) to a Holder of a Global Security (whether by mail or otherwise), such notice shall be sufficiently given to the Depository for such Security (or its designee) pursuant to the customary procedures of such Depository.

Section 10.3 Communication by Holders with Other Holders.

Securityholders of any Series may communicate pursuant to TIA § 312(b) with other Securityholders of that Series or any other Series with respect to their rights under this Indenture or the Securities of that Series or all Series. The Company, the Trustee, the Registrar and anyone else shall have the protection of TIA § 312(c).

Section 10.4 Certificate and Opinion as to Conditions Precedent.

Upon any request or application by the Company to the Trustee to take any action under this Indenture, the Company shall furnish to the Trustee:

(a) an Officer's Certificate stating that, in the opinion of the signers, all conditions precedent, if any, provided for in this Indenture relating to the proposed action have been complied with; and

(b) an Opinion of Counsel stating that, in the opinion of such counsel, all such conditions precedent have been complied with.

Section 10.5 Statements Required in Certificate or Opinion.

Each certificate or opinion with respect to compliance with a condition or covenant provided for in this Indenture (other than a certificate provided pursuant to TIA § 314(a)(4)) shall comply with the provisions of TIA § 314(e) and shall include:

(a) a statement that the person making such certificate or opinion has read such covenant or condition;

(b) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such certificate or opinion are based;

(c) a statement that, in the opinion of such person, he has made such examination or investigation as is necessary to enable him to express an informed opinion as to whether or not such covenant or condition has been complied with; and

(d) a statement as to whether or not, in the opinion of such person, such condition or covenant has been complied with.

Section 10.6 Rules by Trustee and Agents.

The Trustee may make reasonable rules for action by or a meeting of Securityholders of one or more Series. Any Agent may make reasonable rules and set reasonable requirements for its functions.

Section 10.7 Legal Holidays.

A "Legal Holiday" is any day that is not a Business Day. If a payment date is a Legal Holiday at a place of payment, payment may be made at that place on the next succeeding day that is not a Legal Holiday, and no interest shall accrue for the intervening period.

Section 10.8 No Recourse Against Others.

A director, officer, employee or stockholder (past or present), as such, of the Company shall not have any liability for any obligations of the Company under the Securities or the Indenture or for any claim based on, in respect of or by reason of such obligations or their creation. Each Securityholder by accepting a Security waives and releases all such liability. The waiver and release are part of the consideration for the issue of the Securities.

Section 10.9 Counterparts.

This Indenture may be executed in any number of counterparts and by the parties hereto in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement. The exchange of copies of this Indenture and of signature pages by facsimile or PDF transmission shall constitute effective execution and delivery of this Indenture as to the parties hereto and may be used in lieu of the original Indenture for all purposes. Signatures of the parties hereto transmitted by facsimile or PDF shall be deemed to be their original signatures for all purposes.

Section 10.10 Governing Law; Waiver of Jury Trial; Consent to Jurisdiction.

THIS INDENTURE AND THE SECURITIES, INCLUDING ANY CLAIM OR CONTROVERSY ARISING OUT OF OR RELATING TO THE INDENTURE OR THE SECURITIES, SHALL BE GOVERNED BY THE LAWS OF THE STATE OF NEW YORK. THE COMPANY, THE TRUSTEE AND THE HOLDERS (BY THEIR ACCEPTANCE OF THE SECURITIES) EACH HEREBY IRREVOCABLY WAIVE, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATING TO THIS INDENTURE, THE SECURITIES OR THE TRANSACTIONS CONTEMPLATED HEREBY OR THEREBY.

Any legal suit, action or proceeding arising out of or based upon this Indenture or the transactions contemplated hereby may be instituted in the federal courts of the United States of America located in the City of New York or the courts of the State of New York in each case located in the City of New York (collectively, the "*Specified Courts*"), and each party irrevocably submits to the nonexclusive jurisdiction of such courts in any such suit, action or proceeding. Service of any process, summons, notice or document by mail (to the extent allowed under any applicable statute or rule of court) to such party's address set forth above shall be effective service of process for any suit, action or other proceeding brought in any such court. The Company, the Trustee and the Holders (by their acceptance of the Securities) each hereby irrevocably and unconditionally waive any objection to the laying of venue of any suit, action or other proceeding in the Specified Courts and irrevocably and unconditionally waive and agree not to plead or claim any such suit, action or other proceeding has been brought in an inconvenient forum.

