

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

FORM S-3

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

**Tourmaline Bio, Inc.**

(Exact name of registrant as specified in its charter)

**Delaware**

(State or other jurisdiction of incorporation or organization)

**83-2377352**

(I.R.S. Employer Identification Number)

**27 West 24th Street, Suite 702  
New York, NY 10010  
(646) 481-9832**

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

**Sandeep Kulkarni, MD  
President and Chief Executive Officer  
Tourmaline Bio, Inc.**

**27 West 24th Street, Suite 702  
New York, NY 10010  
(646) 481-9832**

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

*Copies to:*

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55 Hudson Yards  
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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, as amended, 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, 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

Non-accelerated filer

Accelerated filer

Smaller reporting company

Emerging growth company

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

**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 that specifically states that this registration statement shall thereafter become effective in accordance with section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the 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 the registrant of up to \$350,000,000 in the aggregate of the registrant's common stock, preferred stock, debt securities and/or warrants from time to time in one or more offerings; and
- a sales agreement prospectus, which covers the offering, issuance and sale by the registrant of up to a maximum aggregate offering price of \$100,000,000 of the registrant's common stock that may be issued and sold from time to time under a sales agreement, dated November 7, 2024, with Leerink Partners LLC (the "Sales Agreement").

The base prospectus immediately follows this explanatory note. The specific terms of any securities to be offered pursuant to the base prospectus other than the shares under the Sales Agreement will be specified in one or more prospectus supplements to the base prospectus. The specific terms of the securities to be offered, issued and sold under the Sales Agreement are specified in the sales agreement prospectus, which immediately follows the base prospectus. The \$100,000,000 of common stock that may be offered, issued and sold under the sales agreement prospectus is included in the \$350,000,000 of securities that may be offered, issued and sold by the registrant under the base prospectus. Upon termination of the Sales Agreement or upon suspension of sales under the sales agreement prospectus, any portion of the \$100,000,000 included in the sales agreement prospectus 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 \$100,000,000 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. We may not sell these securities or accept an offer to buy these securities 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 offers to buy these securities in any state where such offer or sale is not permitted.**

**SUBJECT TO COMPLETION, DATED NOVEMBER 7, 2024**

**PROSPECTUS**

# TOURMALINE

**\$350,000,000**  
**Common Stock**  
**Preferred Stock**  
**Debt Securities**  
**Warrants**

From time to time, we may offer and sell up to an aggregate amount of \$350,000,000 of any combination of shares of our common stock, shares of our preferred stock, debt securities and warrants to purchase any of such securities in one or more offerings as described in this prospectus. We may also offer securities as may be issuable upon conversion, redemption, repurchase, exchange or exercise of any securities registered hereunder, including any applicable antidilution provisions.

This prospectus provides a general description of the securities we may offer. Each time we offer securities, we will specify in an accompanying prospectus supplement the terms of the securities being offered. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings. The prospectus supplement and any related free writing prospectus may also add, update or change information contained in this prospectus. You should carefully read this prospectus, the applicable prospectus supplement and any related free writing prospectus, as well as any documents incorporated by reference, before you invest in any of the securities being offered.

**This prospectus may not be used to consummate a sale of any securities unless accompanied by a prospectus supplement.**

Our common stock is traded on the Nasdaq Global Select Market under the symbol "TRML." On November 4, 2024, the last reported sale price of our common stock was \$26.90 per share. The applicable prospectus supplement will contain information, where applicable, as to any other listing on the Nasdaq Global Select Market or any securities market or other exchange of the securities, if any, covered by the prospectus supplement.

We may offer and sell these securities directly to investors, through agents designated from time to time or to or through underwriters or dealers, on a continuous or delayed basis. For additional information on the methods of sale, you should refer to the section titled "Plan of Distribution" in this prospectus. If any agents or underwriters are involved in the sale of any securities with respect to which this prospectus is being delivered, the names of such agents or underwriters and any applicable fees, commissions, discounts or over-allotment options will be set forth in a prospectus supplement. The price to the public of such securities and the net proceeds we expect to receive from such sale will also be set forth in a prospectus supplement.

**We are an "emerging growth company" as defined by the Jumpstart Our Business Startups Act of 2012, and as such, have elected to comply with reduced public company reporting requirements for this prospectus and the documents incorporated by reference herein and may elect to comply with reduced public company reporting requirements in future filings.**

**Investing in our securities involves a high degree of risk. You should carefully review the risks and uncertainties described under the heading “Risk Factors” on page [6](#) of this prospectus as well as those contained in the applicable prospectus supplement and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus.**

**NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR DETERMINED IF THIS PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.**

The date of this prospectus is , 2024.

## TABLE OF CONTENTS

	<u>Page</u>
<a href="#"><u>ABOUT THIS PROSPECTUS</u></a>	<a href="#"><u>ii</u></a>
<a href="#"><u>SUMMARY</u></a>	<a href="#"><u>1</u></a>
<a href="#"><u>RISK FACTORS</u></a>	<a href="#"><u>6</u></a>
<a href="#"><u>SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS</u></a>	<a href="#"><u>7</u></a>
<a href="#"><u>USE OF PROCEEDS</u></a>	<a href="#"><u>9</u></a>
<a href="#"><u>DESCRIPTION OF CAPITAL STOCK</u></a>	<a href="#"><u>10</u></a>
<a href="#"><u>DESCRIPTION OF DEBT SECURITIES</u></a>	<a href="#"><u>16</u></a>
<a href="#"><u>DESCRIPTION OF WARRANTS</u></a>	<a href="#"><u>23</u></a>
<a href="#"><u>LEGAL OWNERSHIP OF SECURITIES</u></a>	<a href="#"><u>26</u></a>
<a href="#"><u>PLAN OF DISTRIBUTION</u></a>	<a href="#"><u>30</u></a>
<a href="#"><u>LEGAL MATTERS</u></a>	<a href="#"><u>32</u></a>
<a href="#"><u>EXPERTS</u></a>	<a href="#"><u>32</u></a>
<a href="#"><u>WHERE YOU CAN FIND MORE INFORMATION</u></a>	<a href="#"><u>32</u></a>
<a href="#"><u>INCORPORATION OF CERTAIN INFORMATION BY REFERENCE</u></a>	<a href="#"><u>33</u></a>

## **ABOUT THIS PROSPECTUS**

This prospectus is a part of a registration statement on Form S-3 that we filed with the U.S. Securities and Exchange Commission (“SEC”) utilizing a “shelf” registration process under the Securities Act of 1933, as amended (the “Securities Act”). Under this shelf registration process, we may offer and sell from time to time in one or more offerings the securities described in this prospectus up to a total dollar amount of \$350,000,000.

This prospectus provides you with a general description of the securities we may offer. Each time we offer securities under this prospectus, we will provide a prospectus supplement that will contain specific information about the terms of these securities and offerings. 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 and any related free writing prospectus that we may authorize to be provided to you may also add, update or change information contained in this prospectus or in any documents that we have incorporated by reference into this prospectus. You should read this prospectus, any applicable prospectus supplement and any related free writing prospectus, together with the information incorporated herein by reference as described under the heading “Incorporation of Certain Information by Reference,” before investing in any of the securities offered.

### **THIS PROSPECTUS MAY NOT BE USED TO CONSUMMATE A SALE OF SECURITIES UNLESS IT IS ACCOMPANIED BY A PROSPECTUS SUPPLEMENT.**

Neither we, nor any agent, underwriter or dealer has authorized any person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus, any applicable prospectus supplement or any related free writing prospectus prepared by or on behalf of us or to which we have referred you. This prospectus, any applicable supplement to this prospectus 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 registered securities to which they relate, nor do this prospectus, any applicable supplement to this prospectus or any related free writing prospectus constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction.

You should not assume that the information contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus, any applicable prospectus supplement or any related free writing prospectus is delivered, or securities are sold, on a later date.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the heading “Where You Can Find More Information.”

## **MARKET AND INDUSTRY DATA**

Certain information contained in this document relates to or is based on studies, publications, surveys and other data obtained from third-party sources and our own internal estimates and research. While we believe these third-party sources to be reliable as of the date of this prospectus, we have not independently verified the market and industry data contained in this prospectus or the underlying assumptions relied on therein. Finally, while we believe our own internal research is reliable, such research has not been verified by any independent source. Notwithstanding the foregoing, we are liable for the information provided in this prospectus.

## SUMMARY

This summary highlights selected information from this prospectus and does not contain all of the information that you need to consider in making your investment decision. You should carefully read the entire prospectus, the applicable prospectus supplement and any related free writing prospectus, including the risks of investing in our securities discussed under the heading “Risk Factors” contained in the applicable prospectus supplement and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus. You should also carefully read the information incorporated by reference into this prospectus, including our financial statements, and the exhibits to the registration statement of which this prospectus is a part.

Unless the context requires otherwise, references in this prospectus to the “Company,” “Tourmaline Bio,” “we,” “us” and “our” refer to Tourmaline Bio, Inc.

## Company Overview

We are a late-stage clinical biotechnology company focused on developing transformative medicines that dramatically improve the lives of patients with life-altering immune and inflammatory diseases. In doing so, we seek to identify and develop medicines that have the potential to establish new standards-of-care in areas of high unmet medical need.

Our initial product candidate is pacibekitug (also referred to as TOUR006), a fully human monoclonal antibody that selectively binds to interleukin-6 (“IL-6”), a key proinflammatory cytokine involved in the pathogenesis of many autoimmune and inflammatory disorders. The anti-IL-6 and anti-IL-6 receptor (“IL-6R”) antibody class (“IL-6 class”) has over two decades of clinical and commercial experience treating over a million patients with a variety of autoimmune and inflammatory diseases. To date, four anti-IL-6 or anti-IL-6R antibodies have been approved in the U.S. These four anti-IL-6 or anti-IL-6R antibodies together generated more than \$3.5 billion in global sales in 2023.

Pacibekitug is a long-acting anti-IL-6 antibody which we believe has best-in-class properties including a high binding affinity to IL-6, long half-life, and low observed immunogenicity. These characteristics may allow pacibekitug to achieve substantial IL-6 pathway suppression with relatively low amounts of drug exposure, potentially enabling delivery in a convenient, low volume, infrequently administered, subcutaneous injection.