Section 10.11 No Adverse Interpretation of Other Agreements.

This Indenture may not be used to interpret another indenture, loan or debt agreement of the Company or a Subsidiary of the Company. Any such indenture, loan or debt agreement may not be used to interpret this Indenture.

Section 10.12 Successors.

All agreements of the Company in this Indenture and the Securities shall bind its successor. All agreements of the Trustee in this Indenture shall bind its successor.

Section 10.13 Severability.

In case any provision in this Indenture or in the Securities shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

Section 10.14 Table of Contents, Headings, Etc.

The Table of Contents, Cross Reference Table, and headings of the Articles and Sections of this Indenture have been inserted for convenience of reference only, are not to be considered a part hereof, and shall in no way modify or restrict any of the terms or provisions hereof.

Section 10.15 Securities in a Foreign Currency.

Unless otherwise specified in a Board Resolution, a supplemental indenture hereto or an Officer's Certificate delivered pursuant to Section 2.2 of this Indenture with respect to a particular Series of Securities, whenever for purposes of this Indenture any action may be taken by the Holders of a specified percentage in aggregate principal amount of Securities of all Series or all Series affected by a particular action at the time outstanding and, at such time, there are outstanding Securities of any Series which are denominated in more than one currency, then the principal amount of Securities of such Series which shall be deemed to be outstanding for the purpose of taking such action shall be determined by converting any such other currency into a currency that is designated upon issuance of any particular Series of Securities. Unless otherwise specified in a Board Resolution, a supplemental indenture hereto or an Officer's Certificate delivered pursuant to Section 2.2 of this Indenture with respect to a particular Series of Securities, such conversion shall be at the spot rate for the purchase of the designated currency as published in The Financial Times in the "Currency Rates" section (or, if The Financial Times is no longer published, or if such information is no longer available in The Financial Times, such source as may be selected in good faith by the Company) on any date of determination. The provisions of this paragraph shall apply in determining the equivalent principal amount in respect of Securities of a Series denominated in currency other than Dollars in connection with any action taken by Holders of Securities pursuant to the terms of this Indenture.

All decisions and determinations provided for in the preceding paragraph shall, in the absence of manifest error, to the extent permitted by law, be conclusive for all purposes and irrevocably binding upon the Trustee and all Holders.

Section 10.16 Judgment Currency.

The Company agrees, to the fullest extent that it may effectively do so under applicable law, that (a) if for the purpose of obtaining judgment in any court it is necessary to convert the sum due in respect of the principal of or interest or other amount on the Securities of any Series (the

“Required Currency”) into a currency in which a judgment will be rendered (the “Judgment Currency”), the rate of exchange used shall be the rate at which in accordance with normal banking procedures the Trustee could purchase in The City of New York the Required Currency with the Judgment Currency on the day on which final unappealable judgment is entered, unless such day is not a New York Banking Day, then the rate of exchange used shall be the rate at which in accordance with normal banking procedures the Trustee could purchase in The City of New York the Required Currency with the Judgment Currency on the New York Banking Day preceding the day on which final unappealable judgment is entered and (b) its obligations under this Indenture to make payments in the Required Currency (i) shall not be discharged or satisfied by any tender, any recovery pursuant to any judgment (whether or not entered in accordance with subsection (a)), in any currency other than the Required Currency, except to the extent that such tender or recovery shall result in the actual receipt, by the payee, of the full amount of the Required Currency expressed to be payable in respect of such payments, (ii) shall be enforceable as an alternative or additional cause of action for the purpose of recovering in the Required Currency the amount, if any, by which such actual receipt shall fall short of the full amount of the Required Currency so expressed to be payable, and (iii) shall not be affected by judgment being obtained for any other sum due under this Indenture. For purposes of the foregoing, “New York Banking Day” means any day except a Saturday, Sunday or a Legal Holiday in The City of New York on which banking institutions are authorized or required by law, regulation or executive order to close.

Section 10.17 Force Majeure.

In no event shall the Trustee be responsible or liable for any failure or delay in the performance of its obligations hereunder arising out of or caused by, directly or indirectly, forces beyond its control, including, without limitation, strikes, work stoppages, accidents, acts of war or terrorism, civil or military disturbances, nuclear or natural catastrophes or acts of God, and interruptions, loss or malfunctions of utilities, communications or computer (software and hardware) services, it being understood that the Trustee shall use reasonable best efforts which are consistent with accepted practices in the banking industry to resume performance as soon as practicable under the circumstances.

Section 10.18 U.S.A. Patriot Act.

The parties hereto acknowledge that in accordance with Section 326 of the U.S.A. Patriot Act, the Trustee is required to obtain, verify, and record information that identifies each person or legal entity that establishes a relationship or opens an account with the Trustee. The parties to this Indenture agree that they will provide the Trustee with such information as it may request in order for the Trustee to satisfy the requirements of the U.S.A. Patriot Act.

**ARTICLE XI
SINKING FUNDS**

Section 11.1 Applicability of Article.

The provisions of this Article shall be applicable to any sinking fund for the retirement of the Securities of a Series if so provided by the terms of such Securities pursuant to Section 2.2 and except as otherwise permitted or required by any form of Security of such Series issued pursuant to this Indenture.

The minimum amount of any sinking fund payment provided for by the terms of the Securities of any Series is herein referred to as a “*mandatory sinking fund payment*” and any other amount provided for by the terms of Securities of such Series is herein referred to as an “*optional sinking fund payment*.” If provided for by the terms of Securities of any Series, the cash amount of any sinking fund payment may be subject to reduction as provided in Section 11.2. Each sinking fund payment shall be applied to the redemption of Securities of any Series as provided for by the terms of the Securities of such Series.

Section 11.2 Satisfaction of Sinking Fund Payments with Securities.

The Company may, in satisfaction of all or any part of any sinking fund payment with respect to the Securities of any Series to be made pursuant to the terms of such Securities (1) deliver outstanding Securities of such Series to which such sinking fund payment is applicable (other than any of such Securities previously called for mandatory sinking fund redemption) and (2) apply as credit Securities of such Series to which such sinking fund payment is applicable and which have been repurchased by the Company or redeemed either at the election of the Company pursuant to the terms of such Series of Securities (except pursuant to any mandatory sinking fund) or through the application of permitted optional sinking fund payments or other optional redemptions pursuant to the terms of such Securities, provided that such Securities have not been previously so credited. Such Securities shall be received by the Trustee, together with an Officer’s Certificate with respect thereto, not later than 15 days prior to the date on which the Trustee begins the process of selecting Securities for redemption, and shall be credited for such purpose by the Trustee at the price specified in such Securities for redemption through operation of the sinking fund and the amount of such sinking fund payment shall be reduced accordingly. If as a result of the delivery or credit of Securities in lieu of cash payments pursuant to this Section 11.2, the principal amount of Securities of such Series to be redeemed in order to exhaust the aforesaid cash payment shall be less than \$100,000, the Trustee need not call Securities of such Series for redemption, except upon receipt of a Company Order that such action be taken, and such cash payment shall be held by the Trustee or a Paying Agent and applied to the next succeeding sinking fund payment, provided, however, that the Trustee or such Paying Agent shall from time to time upon receipt of a Company Order pay over and deliver to the Company any cash payment so being held by the Trustee or such Paying Agent upon delivery by the Company to the Trustee of Securities of that Series purchased by the Company having an unpaid principal amount equal to the cash payment required to be released to the Company.

Section 11.3 Redemption of Securities for Sinking Fund.