We have identified thyroid eye disease (“TED”) as our beachhead indication to explore pacibekitug’s potential in autoantibody-driven diseases. TED is an autoimmune disease characterized by autoantibody-mediated activation of the tissues surrounding the eye, causing inflammation and disfigurement which can be sight-threatening in severe cases. We have identified a substantial body of published clinical observations characterizing the beneficial off-label use of currently marketed IL-6 pathway inhibitors, namely Actemra® (tocilizumab), an anti-IL-6R monoclonal antibody, in reducing inflammation, eye-bulging, and levels of autoantibodies in patients with TED. However, no formal, industry-sponsored development effort studying the IL-6 class for the treatment of TED has been completed to date.

We are currently evaluating pacibekitug in a pivotal Phase 2b trial in first-line TED, which we refer to as the spiriTED trial. We initiated the spiriTED trial in September 2023 and expect to report topline data in the second half of 2025. Further, we expect to commence a pivotal Phase 3 trial of pacibekitug in first-line TED in the fourth quarter of 2024, with topline data expected to be reported in 2026.

We are also exploring pacibekitug’s potential within cardiovascular inflammation. We believe pacibekitug has the potential to transform the care of high-risk cardiovascular patients by targeting key inflammatory pathways driving cardiovascular disease. Our first indication under our cardiovascular inflammation strategic path is atherosclerotic cardiovascular disease (“ASCVD”), a leading cause of death globally. Preventing major adverse cardiovascular events (“MACE”), such as death, nonfatal myocardial infarction or nonfatal stroke, has the potential to significantly reduce global cardiovascular disease burden. IL-6 has been identified as a promising drug target for addressing the risk of MACE in ASCVD, and multiple external Phase 3 cardiovascular outcome trials investigating IL-6 blockade are ongoing. We believe that pacibekitug potentially offers a meaningfully enhanced product profile to these competitor programs with a potential for subcutaneous dosing once every three months. As previously

announced in January 2024, we have reached alignment with the U.S. Food and Drug Administration (“FDA”) on the ASCVD clinical development program, including a Phase 2 trial evaluating the reduction of C-reactive protein (“CRP”), a validated biomarker for inflammation, with quarterly and monthly dosing of pacibekitug in patients with elevated cardiovascular risk. In March 2024, the FDA cleared our Investigational New Drug application (“IND”) related to our ASCVD clinical development program. We initiated a Phase 2 trial of pacibekitug in patients with chronic kidney disease (“CKD”) and elevated high-sensitivity CRP (“hs-CRP”) in April 2024, which we refer to as the TRANQUILITY trial. We expect to report topline data from the TRANQUILITY trial in the first half of 2025. Pending a successful trial, positive results from the TRANQUILITY trial are expected to position us to be Phase 3-ready in 2025 for pacibekitug in cardiovascular disease.

We also plan to identify additional indication opportunities for pacibekitug. In addition, we continue to evaluate new in-licensing and acquisition opportunities for assets that we believe have standard-of-care changing potential for patients with immune and inflammatory diseases.

### **Corporate Information**

Prior to October 19, 2023, we were a clinical-stage biopharmaceutical company known as Talaris Therapeutics, Inc. (“Talaris”) that had historically been focused on applying allogeneic hematopoietic stem cell transplantation to solid organ transplantation, autoimmune diseases and certain severe blood, immune and metabolic disorders. Talaris was originally incorporated in the State of Delaware in February 2002.

On October 19, 2023, we completed our business combination with Tourmaline Bio, Inc. (“Legacy Tourmaline”) in accordance with the terms and conditions of the Agreement and Plan of Merger, dated as of June 22, 2023 (the “Merger Agreement”), by and among Talaris, Legacy Tourmaline and Terrain Merger Sub, Inc., a direct wholly owned subsidiary of Talaris (“Merger Sub”), pursuant to which Merger Sub merged with and into Legacy Tourmaline, with Legacy Tourmaline surviving as a direct wholly owned subsidiary of Talaris and the surviving corporation of the merger (the “Merger”). On October 19, 2023, in connection with and prior to the completion of the Merger, Talaris effected a 1-for-10 reverse stock split of its common stock (the “Reverse Stock Split”). Upon the completion of the Merger on October 19, 2023, Legacy Tourmaline changed its name from “Tourmaline Bio, Inc.” to “Tourmaline Sub, Inc.”, and Talaris changed its name from “Talaris Therapeutics, Inc.” to “Tourmaline Bio, Inc.”

Following the completion of the Merger, we began conducting the business conducted by Legacy Tourmaline, which is a late-stage clinical biotechnology company developing transformative medicines to dramatically improve the lives of patients with life-altering immune and inflammatory diseases. Our common stock began trading on The Nasdaq Global Select Market under the symbol “TRML” on October 20, 2023. On June 30, 2024, Tourmaline Sub, Inc. was merged with and into Tourmaline Bio, Inc., with Tourmaline Bio, Inc. as the surviving entity.

Our principal executive office is located at 27 West 24th Street, Suite 702, New York, New York 10010. Our telephone number is (646) 481-9832. Our website address is [www.tourmalinebio.com](http://www.tourmalinebio.com). The information contained in, or that can be accessed through, our website is not incorporated by reference herein and is not part of this prospectus.

This prospectus contains references to our trademarks and to trademarks belonging to other entities. Solely for convenience, trademarks and trade names referred to in this prospectus, including logos, artwork and other visual displays, may appear without the ® or TM symbols, but such references are not intended to indicate, in any way, that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto. We do not intend our use or display of other companies’ trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

### **Emerging Growth Company**

We are an “emerging growth company,” as defined in Section 2(a) of the Securities Act, as modified by the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”), and we may take advantage of certain exemptions



from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended (the “Sarbanes-Oxley Act”), reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

Further, Section 102(b)(1) of the JOBS Act exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies (that is, those that have not had a Securities Act registration statement declared effective or do not have a class of securities registered under the Exchange Act) are required to comply with the new or revised financial accounting standards. The JOBS Act provides that a company can elect to opt out of the extended transition period and comply with the requirements that apply to non-emerging growth companies but any such election to opt out is irrevocable.

We will remain an emerging growth company until the earliest to occur of: (i) the last day of the fiscal year in which we have more than \$1.235 billion in annual revenue; (ii) the date we qualify as a “large accelerated filer,” with at least \$700.0 million of equity securities held by non-affiliates; (iii) the date on which we have issued more than \$1.0 billion in non-convertible debt securities during the prior three-year period; and (iv) the last day of the fiscal year ending after the fifth anniversary of our initial public offering.

### **Smaller Reporting Company**

Additionally, we are currently a “smaller reporting company” as defined in Item 10(f)(1) of Regulation S-K. Smaller reporting companies may take advantage of certain reduced disclosure obligations, including, among other things, providing only two years of audited financial statements. We may continue to be a smaller reporting company if either (i) the market value of our stock held by non-affiliates is less than \$250.0 million or (ii) our annual revenue was less than \$100.0 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than \$700.0 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

### **The Securities We May Offer**

We may offer shares of our common stock, shares of our preferred stock, debt securities and warrants to purchase any of such securities, up to a total aggregate amount of \$350,000,000, from time to time in one or more offerings under this prospectus, together with any applicable prospectus supplement and any related free writing prospectus, at prices and on terms to be determined by market conditions at the time of the relevant offering. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities under this prospectus, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities, including, to the extent applicable:

- designation or classification;
- aggregate principal amount or aggregate offering price;
- maturity, if applicable;
- original issue discount, if any;
- rates and times of payment of interest or dividends, if any;
- redemption, conversion, exchange or sinking fund terms, if any;

- conversion or exchange prices or rates, if any, and, if applicable, any provisions for changes to or adjustments in the conversion or exchange prices or rates and in the securities or other property receivable upon conversion or exchange;
- ranking, if applicable;
- restrictive covenants, if any;
- voting or other rights, if any; and
- important U.S. federal income tax considerations.

The prospectus supplement and any related free writing prospectus that we may authorize to be provided to you may also add, update or change information contained in this prospectus or in documents we have incorporated by reference. However, no prospectus supplement or free writing prospectus will offer a security that is not registered and described in this prospectus at the time of the effectiveness of the registration statement of which this prospectus is a part.

**This prospectus may not be used to consummate a sale of securities unless it is accompanied by a prospectus supplement.**

We may sell the securities directly to investors or through underwriters, dealers or agents. We, and our underwriters or agents, reserve the right to accept or reject all or part of any proposed purchase of securities. If we do offer securities through underwriters or agents, we will include in the applicable prospectus supplement:

- the names of those underwriters or agents;
- applicable fees, discounts and commissions to be paid to them;
- details regarding over-allotment options, if any; and
- the estimated net proceeds to us.

**Common Stock.** We may issue shares of our common stock from time to time. Except as otherwise expressly provided in our certificate of incorporation or as required by applicable law, holders of our common stock are entitled to one vote per share of common stock, and holders of our non-voting common stock are not entitled to any votes per share of non-voting common stock, including for the election of directors. Holders of our common stock have no conversion rights, while holders of our non-voting common stock shall have the right to convert each share of our non-voting common stock held into one share of common stock at such holder's election, subject to certain beneficial ownership limitations. Subject to any preferential rights of any then outstanding preferred stock, in the event of our liquidation, dissolution or winding up, holders of our common stock and non-voting common stock are entitled to share ratably in the assets remaining after payment of liabilities and the liquidation preferences of any then outstanding preferred stock. Our common stock and non-voting common stock have no preemptive rights or other subscription rights or redemption or sinking fund provisions.

**Preferred Stock.** We may issue shares of our preferred stock from time to time, in one or more series. Under our amended and restated certificate of incorporation, our board of directors has the authority, without further action by stockholders, to designate up to 10,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges, qualifications and restrictions granted to or imposed upon the preferred stock, including dividend rights, conversion rights, voting rights, rights and terms of redemption, liquidation preference and sinking fund terms, any or all of which may be greater than the rights of the common stock. To date, none of the 10,000,000 authorized shares of preferred stock have been designated by our board of directors. Convertible preferred stock will be convertible into our common stock or exchangeable for our other securities. Conversion may be mandatory or at the option of the holders of our preferred stock and would be at prescribed conversion rates.

We will fix the rights, preferences, privileges, qualifications and restrictions of the preferred stock of each series that we sell under this prospectus and applicable prospectus supplements in the certificate of designation relating to

that series. We will incorporate by reference into the registration statement of which this prospectus is a part the form of any certificate of designation that describes the terms of the series of preferred stock we are offering before the issuance of the related series of preferred stock. We urge you, however, to read the applicable prospectus supplement (and any related free writing prospectus that we may authorize to be provided to you) related to the series of preferred stock being offered, as well as the complete certificate of designation that contains the terms of the applicable series of preferred stock.

**Debt Securities.** We may issue debt securities from time to time, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. The senior debt securities will rank equally with any other unsecured and unsubordinated debt. The subordinated debt securities will be subordinate and junior in right of payment, to the extent and in the manner described in the instrument governing the debt, to all of our senior indebtedness. Convertible debt securities will be convertible into our common stock or preferred stock. Conversion may be mandatory or at the holder's option and would be at prescribed conversion rates.

The debt securities will be issued under one or more documents called indentures, which are contracts between us and a national banking association or other eligible party, as trustee. In this prospectus, we have summarized certain general features of the debt securities. We urge you, however, to read the applicable prospectus supplement (and any free writing prospectus that we may authorize to be provided to you) related to the series of debt securities being offered, as well as the complete indentures that contain the terms of the debt securities. A form of indenture has been filed as an exhibit to the registration statement of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of the debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

**Warrants.** We may issue warrants for the purchase of common stock, preferred stock and/or debt securities in one or more series. We may issue warrants independently or together with common stock, preferred stock and/or debt securities, and the warrants may be attached to or separate from these securities. In this prospectus, we have summarized certain general features of the warrants. We urge you, however, to read the applicable prospectus supplement (and any free writing prospectus that we may authorize to be provided to you) related to the particular series of warrants being offered, as well as the complete warrant agreements and warrant certificates that contain the terms of the warrants. Forms of the warrant agreements and forms of warrant certificates containing the terms of the warrants being offered have been filed as exhibits to the registration statement of which this prospectus is a part, and supplemental warrant agreements and forms of warrant certificates will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

We will evidence each series of warrants by warrant certificates that we will issue. Warrants may be issued under an applicable warrant agreement that we enter into with a warrant agent. We will indicate the name and address of the warrant agent, if applicable, in the prospectus supplement relating to the particular series of warrants being offered.

## **RISK FACTORS**

Investing in our securities involves a high degree of risk. You should carefully review the risks and uncertainties described under the heading “Risk Factors” contained in the applicable prospectus supplement and any related free writing prospectus, and under similar headings in our most recent Annual Report on Form 10-K, as updated by our quarterly and other reports and documents that are incorporated by reference into this prospectus and the applicable prospectus supplement, before deciding whether to purchase any of the securities being registered pursuant to the registration statement of which this prospectus is a part. Each of the risk factors could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our securities, and the occurrence of any of these risks might cause you to lose all or part of your investment. Additional risks not presently known to us or that we currently believe are immaterial may also significantly impair our business operations.

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Statements contained in this prospectus, the applicable prospectus supplement and in the documents incorporated by reference herein and therein that are not strictly historical in nature are forward-looking statements within the meaning of Section 27A of the Securities Act, and within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). These forward-looking statements are subject to the “safe harbor” created by Section 27A of the Securities Act and Section 21E of the Exchange Act and may include, but are not limited to, statements about:

- the success, cost and timing of our development activities, non-clinical studies and clinical trials;
- the timing and outcome of our current and future clinical trials, and the reporting of data from those trials;
- the therapeutic potential of pacibekitug (also referred to as TOUR006) and future product candidates;
- the ability to obtain funding for our operations, including funding necessary to develop and commercialize our current and future product candidates, subject to regulatory approvals;
- our ability to extend our operating capital;
- the potential of our technologies and our ability to execute on our corporate strategy;
- our ability to contract with third-party suppliers and manufacturers and their ability to perform adequately;
- our reliance on third parties to manufacture and conduct preclinical studies and clinical trials of our current and future product candidates;
- the success of competing therapies that are or may become available;
- our ability to obtain regulatory approval for our product candidates and any related restrictions, limitations and/or warnings in the label of any approved product candidate;
- existing regulations and regulatory developments in the United States (the “U.S.”) and other jurisdictions;
- the strength and breadth of our patent portfolio;
- our ability to obtain and adequately protect intellectual property rights for our product candidates;
- potential claims relating to our intellectual property;
- our financial performance;
- our ability to develop and maintain our corporate infrastructure, including our ability to design and maintain an effective system of internal controls;
- our ability to remediate the existing material weaknesses in our internal control over financial reporting;
- our ability to attract and retain key scientific, medical, commercial and management personnel;
- our ability to continue to satisfy the listing requirements of The Nasdaq Stock Market and have our stock continue to trade thereon;
- the effects of macroeconomic and geopolitical conditions and unforeseeable events;
- our expectations regarding the use of proceeds from offerings of our securities under this prospectus; and
- other factors set forth in documents filed, or to be filed, with the SEC.

In some cases, you can identify forward-looking statements by terms such as “anticipates,” “believes,” “could,” “estimates,” “expects,” “goal,” “intends,” “may,” “plans,” “potential,” “predicts,” “projects,” “should,” “will,” “would,” the negative of these words and words or similar expressions intended to identify forward-looking statements. These statements reflect our views as of the date on which they were made with respect to future events and are based on assumptions and subject to risks and uncertainties. The underlying information and expectations are likely to change over time. 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 the statement is made, 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.

Given these uncertainties, you should not place undue reliance on these forward-looking statements as actual events or results may differ materially from those projected in the forward-looking statements due to various factors, including, but not limited to, those set forth under the heading “Risk Factors” in any applicable prospectus supplement, the documents incorporated by reference therein or any free writing prospectus that we authorized. These forward-looking statements represent our estimates and assumptions only as of the date of the document containing the applicable statement. Our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements contained in this prospectus, in the documents incorporated by reference herein and in any prospectus supplement by these cautionary statements. Unless required by law, we undertake no obligation to update or revise any forward-looking statements to reflect new information or future events or developments. Thus, you should not assume that our silence over time means that actual events are bearing out as expressed or implied in such forward-looking statements. Before deciding to purchase our securities, you should carefully consider the risk factors discussed in this prospectus, any accompanying prospectus supplement or free writing prospectus and in the documents incorporated by reference, in addition to the other information set forth in this prospectus, any accompanying prospectus supplement or free writing prospectus and in the documents incorporated by reference.

## **USE OF PROCEEDS**

Except as described in any prospectus supplement or in any related free writing prospectus that we may authorize to be provided to you, we currently intend to use the net proceeds from the sale of securities under this prospectus for continued clinical development of pipeline products, working capital and other general corporate purposes. We may also use the net proceeds to in-license, acquire or invest in complementary businesses, technologies, products or assets. However, we have no current commitments or obligations to do so. As of the date of this prospectus, we cannot specify with certainty all of the particular uses of the net proceeds, if any, from the sale of securities under this prospectus. Accordingly, we will retain broad discretion over the use of any such proceeds. Pending the use of the net proceeds from the sale of securities under this prospectus as described above, we intend to invest the net proceeds in investment-grade, interest-bearing instruments.

## DESCRIPTION OF CAPITAL STOCK

### General

As of the date of this prospectus, our authorized capital stock consists of 140,000,000 shares of common stock, par value \$0.0001 per share, 10,000,000 shares of non-voting common stock, par value \$0.0001 per share, and 10,000,000 shares of preferred stock, par value \$0.0001 per share, all of which shares of preferred stock are undesignated.

The following summary description of our capital stock is based on the provisions of our amended and restated certificate of incorporation, our amended and restated bylaws and the applicable provisions of the Delaware General Corporation Law (the “DGCL”). This information is qualified entirely by reference to the applicable provisions of our amended and restated certificate of incorporation, our amended and restated bylaws and the DGCL. For information on how to obtain copies of our amended and restated certificate of incorporation and amended and restated bylaws, which are exhibits to the registration statement of which this prospectus is a part, see “Where You Can Find More Information” and “Incorporation of Certain Information by Reference.”

### Common Stock

*Voting Rights.* Holders of our common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders, including the election of directors, and do not have cumulative voting rights. Accordingly, the holders of a majority of the shares of our common stock entitled to vote in any election of directors can elect all of the directors standing for election. Holders of our non-voting common stock are not entitled to any votes per share of non-voting common stock, including for the election of directors.

*Conversion Rights.* Holders of our common stock have no conversion rights, while holders of our non-voting common stock shall have the right to convert each share of our non-voting common stock held into one share of common stock at such holder’s election, provided that as a result of such conversion, such holder, together with its affiliates and any members of a Schedule 13(d) group with such holder, would not beneficially own in excess of 9.9% of our common stock following such conversion, unless otherwise expressly provided for in our certificate of incorporation. However, this ownership limitation may be increased to any other percentage designated by such holder of non-voting common stock upon 61 days’ notice to us or decreased at any time. Holders of our non-voting common stock are also permitted to make certain transfers to non-affiliates upon which, such transferred shares would immediately convert to shares of our common stock.

*Dividends.* Holders of our common stock and non-voting common stock are entitled to receive ratably any dividends declared by our board of directors out of funds legally available for that purpose, subject to any preferential dividend rights of any outstanding preferred stock.

*Liquidation, Dissolution or Winding Up.* Holders of our common stock and non-voting common stock will be entitled to share ratably in all assets remaining after payment of all debts and other liabilities and any liquidation preference of any outstanding preferred stock.

*Other Rights and Preferences.* Holders of our common stock and non-voting common stock have no preemptive or subscription rights, and there are no redemption or sinking fund provisions applicable to our common stock and non-voting common stock. The rights, preferences and privileges of the holders of our common stock and non-voting common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of our preferred stock that we may designate and issue in the future.

*Fully Paid and Nonassessable.* All of our outstanding shares of common stock are, and the shares to be issued by us under this prospectus when issued and paid for will be, fully paid and nonassessable.