Not less than 45 days (unless otherwise indicated in the Board Resolution, supplemental indenture hereto or Officer’s Certificate in respect of a particular Series of Securities) prior to each sinking fund payment date for any Series of Securities, the Company will deliver to the Trustee an Officer’s Certificate specifying the amount of the next ensuing mandatory sinking fund payment for that Series pursuant to the terms of that Series, the portion thereof, if any, which is to be satisfied by payment of cash and the portion thereof, if any, which is to be satisfied by delivering and crediting

of Securities of that Series pursuant to Section 11.2, and the optional amount, if any, to be added in cash to the next ensuing mandatory sinking fund payment, and the Company shall thereupon be obligated to pay the amount therein specified. Not less than 30 days (unless otherwise indicated in the Board Resolution, Officer's Certificate or supplemental indenture in respect of a particular Series of Securities) before each such sinking fund payment date the Securities to be redeemed upon such sinking fund payment date will be selected in the manner specified in Section 3.2 and the Company shall send or cause to be sent a notice of the redemption thereof to be given in the name of and at the expense of the Company in the manner provided in and in accordance with Section 3.3. Such notice having been duly given, the redemption of such Securities shall be made upon the terms and in the manner stated in Sections 3.4, 3.5 and 3.6.

IN WITNESS WHEREOF, the parties hereto have caused this Indenture to be duly executed as of the day and year first above written.

TENAYA THERAPEUTICS, INC.

By: _____
Name:
Its:

[_____] ,
as Trustee

By: _____
Name:
Its:



Wilson Sonsini Goodrich & Rosati
Professional Corporation

650 Page Mill Road
Palo Alto, California 94304-1050

O: (650) 493-9300
F: (650) 493-6811

August 10, 2022

Tenaya Therapeutics, Inc.
171 Oyster Point Boulevard, 5th Floor
South San Francisco, California 94080

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

At your request, we have examined the Registration Statement on Form S-3 (the "Registration Statement"), filed by Tenaya Therapeutics, Inc., a Delaware corporation (the "Company"), with the Securities and Exchange Commission (the "Commission") in connection with the registration pursuant to the Securities Act of 1933, as amended (the "Act"), of the Securities (as defined below).

The Registration Statement relates to the proposed issuance and sale by the Company, from time to time, pursuant to Rule 415 under the Act, as set forth in the Registration Statement, the prospectus contained therein (the "Prospectus") and the supplements to the prospectus referred to therein (each a "Prospectus Supplement"), of up to an aggregate offering price of \$300,000,000, or the equivalent thereof, of (a) shares of the Company's common stock, \$0.0001 par value per share (the "Common Stock"); (b) shares of the Company's preferred stock, \$0.0001 par value per share (the "Preferred Stock"); (c) the Company's debt securities (the "Debt Securities"); (d) depositary shares of the Company representing a fractional interest in a share of Preferred Stock (the "Depositary Shares"); (e) warrants to purchase any of the securities above (the "Warrants"); (f) subscription rights to purchase Common Stock, Preferred Stock, Debt Securities, Depositary Shares, Warrants or units consisting of some or all of these securities (the "Subscription Rights"); (g) purchase contracts of the Company with respect to the securities of the Company (the "Purchase Contracts"); and (h) units consisting of two or more securities described above in any combination (the "Units") (the Common Stock, the Preferred Stock, the Debt Securities, the Depositary Shares, the Warrants, the Subscription Rights, the Purchase Contracts and the Units are collectively referred to herein as the "Securities").

We advise you that we have also examined the prospectus supplement to the Registration Statement in connection with the registration under the Act of up to \$75,000,000 in Common Stock (the "Shares") to be issued and sold by the Company. We understand that the Company has agreed to issue and sell the Shares from time to time through SVB Securities LLC, as sales agent (the "Agent"), pursuant to a sales agreement by and between the Company and the Agent (the "Sales Agreement").

AUSTIN BEIJING BOSTON BOULDER BRUSSELS HONG KONG LONDON LOS ANGELES NEW YORK PALO ALTO
SALT LAKE CITY SAN DIEGO SAN FRANCISCO SEATTLE SHANGHAI WASHINGTON, DC WILMINGTON, DE

The Securities are to be sold from time to time as set forth in the Registration Statement, the Prospectus contained therein and the Prospectus Supplements. The Debt Securities are to be issued pursuant to a debt securities indenture (the "Indenture"), a form of which has been filed as an exhibit to the Registration Statement and is to be entered into between the Company and a trustee to be named in a Prospectus Supplement to the Registration Statement (the "Trustee"). The Securities are to be sold pursuant to a purchase, underwriting or similar agreement in substantially the form to be filed under the Registration Statement or a Current Report on Form 8-K. The Debt Securities are to be issued in the form set forth in the Indenture. The Indenture may be supplemented in connection with the issuance of each such series of Debt Securities, by a supplemental indenture or other appropriate action of the Company creating such series of Debt Securities.