## Preferred Stock

Pursuant to our amended and restated certificate of incorporation, our board of directors has the authority, without further action by the stockholders, to issue up to 10,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting, or the designation of, such series, any or all of which may be greater than the rights of common stock. The issuance of our preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon our liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change in control of our Company or other corporate action.

We will fix the designations, voting powers, preferences and rights of the preferred stock of each series, as well as the qualifications, limitations or restrictions thereof, in the certificate of designation relating to that series. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of any certificate of designation that describes the terms of the series of preferred stock we are offering before the issuance of that series of preferred stock. This description will include:

- the title and stated value;
- the number of shares we are offering;
- the liquidation preference per share;
- the purchase price per share;
- the dividend rate per share, dividend period, payment date or dates and method of calculation for dividends;
- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
- our right, if any, to defer payment of dividends and the maximum length of any such deferral period;
- the procedures for any auction and remarketing, if any;
- the provisions for a sinking fund, if any;
- the provisions for redemption or repurchase, if applicable, and any restrictions on our ability to exercise those redemption and repurchase rights;
- any listing of the preferred stock on any securities exchange or market;
- whether the preferred stock will be convertible into our common stock or other securities of ours, including warrants, and, if applicable, the conversion price, or how it will be calculated, and under what circumstances and the mechanism by which it may be adjusted, and the conversion period;
- whether the preferred stock will be exchangeable into debt securities or other securities of ours, and, if applicable, the exchange price, or how it will be calculated, and under what circumstances it may be adjusted, and the exchange period;
- voting rights, if any;
- preemptive rights, if any;
- restrictions on transfer, sale or other assignment, if any;
- whether interests in the preferred stock will be represented by depositary shares;
- a discussion of any material or special U.S. federal income tax considerations applicable to the preferred stock;

- the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;
- any limitations on issuances of any class or series of preferred stock ranking senior to or on parity with the series of preferred stock being issued as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and
- any other specific terms, rights, preferences, privileges, qualifications or limitations of, or restrictions on the preferred stock.

If we issue shares of preferred stock under this prospectus, the shares when issued and paid for will be validly issued, fully paid and non-assessable.

The DGCL provides that the holders of preferred stock will have the right to vote separately as a class (or, in some cases, as a series) on an amendment to our certificate of incorporation if the amendment would change the par value or, unless our certificate of incorporation provided otherwise, the number of authorized shares of the class or change the powers, preferences or special rights of the class or series so as to adversely affect the class or series, as the case may be. This right is in addition to any voting rights that may be provided for in the applicable certificate of designation.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in our control that may otherwise benefit holders of our common stock and may adversely affect the market price of the common stock and the voting and other rights of the holders of common stock. We have no current plans to issue any shares of preferred stock.

### **Anti-Takeover Effects of Provisions of Delaware Law, Our Amended and Restated Certificate of Incorporation, and Our Amended and Restated Bylaws**

#### ***Delaware Anti-Takeover Law***

We are subject to Section 203 of the DGCL, which generally prohibits a public Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years after the date of the transaction in which the person became an interested stockholder, unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- the interested stockholder owned at least 85% of the voting stock of the corporation outstanding upon consummation of the transaction, excluding for purposes of determining the number of shares outstanding (1) shares owned by persons who are directors and also officers and (2) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to the consummation of the transaction, the business combination is approved by the board and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 of the DGCL defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;

- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder; and
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 of the DGCL defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

***Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws***

Our certificate of incorporation and bylaws include a number of provisions that may have the effect of delaying, deferring or preventing another party from acquiring control of us and encouraging persons considering unsolicited tender offers or other unilateral takeover proposals to negotiate with our board of directors rather than pursue non-negotiated takeover attempts. These provisions include the items described below.

*Board Composition and Filling Vacancies.* Our certificate of incorporation provides for the division of our board of directors into three classes serving staggered three-year terms, with one class being elected each year. Our certificate of incorporation also provides that directors may be removed only for cause and then only by the affirmative vote of the holders of two-thirds or more of the shares then entitled to vote at an election of directors. Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of our board, may only be filled by the affirmative vote of a majority of our directors then in office even if less than a quorum. The classification of directors, together with the limitations on removal of directors and treatment of vacancies, has the effect of making it more difficult for stockholders to change the composition of our board of directors.

*No Written Consent of Stockholders.* Our certificate of incorporation provides that all stockholder actions are required to be taken by a vote of the stockholders at an annual or special meeting, and that stockholders may not take any action by written consent in lieu of a meeting. This limit may lengthen the amount of time required to take stockholder actions and would prevent the amendment of our bylaws or removal of directors by our stockholders without holding a meeting of stockholders.

*Meetings of Stockholders.* Our certificate of incorporation and bylaws provide that only a majority of the members of our board of directors then in office may call special meetings of stockholders and only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders. Our bylaws limit the business that may be conducted at an annual meeting of stockholders to those matters properly brought before the meeting.

*Advance Notice Requirements.* Our bylaws establish advance notice procedures with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary date of the annual meeting for the preceding year. Our bylaws specify the requirements as to form and content of all stockholders' notices. These requirements may preclude stockholders from bringing matters before the stockholders at an annual or special meeting.

*Amendment to Certificate of Incorporation and Bylaws.* Any amendment of our certificate of incorporation must first be approved by a majority of our board of directors, and if required by law or our certificate of incorporation, must thereafter be approved by a majority of the outstanding shares of capital stock (other than the non-voting

common stock) entitled to vote on the amendment and a majority of the outstanding shares of each class entitled to vote thereon as a class, except that the amendment of the provisions relating to stockholder action, board composition, and limitation of liability must be approved by not less than two-thirds of the outstanding shares entitled to vote on the amendment, and not less than two-thirds of the outstanding shares of each class entitled to vote thereon as a class. Our bylaws may be amended by the affirmative vote of a majority of the directors then in office, subject to any limitations set forth in the bylaws; and may also be amended by the affirmative vote of not less than two-thirds of the outstanding shares entitled to vote on the amendment, and not less than two-thirds of the outstanding shares of each class entitled to vote thereon as a class, or, if our board of directors recommends that the stockholders approve the amendment, by the affirmative vote of the majority of the outstanding shares entitled to vote on the amendment, in each case voting together as a single class. Any amendments of the provisions relating to the rights on non-voting common stock requires the unanimous approval of all outstanding shares of non-voting common stock.

*Undesignated Preferred Stock.* Our certificate of incorporation provides for 10,000,000 authorized shares of preferred stock. The existence of authorized but unissued shares of preferred stock may enable our board of directors to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, our board of directors were to determine that a takeover proposal is not in the best interests of our stockholders, our board of directors could cause shares of preferred stock to be issued without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer or insurgent stockholder or stockholder group. In this regard, our certificate of incorporation grants our board of directors broad power to establish the rights and preferences of authorized and unissued shares of preferred stock. The issuance of shares of preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock and non-voting common stock. The issuance may also adversely affect the rights and powers, including voting rights, of these holders and may have the effect of delaying, deterring or preventing a change in control of us.

### ***Choice of Forum***

Our bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for any state law claims for (1) any derivative action or proceeding brought on our behalf, (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers, and employees to us or our stockholders, (3) any action asserting a claim arising pursuant to the Delaware General Corporation Law, our certificate of incorporation or our bylaws, (4) any action to interpret, apply, enforce or determine the validity of our certificate of incorporation or bylaws, or (5) any action asserting a claim that is governed by the internal affairs doctrine; provided, however, that this provision shall not apply to any causes of action arising under the Securities Act or Exchange Act. In addition, our bylaws provide that, unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States shall be the sole and exclusive forum for resolving any complaint asserting a cause or causes of action arising under the Securities Act, including all causes of action asserted against any defendants to such complaint. For the avoidance of doubt, this provision is intended to benefit and may be enforced by us, our officers and directors, the underwriters to any offering giving rise to such complaint, and any other professional entity whose profession gives authority to a statement made by that person or entity and who has prepared or certified any part of the documents underlying the offering. While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring a claim in a venue other than those designated in the exclusive forum provisions, and there can be no assurance that such provisions will be enforced by a court in those other jurisdictions. Any person or entity purchasing or otherwise acquiring any interest in our securities shall be deemed to have notice of and consented to these forum provisions. These forum provisions may impose additional costs on stockholders, may limit our stockholders' ability to bring a claim in a forum they find favorable, and the designated courts may reach different judgments or results than other courts.

### **Transfer Agent and Registrar**

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A. The transfer agent and registrar's address is 150 Royall Street, Canton, MA 02021, and its telephone number is (800) 962-4284.

**Listing on the Nasdaq Global Select Market**

Our common stock is listed on the Nasdaq Global Select Market under the symbol “TRML.”

## DESCRIPTION OF DEBT SECURITIES

We may issue debt securities from time to time, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. While the terms we have summarized below will apply generally to any debt securities that we may offer under this prospectus, we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement. The terms of any debt securities offered under a prospectus supplement may differ from the terms described below. Unless the context requires otherwise, whenever we refer to the indenture, we also are referring to any supplemental indentures that specify the terms of a particular series of debt securities.

We will issue the debt securities under the indenture that we will enter into with the trustee named in the indenture. The indenture will be qualified under the Trust Indenture Act of 1939, as amended (the “Trust Indenture Act”). We have filed the form of indenture as an exhibit to the registration statement of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of the debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

The following summary of material provisions of the debt securities and the indenture is subject to, and qualified in its entirety by reference to, all of the provisions of the indenture applicable to a particular series of debt securities. We urge you to read the applicable prospectus supplements and any related free writing prospectuses related to the debt securities that we may offer under this prospectus, as well as the complete indenture that contains the terms of the debt securities.

### General

The indenture does not limit the amount of debt securities that we may issue. It provides that we may issue debt securities up to the principal amount that we may authorize and may be in any currency or currency unit that we may designate. Except for the limitations on consolidation, merger and sale of all or substantially all of our assets contained in the indenture, the terms of the indenture do not contain any covenants or other provisions designed to give holders of any debt securities protection against changes in our operations, financial condition or transactions involving us.

We may issue the debt securities issued under the indenture as “discount securities,” which means they may be sold at a discount below their stated principal amount. These debt securities, as well as other debt securities that are not issued at a discount, may be issued with “original issue discount,” or OID, for U.S. federal income tax purposes because of interest payment and other characteristics or terms of the debt securities. Material U.S. federal income tax considerations applicable to debt securities issued with OID will be described in more detail in any applicable prospectus supplement.

We will describe in the applicable prospectus supplement the terms of the series of debt securities being offered, including:

- the title of the series of debt securities;
- any limit upon the aggregate principal amount that may be issued;
- the maturity date or dates;
- the form of the debt securities of the series;
- the applicability of any guarantees;
- whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;
- whether the debt securities rank as senior debt, senior subordinated debt, subordinated debt or any combination thereof, and the terms of any subordination;

- if the price (expressed as a percentage of the aggregate principal amount thereof) at which such debt securities will be issued is a price other than the principal amount thereof, the portion of the principal amount thereof payable upon declaration of acceleration of the maturity thereof, or if applicable, the portion of the principal amount of such debt securities that is convertible into another security or the method by which any such portion shall be determined;
- the interest rate or rates, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;
- our right, if any, to defer payment of interest and the maximum length of any such deferral period;
- if applicable, the date or dates after which, or the period or periods during which, and the price or prices at which, we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions and the terms of those redemption provisions;
- the date or dates, if any, on which, and the price or prices at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;
- the denominations in which we will issue the series of debt securities, if other than denominations of \$1,000 and any integral multiple thereof;
- any and all terms, if applicable, relating to any auction or remarketing of the debt securities of that series and any security for our obligations with respect to such debt securities and any other terms which may be advisable in connection with the marketing of debt securities of that series;
- whether the debt securities of the series shall be issued in whole or in part in the form of a global security or securities; the terms and conditions, if any, upon which such global security or securities may be exchanged in whole or in part for other individual securities; and the depository for such global security or securities;
- if applicable, the provisions relating to conversion or exchange of any debt securities of the series and the terms and conditions upon which such debt securities will be so convertible or exchangeable, including the conversion or exchange price, as applicable, or how it will be calculated and may be adjusted, any mandatory or optional (at our option or the holders' option) conversion or exchange features, the applicable conversion or exchange period and the manner of settlement for any conversion or exchange;
- if other than the full principal amount thereof, the portion of the principal amount of debt securities of the series which shall be payable upon declaration of acceleration of the maturity thereof;
- additions to or changes in the covenants applicable to the particular debt securities being issued, including, among others, the consolidation, merger or sale covenant;
- additions to or changes in the events of default with respect to the securities and any change in the right of the trustee or the holders to declare the principal, premium, if any, and interest, if any, with respect to such securities to be due and payable;
- additions to or changes in or deletions of the provisions relating to covenant defeasance and legal defeasance;
- additions to or changes in the provisions relating to satisfaction and discharge of the indenture;
- additions to or changes in the provisions relating to the modification of the indenture both with and without the consent of holders of debt securities issued under the indenture;
- the currency of payment of debt securities if other than U.S. dollars and the manner of determining the equivalent amount in U.S. dollars;
- whether interest will be payable in cash or additional debt securities at our or the holders' option and the terms and conditions upon which the election may be made;

- the terms and conditions, if any, upon which we will pay amounts in addition to the stated interest, premium, if any, and principal amounts of the debt securities of the series to any holder that is not a “United States person” for federal tax purposes;
- any restrictions on transfer, sale or assignment of the debt securities of the series; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, any other additions or changes in the provisions of the indenture, and any terms that may be required by us or advisable under applicable laws or regulations.

### **Conversion or Exchange Rights**

We will set forth in the applicable prospectus supplement the terms on which a series of debt securities may be convertible into or exchangeable for our common stock or our other securities. We will include provisions as to settlement upon conversion or exchange and whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of shares of our common stock or our other securities that the holders of the series of debt securities receive would be subject to adjustment.

### **Consolidation, Merger or Sale**

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, the indenture will not contain any covenant that restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of our assets as an entirety or substantially as an entirety. However, any successor to or acquirer of such assets (other than a subsidiary of ours) must assume all of our obligations under the indenture or the debt securities, as appropriate.

### **Events of Default under the Indenture**

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, the following are events of default under the indenture with respect to any series of debt securities that we may issue:

- if we fail to pay any installment of interest on any series of debt securities, as and when the same shall become due and payable, and such default continues for a period of 90 days; provided, however, that a valid extension of an interest payment period by us in accordance with the terms of any indenture supplemental thereto shall not constitute a default in the payment of interest for this purpose;
- if we fail to pay the principal of, or premium, if any, on any series of debt securities as and when the same shall become due and payable whether at maturity, upon redemption, by declaration or otherwise, or in any payment required by any sinking or analogous fund established with respect to such series; provided, however, that a valid extension of the maturity of such debt securities in accordance with the terms of any indenture supplemental thereto shall not constitute a default in the payment of principal or premium, if any;
- if we fail to observe or perform any other covenant or agreement contained in the debt securities or the indenture, other than a covenant specifically relating to another series of debt securities, and our failure continues for 90 days after we receive written notice of such failure, requiring the same to be remedied and stating that such is a notice of default thereunder, from the trustee or holders of at least 25% in aggregate principal amount of the outstanding debt securities of the applicable series; and
- if specified events of bankruptcy, insolvency or reorganization occur.

If an event of default with respect to debt securities of any series occurs and is continuing, other than an event of default specified in the last bullet point above, the trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series, by notice to us in writing, and to the trustee if notice is given by such holders, may declare the unpaid principal of, premium, if any, and accrued interest, if any, due and payable immediately. If an event of default specified in the last bullet point above occurs with respect to us, the principal



amount of and accrued interest, if any, of each issue of debt securities then outstanding shall be due and payable without any notice or other action on the part of the trustee or any holder.

The holders of a majority in principal amount of the outstanding debt securities of an affected series may waive any default or event of default with respect to the series and its consequences, except defaults or events of default regarding payment of principal, premium, if any, or interest, unless we have cured the default or event of default in accordance with the indenture. Any waiver shall cure the default or event of default.

Subject to the terms of the indenture, if an event of default under an indenture shall occur and be continuing, the trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of debt securities, unless such holders have offered the trustee reasonable indemnity. 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, provided that:

- the direction so given by the holder is not in conflict with any law or the applicable indenture; and
- subject to its duties under the Trust Indenture Act, the trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

A holder of the debt securities of any series will have the right to institute a proceeding under the indenture or to appoint a receiver or trustee, or to seek other remedies only if:

- the holder has given written notice to the trustee of a continuing event of default with respect to that series;
- the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series have made written request;
- such holders have offered to the trustee indemnity satisfactory to it against the costs, expenses and liabilities to be incurred by the trustee in compliance with the request; and
- the trustee does not institute the proceeding, and does not receive from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series other conflicting directions within 90 days after the notice, request and offer.

These limitations do not apply to a suit instituted by a holder of debt securities if we default in the payment of the principal, premium, if any, or interest on, the debt securities.

We will periodically file statements with the trustee regarding our compliance with specified covenants in the indenture.

#### **Modification of Indenture; Waiver**

We and the trustee may change an indenture without the consent of any holders with respect to specific matters:

- to cure any ambiguity, defect or inconsistency in the indenture or in the debt securities of any series;
- to comply with the provisions described above under “Description of Debt Securities—Consolidation, Merger or Sale;”
- to provide for uncertificated debt securities in addition to or in place of certificated debt securities;
- to add to our covenants, restrictions, conditions or provisions such new covenants, restrictions, conditions or provisions for the benefit of the holders of all or any series of debt securities, to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default or to surrender any right or power conferred upon us in the indenture;

- to add to, delete from or revise the conditions, limitations, and restrictions on the authorized amount, terms, or purposes of issue, authentication and delivery of debt securities, as set forth in the indenture;
- to make any change that does not adversely affect the interests of any holder of debt securities of any series in any material respect;
- to provide for the issuance of and establish the form and terms and conditions of the debt securities of any series as provided above under “Description of Debt Securities—General” to establish the form of any certifications required to be furnished pursuant to the terms of the indenture or any series of debt securities, or to add to the rights of the holders of any series of debt securities;
- to evidence and provide for the acceptance of appointment under any indenture by a successor trustee; or
- to comply with any requirements of the SEC in connection with the qualification of any indenture under the Trust Indenture Act.

In addition, under the indenture, the rights of holders of a series of debt securities may be changed by us and the trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series that is affected. However, unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, we and the trustee may make the following changes only with the consent of each holder of any outstanding debt securities affected:

- extending the fixed maturity of any debt securities of any series;
- reducing the principal amount, reducing the rate of or extending the time of payment of interest, or reducing any premium payable upon the redemption of any series of any debt securities; or
- reducing the percentage of debt securities, the holders of which are required to consent to any amendment, supplement, modification or waiver.

### **Discharge**

The indenture provides that we can elect to be discharged from our obligations with respect to one or more series of debt securities, except for specified obligations, including obligations to:

- provide for payment;
- register the transfer or exchange of debt securities of the series;
- replace stolen, lost or mutilated debt securities of the series;
- pay principal of and premium and interest on any debt securities of the series;
- maintain paying agencies;
- hold monies for payment in trust;
- recover excess money held by the trustee;
- compensate and indemnify the trustee; and
- appoint any successor trustee.

In order to exercise our rights to be discharged, we must deposit with the trustee money or government obligations sufficient to pay all the principal of, any premium, if any, and interest on, the debt securities of the series on the dates payments are due.

### **Form, Exchange and Transfer**

We will issue the debt securities of each series only in fully registered form without coupons and, unless we provide otherwise in the applicable prospectus supplement, in denominations of \$1,000 and any integral multiple

thereof. The indenture provides that we may issue debt securities of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on behalf of, The Depository Trust Company (“DTC”), or another depository named by us and identified in the applicable prospectus supplement with respect to that series. To the extent the debt securities of a series are issued in global form and as book-entry, a description of terms relating to any book-entry securities will be set forth in the applicable prospectus supplement.

At the option of the holder, subject to the terms of the indenture and the limitations applicable to global securities described in the applicable prospectus supplement, the holder of the debt securities of any series can exchange the debt securities for other debt securities of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

Subject to the terms of the indenture and the limitations applicable to global securities set forth in the applicable prospectus supplement, holders of the debt securities may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the debt securities that the holder presents for transfer or exchange, we will impose no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in the applicable prospectus supplement the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any debt securities. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

If we elect to redeem the debt securities of any series, we will not be required to:

- issue, register the transfer of, or exchange any debt securities of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the day of the mailing; or
- register the transfer or exchange of any debt securities so selected for redemption, in whole or in part, except the unredeemed portion of any debt securities we are redeeming in part.