We have examined instruments, documents, certificates and records that we have deemed relevant and necessary for the basis of our opinions hereinafter expressed. In such examination, we have assumed: (a) the authenticity of original documents and the genuineness of all signatures; (b) the conformity to the originals of all documents submitted to us as copies; (c) the truth, accuracy and completeness of the information, representations and warranties contained in the instruments, documents, certificates and records we have reviewed; (d) that the Registration Statement, and any amendments thereto (including post-effective amendments), will have become effective under the Act; (e) that a Prospectus Supplement will have been filed with the Commission describing the Securities offered thereby; (f) that the Securities will be issued and sold in compliance with applicable U.S. federal and state securities laws and in the manner stated in the Registration Statement and the applicable Prospectus Supplement; (g) that a definitive purchase, underwriting or similar agreement with respect to any Securities offered will have been duly authorized and validly executed and delivered by the Company and the other parties thereto; (h) that any Securities issuable upon conversion, exchange, redemption or exercise of any Securities being offered will be duly authorized, created and, if appropriate, reserved for issuance upon such conversion, exchange, redemption or exercise; (i) with respect to shares of Common Stock or Preferred Stock, that there will be sufficient shares of Common Stock or Preferred Stock authorized under the Company's organizational documents that are not otherwise reserved for issuance; and (j) the legal capacity of all natural persons. As to any facts material to the opinions expressed herein that were not independently established or verified, we have relied upon oral or written statements and representations of officers and other representatives of the Company.

Based on such examination, we are of the opinion that:

1. With respect to the shares of Common Stock, when: (a) the Board of Directors of the Company or a duly constituted and acting committee thereof (such Board of Directors or committee being hereinafter referred to as the "Board") has taken all necessary corporate action to approve the issuance and the terms of the offering of the shares of Common Stock and related matters; and (b) the shares of Common Stock have been duly delivered either (i) in accordance with the applicable definitive purchase, underwriting or similar agreement approved by the Board, or upon the exercise of Warrants to purchase Common Stock, upon payment of the consideration therefor (not less than the par value of the Common Stock) provided for therein or (ii) upon conversion or exercise of any other Security, in accordance with the terms of such Security or the instrument governing such Security providing for such conversion or exercise as approved by the Board, for the consideration approved by the Board, then the shares of Common Stock will be validly issued, fully paid and nonassessable.

2. With respect to any particular series of shares of Preferred Stock, when: (a) the Board has taken all necessary corporate action to approve the issuance and terms of the shares of Preferred Stock, the terms of the offering thereof, and related matters, including the adoption of a certificate of designation (a "Certificate") relating to such Preferred Stock conforming to the General Corporation Law of the State of Delaware (the "DGCL") and the filing of the Certificate with the Secretary of State of the State of Delaware; and (b) the shares of Preferred Stock have been duly delivered either (i) in accordance with the applicable definitive purchase, underwriting or similar agreement approved by the Board, or upon the exercise of Warrants to purchase Preferred Stock, upon payment of the consideration therefor (not less than the par value of the Preferred Stock) provided for therein or (ii) upon conversion or exercise of any other Security, in accordance with the terms of such Security or the instrument governing such Security providing for such conversion or exercise as approved by the Board, for the consideration approved by the Board, then the shares of Preferred Stock will be validly issued, fully paid and nonassessable.