#### **Information Concerning the Trustee**

The trustee, other than during the occurrence and continuance of an event of default under an indenture, undertakes to perform only those duties as are specifically set forth in the applicable indenture. Upon an event of default under an indenture, the trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs. Subject to this provision, the trustee is under no obligation to exercise any of the powers given it by the indenture at the request of any holder of debt securities unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur.

#### **Payment and Paying Agents**

Unless we otherwise indicate in the applicable prospectus supplement, we will make payment of the interest on any debt securities on any interest payment date to the person in whose name the debt securities, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

We will pay the principal of and any premium and interest on the debt securities of a particular series at the office of the paying agents designated by us, except that unless we otherwise indicate in the applicable prospectus supplement, we will make interest payments by check that we will mail to the holder or by wire or ACH transfer to certain holders. Unless we otherwise indicate in the applicable prospectus supplement, we will designate the corporate trust office of the trustee as our sole paying agent for payments with respect to debt securities of each

series. We will name in the applicable prospectus supplement any other paying agents that we initially designate for the debt securities of a particular series. We will maintain a paying agent in each place of payment for the debt securities of a particular series.

All money we pay to a paying agent or the trustee for the payment of the principal of or any premium or interest on any debt securities that remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the holder of the debt security thereafter may look only to us for payment thereof.

#### **Governing Law**

The indenture and the debt securities will be governed by and construed in accordance with the internal laws of the State of New York, except to the extent that the Trust Indenture Act of 1939 is applicable.

## DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplements and free writing prospectuses, summarizes the material terms and provisions of the warrants that we may offer under this prospectus, which may consist of warrants to purchase common stock, preferred stock or debt securities and may be issued in one or more series. Warrants may be issued independently or together with common stock, preferred stock or debt securities offered by any prospectus supplement, and may be attached to or separate from those securities. While the terms we have summarized below will apply generally to any warrants that we may offer under this prospectus, we will describe the particular terms of any series of warrants that we may offer in more detail in the applicable prospectus supplement and any applicable free writing prospectus. The terms of any warrants offered under a prospectus supplement may differ from the terms described below. However, no prospectus supplement will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness.

We have filed forms of the warrant agreements as exhibits to the registration statement of which this prospectus is a part. We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of warrant agreement, if any, including a form of warrant certificate, that describes the terms of the particular series of warrants we are offering. The following summaries of material provisions of the warrants and the warrant agreements are subject to, and qualified in their entirety by reference to, all the provisions of the warrant agreement and warrant certificate applicable to the particular series of warrants that we may offer under this prospectus. We urge you to read the applicable prospectus supplements related to the particular series of warrants that we may offer under this prospectus, as well as any related free writing prospectuses, and the complete warrant agreements and warrant certificates that contain the terms of the warrants.

### General

We will describe in the applicable prospectus supplement the terms relating to a series of warrants being offered, including:

- the title of such securities;
- the offering price or prices and aggregate number of warrants offered;
- the currency or currencies for which the warrants may be purchased;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- if applicable, the minimum or maximum amount of such warrants which may be exercised at any one time;
- in the case of warrants to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one warrant and the price at which, and currency in which, this principal amount of debt securities may be purchased upon such exercise;
- in the case of warrants to purchase common stock or preferred stock, the number of shares of common stock or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which, and the currency in which, these shares may be purchased upon such exercise;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreements and the warrants;
- the terms of any rights to redeem or call the warrants;
- the terms of any rights to force the exercise of the warrants;

- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreements and warrants may be modified;
- a discussion of any material or special U.S. federal income tax consequences of holding or exercising the warrants;
- the terms of the securities issuable upon exercise of the warrants; and
- any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the securities purchasable upon such exercise, including:

- in the case of warrants to purchase debt securities, the right to receive payments of principal of, or premium, if any, or interest on, the debt securities purchasable upon exercise or to enforce covenants in the applicable indenture; or
- in the case of warrants to purchase common stock or preferred stock, the right to receive dividends, if any, or, payments upon our liquidation, dissolution or winding up or to exercise voting rights, if any.

### **Exercise of Warrants**

Each warrant will entitle the holder to purchase the securities that we specify in the applicable prospectus supplement at the exercise price that we describe in the applicable prospectus supplement. Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants at any time up to the specified time on the expiration date that we set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants by delivering the warrant certificate representing the warrants to be exercised together with specified information, and paying the required amount to the warrant agent in immediately available funds, as provided in the applicable prospectus supplement. We will set forth on the reverse side of the warrant certificate and in the applicable prospectus supplement the information that the holder of the warrant will be required to deliver to the warrant agent in connection with the exercise of the warrant.

Upon receipt of the required payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will issue and deliver the securities purchasable upon such exercise. If fewer than all of the warrants represented by the warrant certificate are exercised, then we will issue a new warrant certificate for the remaining amount of warrants. If we so indicate in the applicable prospectus supplement, holders of the warrants may surrender securities as all or part of the exercise price for warrants.

### **Governing Law**

Unless we provide otherwise in the applicable prospectus supplement, the warrants and warrant agreements, and any claim, controversy or dispute arising under or related to the warrants or warrant agreements, will be governed by and construed in accordance with the laws of the State of New York.

### **Enforceability of Rights by Holders of Warrants**

Each warrant agent will act solely as our agent under the applicable warrant agreement and will not assume any obligation or relationship of agency or trust with any holder of any warrant. A single bank or trust company may act as warrant agent for more than one issue of warrants. A warrant agent will have no duty or responsibility in case of

any default by us under the applicable warrant agreement or warrant, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a warrant may, without the consent of the related warrant agent or the holder of any other warrant, enforce by appropriate legal action its right to exercise, and receive the securities purchasable upon exercise of, its warrants.

## LEGAL OWNERSHIP OF SECURITIES

We can issue securities in registered form or in the form of one or more global securities. We describe global securities in greater detail below. We refer to those persons who have securities registered in their own names on the books that we or any applicable trustee or depository maintain for this purpose as the “holders” of those securities. These persons are the legal holders of the securities. We refer to those persons who, indirectly through others, own beneficial interests in securities that are not registered in their own names as “indirect holders” of those securities. As we discuss below, indirect holders are not legal holders and investors in securities issued in book-entry form or in street name will be indirect holders.

### **Book-Entry Holders**

We may issue securities in book-entry form only, as we will specify in the applicable prospectus supplement. This means securities may be represented by one or more global securities registered in the name of a financial institution that holds them as depository on behalf of other financial institutions that participate in the depository’s book-entry system. These participating institutions, which are referred to as participants, in turn, hold beneficial interests in the securities on behalf of themselves or their customers.

Only the person in whose name a security is registered is recognized as the holder of that security. Global securities will be registered in the name of the depository or its participants. Consequently, for global securities, we will recognize only the depository as the holder of the securities, and we will make all payments on the securities to the depository. The depository passes along the payments it receives to its participants, which in turn pass the payments along to their customers who are the beneficial owners. The depository and its participants do so under agreements they have made with one another or with their customers; they are not obligated to do so under the terms of the securities.

As a result, investors in a global security will not own securities directly. Instead, they will own beneficial interests in a global security, through a bank, broker or other financial institution that participates in the depository’s book-entry system or holds an interest through a participant. As long as the securities are issued in global form, investors will be indirect holders, and not legal holders, of the securities.

### **Street Name Holders**

A global security may be terminated in certain situations as described under “—Special Situations When a Global Security Will Be Terminated,” or issue securities that are not issued in global form. In these cases, investors may choose to hold their securities in their own names or in “street name.” Securities held by an investor in street name would be registered in the name of a bank, broker or other financial institution that the investor chooses, and the investor would hold only a beneficial interest in those securities through an account he or she maintains at that institution.

For securities held in street name, we or any applicable trustee or depository will recognize only the intermediary banks, brokers and other financial institutions in whose names the securities are registered as the holders of those securities, and we or any such trustee or depository will make all payments on those securities to them. These institutions pass along the payments they receive to their customers who are the beneficial owners, but only because they agree to do so in their customer agreements or because they are legally required to do so. Investors who hold securities in street name will be indirect holders, not holders, of those securities.

### **Legal Holders**

Our obligations, as well as the obligations of any applicable trustee or third party employed by us or a trustee, run only to the legal holders of the securities. We do not have obligations to investors who hold beneficial interests in global securities, in street name or by any other indirect means. This will be the case whether an investor chooses to be an indirect holder of a security or has no choice because we are issuing the securities only in global form.



For example, once we make a payment or give a notice to the legal holder, we have no further responsibility for the payment or notice even if that legal holder is required, under agreements with its participants or customers or by law, to pass it along to the indirect holders but does not do so. Similarly, we may want to obtain the approval of the holders to amend an indenture, to relieve us of the consequences of a default or of our obligation to comply with a particular provision of an indenture, or for other purposes. In such an event, we would seek approval only from the legal holders, and not the indirect holders, of the securities. Whether and how the legal holders contact the indirect holders is up to the legal holders.

### **Special Considerations for Indirect Holders**

If you hold securities through a bank, broker or other financial institution, either in book-entry form because the securities are represented by one or more global securities or in street name, you should check with your own institution to find out:

- how it handles securities payments and notices;
- whether it imposes fees or charges;
- how it would handle a request for the holders' consent, if ever required;
- whether and how you can instruct it to send you securities registered in your own name so you can be a holder, if that is permitted in the future;
- how it would exercise rights under the securities if there were a default or other event triggering the need for holders to act to protect their interests; and
- if the securities are in book-entry form, how the depositary's rules and procedures will affect these matters.

### **Global Securities**

A global security is a security that represents one or any other number of individual securities held by a depositary. Generally, all securities represented by the same global securities will have the same terms.

Each security issued in book-entry form will be represented by a global security that we issue to, deposit with and register in the name of a financial institution or its nominee that we select. The financial institution that we select for this purpose is called the depositary. Unless we specify otherwise in the applicable prospectus supplement, the DTC will be the depositary for all securities issued in book-entry form.

A global security may not be transferred to or registered in the name of anyone other than the depositary, its nominee or a successor depositary, unless special termination situations arise. We describe those situations below under “—Special Situations When a Global Security Will Be Terminated.” As a result of these arrangements, the depositary, or its nominee, will be the sole registered owner and legal holder of all securities represented by a global security, and investors will be permitted to own only beneficial interests in a global security. Beneficial interests must be held by means of an account with a broker, bank or other financial institution that in turn has an account with the depositary or with another institution that does. Thus, an investor whose security is represented by a global security will not be a legal holder of the security, but only an indirect holder of a beneficial interest in the global security.

If the prospectus supplement for a particular security indicates that the security will be issued as a global security, then the security will be represented by a global security at all times unless and until the global security is terminated. If termination occurs, we may issue the securities through another book-entry clearing system or decide that the securities may no longer be held through any book-entry clearing system.

## **Special Considerations for Global Securities**

As an indirect holder, an investor's rights relating to a global security will be governed by the account rules of the investor's financial institution and of the depository, as well as general laws relating to securities transfers. We do not recognize an indirect holder as a holder of securities and instead deal only with the depository that holds the global security.

If securities are issued only as global securities, an investor should be aware of the following:

- an investor cannot cause the securities to be registered in his or her name, and cannot obtain non-global certificates for his or her interest in the securities, except in the special situations we describe below;
- an investor will be an indirect holder and must look to his or her own bank or broker for payments on the securities and protection of his or her legal rights relating to the securities, as we describe above;
- an investor may not be able to sell interests in the securities to some insurance companies and to other institutions that are required by law to own their securities in non-book-entry form;
- an investor may not be able to pledge his or her interest in the global security in circumstances where certificates representing the securities must be delivered to the lender or other beneficiary of the pledge in order for the pledge to be effective;
- the depository's policies, which may change from time to time, will govern payments, transfers, exchanges and other matters relating to an investor's interest in the global security;
- we and any applicable trustee have no responsibility for any aspect of the depository's actions or for its records of ownership interests in the global security, nor will we or any applicable trustee supervise the depository in any way;
- the depository may, and we understand that DTC will, require that those who purchase and sell interests in the global security within its book-entry system use immediately available funds, and your broker or bank may require you to do so as well; and
- financial institutions that participate in the depository's book-entry system, and through which an investor holds its interest in the global security, may also have their own policies affecting payments, notices and other matters relating to the securities.

There may be more than one financial intermediary in the chain of ownership for an investor. We do not monitor and are not responsible for the actions of any of those intermediaries.

## **Special Situations When a Global Security Will Be Terminated**

In a few special situations described below, a global security will terminate and interests in it will be exchanged for physical certificates representing those interests. After that exchange, the choice of whether to hold securities directly or in street name will be up to the investor. Investors must consult their own banks or brokers to find out how to have their interests in securities transferred to their own names, so that they will be direct holders. We have described the rights of holders and street name investors above.

Unless we provide otherwise in the applicable prospectus supplement, the global security will terminate when the following special situations occur:

- if the depository notifies us that it is unwilling, unable or no longer qualified to continue as depository for that global security and we do not appoint another institution to act as depository within 90 days;
- if we notify any applicable trustee that we wish to terminate that global security; or
- if an event of default has occurred with regard to securities represented by that global security and has not been cured or waived.

The applicable prospectus supplement may also list additional situations for terminating a global security that would apply only to the particular series of securities covered by the prospectus supplement. When a global security terminates, the depositary, and neither we nor any applicable trustee, is responsible for deciding the names of the institutions that will be the initial direct holders.

## PLAN OF DISTRIBUTION

We may sell the securities offered by this prospectus from time to time pursuant to underwritten public offerings, negotiated transactions, block trades or a combination of these methods. We may sell the securities offered by this prospectus to or through underwriters or dealers, through agents, or directly to one or more purchasers. We may distribute securities from time to time in one or more transactions:

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

We may also sell equity securities offered by this prospectus in an “at the market offering” as defined in Rule 415 under the Securities Act. Such offering may be made into an existing trading market for such securities in transactions at other than a fixed price, either:

- on or through the facilities of the Nasdaq Global Select Market or any other securities exchange or quotation or trading service on which such securities may be listed, quoted or traded at the time of sale; and/or
- to or through a market maker other than on the Nasdaq Global Select Market or such other securities exchanges or quotation or trading services.

Such “at the market offerings,” if any, may be conducted by underwriters acting as principal or agent.

A prospectus supplement or supplements (and any related free writing prospectus that we may authorize to be provided to you) will describe the terms of the offering of the securities, including, to the extent applicable:

- the name or names of any underwriters, dealers or agents, if any;
- the purchase price of the securities and the proceeds we will receive from the sale;
- any over-allotment options under which underwriters may purchase additional securities from us;
- any agency fees or underwriting discounts and other items constituting agents’ or underwriters’ compensation;
- any public offering price;
- any discounts or concessions allowed or reallocated or paid to dealers; and
- any securities exchange or market on which the securities may be listed.

Only underwriters named in a prospectus supplement are underwriters of the securities offered by such prospectus supplement.

If underwriters are used in the sale, they will acquire the securities for their own account and may resell the securities from time to time in one or more transactions at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. We may offer the securities to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. Subject to certain conditions, the underwriters will be obligated to purchase all of the securities offered by the prospectus supplement. Any public offering price and any discounts or concessions allowed or reallocated or paid to dealers may change from time to time. We may use underwriters with whom we have a material relationship. We will describe in the prospectus supplement, naming the underwriter, the nature of any such relationship.

We may sell securities directly or through agents we designate from time to time. We will name any agent involved in the offering and sale of securities, and we will describe any commissions and other compensation we will pay the agent in the prospectus supplement. Unless the prospectus supplement states otherwise, our agent will act on a best-efforts basis for the period of its appointment.

We may authorize agents or underwriters to solicit offers by certain types of institutional investors to purchase securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. We will describe the conditions to these contracts and the commissions we must pay for solicitation of these contracts in the prospectus supplement.

We may provide agents and underwriters with indemnification against civil liabilities related to this offering, including liabilities under the Securities Act, or contribution with respect to payments that the agents or underwriters may make with respect to these liabilities. Agents and underwriters may engage in transactions with, or perform services for, us in the ordinary course of business.

Other than common stock, all securities we offer will be new issues of securities with no established trading market. Any underwriters may make a market in these securities, but will not be obligated to do so and may discontinue any market making at any time without notice. We cannot guarantee the liquidity of the trading markets for any securities.

Any underwriter may engage in overallotment, stabilizing transactions, short covering transactions and penalty bids. Overallotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Short covering transactions involve purchases of the securities in the open market after the distribution is completed to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a stabilizing or covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time. These transactions may be effected on any exchange or over-the-counter market or otherwise.

Any agents and underwriters who are qualified market makers on the Nasdaq Global Select Market may engage in passive market making transactions in the securities on the Nasdaq Global Select Market in accordance with Rule 103 of Regulation M, during the business day prior to the pricing of the offering, before the commencement of offers or sales of the securities. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security; if all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid must then be lowered when certain purchase limits are exceeded. Passive market making may stabilize the market price of the securities at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

In compliance with guidelines of the Financial Industry Regulatory Authority ("FINRA"), the maximum consideration or discount to be received by any FINRA member or independent broker dealer may not exceed 8% of the aggregate amount of the securities offered pursuant to this prospectus and the applicable prospectus supplement.

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

## **LEGAL MATTERS**

Unless otherwise indicated in the applicable prospectus supplement, certain legal matters in connection with the offering and the validity of the securities offered by this prospectus, and any supplement hereto, will be passed upon by Cooley LLP. Additional legal matters may be passed upon for us or any underwriters, dealers or agents, by counsel that we will name in the applicable prospectus supplement.

## **EXPERTS**

The financial statements of Tourmaline Bio, Inc. incorporated by reference in this prospectus 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**

This prospectus is part of a registration statement we filed with the SEC. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. Neither we nor any agent, underwriter or dealer has authorized any person to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date on the front page of this prospectus, regardless of the time of delivery of this prospectus or any sale of the securities offered by this prospectus.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains a website that contains reports, proxy statements and other information regarding issuers that file electronically with the SEC, including Tourmaline Bio. The address of the SEC website is [www.sec.gov](http://www.sec.gov).

We maintain a website at [www.tourmalinebio.com](http://www.tourmalinebio.com). The information contained in, or that can be accessed through, our website is not incorporated by reference herein and is not part of this prospectus.

## INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” information that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus, while information that we file later with the SEC will automatically update and supersede the information in this prospectus. We also incorporate by reference into this prospectus the documents listed below and any future filings made by us with the SEC (other than Current Reports or portions thereof furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items and other portions of documents that are furnished, but not filed, or are otherwise not incorporated into registration statements pursuant to applicable rules promulgated by the SEC) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (i) after the date of the filing of the registration statement of which this prospectus is a part and prior to the effectiveness of the registration statement, and (ii) after the effectiveness of the registration statement but prior to the termination of all offerings of securities covered by this prospectus:

- our Annual Report on Form 10-K for the year ended December 31, 2023, filed with the SEC on [March 19, 2024](#) and the information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2023 from our Definitive Proxy Statement on Schedule 14A, filed with the SEC on [April 19, 2024](#);
- our Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2024, June 30, 2024 and September 30, 2024 filed with the SEC on [May 13, 2024](#), [August 8, 2024](#) and [November 7, 2024](#), respectively;
- our Current Reports on Form 8-K, filed with the SEC on [January 8, 2024](#), [January 24, 2024](#), [January 26, 2024](#), [June 7, 2024](#), [June 27, 2024](#), [September 11, 2024](#) and [October 10, 2024](#); and
- the description of our common stock, which is registered under Section 12 of the Exchange Act, described in [Exhibit 4.2](#) to our Annual Report on Form 10-K for the year ended December 31, 2023, filed with the SEC on March 19, 2024.

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, without charge upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus but not delivered with the prospectus, including exhibits which are specifically incorporated by reference into such documents. You should direct any requests for documents by writing us at 27 West 24th Street, New York, NY 10010 or by telephoning us at (646) 481-9832.