3. With respect to Debt Securities to be issued under the Indenture, when: (a) the Trustee is qualified to act as Trustee under the Indenture and the Company has filed a Form T-1 for the Trustee with the Commission; (b) the Trustee has duly executed and delivered the Indenture; (c) the Indenture has been duly authorized and validly executed and delivered by the Company to the Trustee; (d) the Indenture has been duly qualified under the Trust Indenture Act of 1939, as amended; (e) the Board has taken all necessary corporate action to approve the issuance and terms of such Debt Securities, the terms of the offering thereof and related matters; and (f) such Debt Securities have been duly executed, authenticated, issued and delivered in accordance with the provisions of the Indenture and the applicable definitive purchase, underwriting or similar agreement approved by the Board, or upon the exercise of Warrants to purchase Debt Securities, upon payment of the consideration therefor provided for therein, such Debt Securities will constitute valid and binding obligations of the Company, enforceable against the Company in accordance with their terms, and entitled to the benefits of the Indenture.

4. With respect to Depositary Shares, when: (a) the Board has taken all necessary corporate action to approve the issuance and terms of the Depositary Shares, the terms of the offering thereof, and related matters, including the adoption of a Certificate relating to the Preferred Stock underlying such Depositary Shares and the filing of the Certificate with the Secretary of State of the State of Delaware; (b) the Deposit Agreement (the "Deposit Agreement") or agreements relating to the Depositary Shares and the related Depositary Receipts (the "Depositary Receipts") have been duly authorized and validly executed and delivered by the Company and the depositary appointed by the Company; (c) the shares of Preferred Stock underlying such Depositary Shares have been deposited with a bank or trust company (which meets the requirements for the depositary set forth in the Registration Statement) under the applicable Deposit Agreement; and (d) the Depositary Receipts representing the Depositary Shares have been duly executed, countersigned, registered and delivered in accordance with the appropriate Deposit Agreement and the applicable definitive purchase, underwriting or similar agreement approved by the Board upon payment of the consideration therefor provided for therein, the Depositary Shares will be validly issued, fully paid and nonassessable.

5. With respect to the Warrants, when: (a) the Board has taken all necessary corporate action to approve the issuance and terms of the Warrants and related matters; and (b) the Warrants have been duly executed and delivered against payment therefor, pursuant to the applicable definitive purchase, underwriting, warrant or similar agreement, as applicable, duly authorized, executed and delivered by the Company and a warrant agent and the certificates for the Warrants have been duly executed and delivered by the Company and such warrant agent, then the Warrants will constitute valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

6. With respect to the Subscription Rights, when: (a) the Board has taken all necessary corporate action to authorize the issuance and terms of the Subscription Rights, the terms of the offering thereof, and related matters and (b) the rights agreement under which the Subscription Rights are to be issued has been duly authorized and validly executed and delivered by the Company, and upon payment of the consideration for the Subscription Rights provided for in such rights agreement, if any, then the Subscription Rights will be valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

7. With respect to the Purchase Contracts, when: (a) the Board has taken all necessary corporate action to approve the issuance and terms of the Purchase Contracts and related matters and (b) the agreement under which the Purchase Contracts are to be issued has been duly authorized and validly executed and delivered by the Company, then the Purchase Contracts will be valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

8. With respect to the Units, when: (a) the Board has taken all necessary corporate action to approve the issuance and terms of the Units (including any Securities underlying the Units) and related matters; and (b) the Units (including any Securities underlying the Units) have been duly executed and delivered against payment therefor, pursuant to the applicable definitive purchase, underwriting, or similar agreement duly authorized, executed and delivered by the Company and any applicable unit or other agents, and the certificates for the Units (including any Securities underlying the Units) have been duly executed and delivered by the Company and any applicable unit or other agents, then the Units will constitute valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

9. The Shares to be issued and sold by the Company have been duly authorized and, when such Shares are issued and delivered by the Company against payment therefor in accordance with the terms of the Sales Agreement, will be validly issued, fully paid and nonassessable.

Our opinion that any document is legal, valid and binding is qualified as to:

(a) limitations imposed by bankruptcy, insolvency, reorganization, arrangement, fraudulent transfer, moratorium or other similar laws relating to or affecting the rights of creditors generally;

(b) rights to indemnification and contribution, which may be limited by applicable law or equitable principles; and

(c) the effect of general principles of equity, including without limitation concepts of materiality, reasonableness, good faith and fair dealing, and the possible unavailability of specific performance or injunctive relief, whether considered in a proceeding in equity or at law.

We express no opinion as to the laws of any other jurisdiction, other than the federal laws of the United States of America, the laws of the State of New York as to the enforceability of the Debt Securities and the DGCL.

* * *

We hereby consent to the filing of this opinion as an exhibit to the above-referenced Registration Statement and to the use of our name wherever it appears in the Registration Statement, the Prospectus, any Prospectus Supplement, and in any amendment or supplement thereto. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission thereunder.

Very truly yours,

/s/ Wilson Sonsini Goodrich & Rosati, P.C.

WILSON SONSINI GOODRICH & ROSATI
Professional Corporation

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-3 of our report dated March 23, 2022, relating to the financial statements of Tenaya Therapeutics, Inc. (the “Company”) appearing in the Annual Report on Form 10-K of the Company for the year ended December 31, 2021. We also consent to the reference to us under the heading “Experts” in such Registration Statement.

/s/ Deloitte & Touche LLP
San Francisco, California
August 10, 2022

Calculation of Filing Fee Tables

FORM S-3
(Form Type)**TENAYA THERAPEUTICS, INC.**
(Exact Name of Registrant as Specified in its Charter)Table 1: Newly Registered Securities

| | Security Type | Security Class Title | Fee Calculation Rule | Maximum Aggregate Offering Price | Fee Rate | Amount of Registration Fee |
|-----------------|-------------------------------|---|----------------------|----------------------------------|-------------|----------------------------|
| Fees to Be Paid | Equity | Common Stock, par value \$0.0001 per share | 457(o) | (2) | — | — |
| Fees to Be Paid | Equity | Preferred Stock, par value \$0.0001 per share | 457(o) | (2) | — | — |
| Fees to Be Paid | Debt | Debt Securities | 457(o) | (2) | — | — |
| Fees to Be Paid | Equity | Depositary Shares | 457(o) | (2) | — | — |
| Fees to Be Paid | Other | Warrants | 457(o) | (2) | — | — |
| Fees to Be Paid | Other | Subscription Rights | 457(o) | (2) | — | — |
| Fees to Be Paid | Other | Purchase Contracts | 457(o) | (2) | — | — |
| Fees to Be Paid | Other | Units | 457(o) | (2) | — | — |
| Fees to Be Paid | Unallocated (Universal) Shelf | Unallocated (Universal) Shelf(1) | 457(o) | \$300,000,000(3) | \$0.0000927 | \$27,810 |
| | Total Offering Amounts | | | \$300,000,000(3) | \$0.0000927 | \$27,810 |
| | Total Fees Previously Paid | | | \$0 | | — |
| | Total Fee Offsets | | | | | — |
| | Net Fee Due | | | | | \$27,810 |

(1) The securities registered hereunder include such indeterminate number of (a) shares of common stock, (b) shares of preferred stock, (c) debt securities, (d) depositary shares, (e) warrants to purchase common stock, preferred stock, debt securities or depositary shares of the registrant, (f) subscription rights to purchase common stock, preferred stock, debt securities, depositary shares, warrants or units consisting of some or all of these securities of the registrant, (g) purchase contracts, and (h) units consisting of some or all of these securities, as may be sold from time to time by the registrant. There are also being registered hereunder an indeterminate number of shares of common stock and preferred stock as shall be issuable upon conversion, exchange or exercise of any securities that provide for such issuance. Pursuant to Rule 416 under the Securities Act of 1933, as amended, or the Securities Act, this registration statement shall also cover any additional shares of the registrant's securities that become issuable by reason of any share splits, share dividends or similar transactions.

(2) The proposed maximum offering price per security and proposed maximum aggregate offering price per class of security will be determined from time to time by the registrant in connection with the issuance by the registrant of the securities registered hereunder and is not specified as to each class of security pursuant to General Instruction II.D. of Form S-3 under the Securities Act. Separate consideration may or may not be received for securities that are issuable on exercise, conversion or exchange of other securities, or that are issued in units.

(3) Estimated solely for the purpose of calculating the registration fee. Subject to Rule 462(b) under the Securities Act, the aggregate maximum offering price of all securities issued by the registrant pursuant to this registration statement will not exceed \$300,000,000.