Any statement contained herein or in a document incorporated or deemed to be incorporated by reference into this document will be deemed to be modified or superseded for purposes of the document to the extent that a statement contained in this document or any other subsequently filed document that is deemed to be incorporated by reference into this document modifies or supersedes the statement.

**The information in this prospectus is not complete and may be changed. We may not sell these securities or accept an offer to buy these securities 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 offers to buy these securities in any state where such offer or sale is not permitted.**

**SUBJECT TO COMPLETION, DATED NOVEMBER 7, 2024**

**PROSPECTUS**

**Up to \$100,000,000**

**TOURMALINE**

## **Common Stock**

We have entered into a sales agreement with Leerink Partners LLC (“Leerink Partners”), dated as of November 7, 2024 (the “sales agreement”), relating to shares of our common stock, par value \$0.0001 per share (the “common stock”) offered by this prospectus. In accordance with the terms of the sales agreement, we may offer and sell shares of our common stock under this prospectus having an aggregate gross sales price of up to \$100,000,000 from time to time through Leerink Partners acting as our agent. Upon entry into the sales agreement, we terminated our prior at-the-market program pursuant to the sales agreement with Leerink Partners dated August 15, 2022. At the time of such termination, \$75,000,000 out of an aggregate of \$75,000,000 remained unsold under such sales agreement.

Our common stock is listed on the Nasdaq Global Select Market (“Nasdaq”) under the symbol “TRML.” On November 4, 2024, the last reported sale price of our common stock was \$26.90 per share.

Subject to the terms and conditions of the sales agreement, Leerink Partners may sell the common stock by any methods deemed to be an “at the market offering” as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended (the “Securities Act”). Leerink Partners is not required to sell any specific amount of securities, but will act as our sales agent using commercially reasonable efforts consistent with its normal trading and sales practices, on mutually agreed terms between Leerink Partners and us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

The compensation to Leerink Partners for sales of common stock sold pursuant to the sales agreement will be an amount up to 3.0% 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, Leerink Partners will be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation of Leerink Partners will be deemed to be underwriting commissions or discounts. We have agreed to reimburse Leerink Partners for certain of its out-of-pocket expenses. See “Plan of Distribution” for further information regarding compensation to be paid to Leerink Partners in connection with this offering. We have also agreed to provide indemnification and contribution to Leerink Partners with respect to certain liabilities, including liabilities under the Securities Act or the Securities Exchange Act of 1934, as amended (the “Exchange Act”).

We are an “emerging growth company” and a “smaller reporting company” under the federal securities laws and, as such, we have elected to comply with certain reduced public company reporting requirements for this prospectus and for future filings.

**Investing in our common stock involves a high degree of risk. You should carefully review the risks and uncertainties described under the heading “Risk Factors” beginning on page [S-5](#) of this prospectus and under similar headings in the documents that are incorporated by reference into this prospectus.**



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

## Leerink Partners

, 2024

## TABLE OF CONTENTS

	<u>Page</u>
<a href="#"><u>ABOUT THIS PROSPECTUS</u></a>	<a href="#"><u>S-ii</u></a>
<a href="#"><u>PROSPECTUS SUMMARY</u></a>	<a href="#"><u>S-1</u></a>
<a href="#"><u>RISK FACTORS</u></a>	<a href="#"><u>S-5</u></a>
<a href="#"><u>SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS</u></a>	<a href="#"><u>S-7</u></a>
<a href="#"><u>USE OF PROCEEDS</u></a>	<a href="#"><u>S-9</u></a>
<a href="#"><u>DILUTION</u></a>	<a href="#"><u>S-10</u></a>
<a href="#"><u>PLAN OF DISTRIBUTION</u></a>	<a href="#"><u>S-12</u></a>
<a href="#"><u>LEGAL MATTERS</u></a>	<a href="#"><u>S-14</u></a>
<a href="#"><u>EXPERTS</u></a>	<a href="#"><u>S-14</u></a>
<a href="#"><u>WHERE YOU CAN FIND MORE INFORMATION</u></a>	<a href="#"><u>S-14</u></a>
<a href="#"><u>INCORPORATION OF CERTAIN INFORMATION BY REFERENCE</u></a>	<a href="#"><u>S-15</u></a>

## **ABOUT THIS PROSPECTUS**

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

This prospectus describes the terms of this offering of common stock and also adds to and updates information contained in the documents incorporated by reference into this prospectus. To the extent there is a conflict between the information contained in this prospectus, on the one hand, and the information contained in any document incorporated by reference into this prospectus that was filed with the U.S. Securities and Exchange Commission (the “SEC”) before the date of this prospectus, on the other hand, you should rely on the information in this prospectus. 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 into this prospectus) the statement in the document having the later date modifies or supersedes the earlier statement.

We have not, and Leerink Partners has not, authorized anyone to provide you with information in addition to or different from that contained in or incorporated by reference into this prospectus. We are not, and Leerink Partners is not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus, the documents incorporated by reference into this prospectus, and in any free writing prospectus that we have authorized for use in connection with this offering, is accurate only as of the date of those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this prospectus, the documents incorporated by reference into this prospectus, and any free writing prospectus that we have authorized for use in connection with this offering, in their entirety before making an investment decision.

Unless the context requires otherwise, references in this prospectus to the “Company,” “Tourmaline Bio,” “we,” “us” and “our” refer to Tourmaline Bio, Inc.

## **MARKET AND INDUSTRY DATA**

Certain information contained in, or incorporated by reference into, this prospectus relates to or is based on studies, publications, surveys and other data obtained from third-party sources and our own internal estimates and research. While we believe these third-party sources to be reliable as of the date of this prospectus, we have not independently verified the market and industry data contained in this prospectus or the underlying assumptions relied on therein. Finally, while we believe our own internal research is reliable, such research has not been verified by any independent source. Notwithstanding the foregoing, we are liable for the information provided in this prospectus.

## **TRADEMARKS**

This prospectus contains references to our trademarks and to trademarks belonging to other entities. Solely for convenience, trademarks and trade names referred to in this prospectus, including logos, artwork and other visual displays, may appear without the ® or TM symbols, but such references are not intended to indicate, in any way, that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto. We do not intend our use or display of other companies’ trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

## PROSPECTUS SUMMARY

*This summary highlights certain information about us, this offering and selected information contained elsewhere in or incorporated by reference into this prospectus. This summary is not complete and does not contain all of the information that you should consider before deciding whether to invest in our common stock. For a more complete understanding of our Company and this offering, we encourage you to read and consider carefully the more detailed information in this prospectus, including the information incorporated by reference into this prospectus, and the information included in any free writing prospectus that we have authorized for use in connection with this offering, including the information under the heading “Risk Factors” in this prospectus beginning on page [S-5](#) and in the documents incorporated by reference into this prospectus.*

### Company Overview

We are a late-stage clinical biotechnology company focused on developing transformative medicines that dramatically improve the lives of patients with life-altering immune and inflammatory diseases. In doing so, we seek to identify and develop medicines that have the potential to establish new standards-of-care in areas of high unmet medical need.

Our initial product candidate is pacibekitug (also referred to as TOUR006), a fully human monoclonal antibody that selectively binds to interleukin-6 (“IL-6”), a key proinflammatory cytokine involved in the pathogenesis of many autoimmune and inflammatory disorders. The anti-IL-6 and anti-IL-6 receptor (“IL-6R”) antibody class (“IL-6 class”) has over two decades of clinical and commercial experience treating over a million patients with a variety of autoimmune and inflammatory diseases. To date, four anti-IL-6 or anti-IL-6R antibodies have been approved in the U.S. These four anti-IL-6 or anti-IL-6R antibodies together generated more than \$3.5 billion in global sales in 2023.

Pacibekitug is a long-acting anti-IL-6 antibody which we believe has best-in-class properties including a high binding affinity to IL-6, long half-life, and low observed immunogenicity. These characteristics may allow pacibekitug to achieve substantial IL-6 pathway suppression with relatively low amounts of drug exposure, potentially enabling delivery in a convenient, low volume, infrequently administered, subcutaneous injection.

We have identified thyroid eye disease (“TED”) as our beachhead indication to explore pacibekitug’s potential in autoantibody-driven diseases. TED is an autoimmune disease characterized by autoantibody-mediated activation of the tissues surrounding the eye, causing inflammation and disfigurement which can be sight-threatening in severe cases. We have identified a substantial body of published clinical observations characterizing the beneficial off-label use of currently marketed IL-6 pathway inhibitors, namely Actemra® (tocilizumab), an anti-IL-6R monoclonal antibody, in reducing inflammation, eye-bulging, and levels of autoantibodies in patients with TED. However, no formal, industry-sponsored development effort studying the IL-6 class for the treatment of TED has been completed to date.

We are currently evaluating pacibekitug in a pivotal Phase 2b trial in first-line TED, which we refer to as the spiriTED trial. We initiated the spiriTED trial in September 2023 and expect to report topline data in the second half of 2025. Further, we expect to commence a pivotal Phase 3 trial of pacibekitug in first-line TED in the fourth quarter of 2024, with topline data expected to be reported in 2026.

We are also exploring pacibekitug’s potential within cardiovascular inflammation. We believe pacibekitug has the potential to transform the care of high-risk cardiovascular patients by targeting key inflammatory pathways driving cardiovascular disease. Our first indication under our cardiovascular inflammation strategic path is atherosclerotic cardiovascular disease (“ASCVD”), a leading cause of death globally. Preventing major adverse cardiovascular events (“MACE”), such as death, nonfatal myocardial infarction or nonfatal stroke, has the potential to significantly reduce global cardiovascular disease burden. IL-6 has been identified as a promising drug target for addressing the risk of MACE in ASCVD, and multiple external Phase 3 cardiovascular outcome trials investigating IL-6 blockade are ongoing. We believe that pacibekitug potentially offers a meaningfully enhanced product profile to these competitor programs with a potential for subcutaneous dosing once every three months. As previously announced in January 2024, we have reached alignment with the U.S. Food and Drug Administration (“FDA”) on the ASCVD clinical development program, including a Phase 2 trial evaluating the reduction of C-reactive protein

("CRP"), a validated biomarker for inflammation, with quarterly and monthly dosing of pacibekitug in patients with elevated cardiovascular risk. In March 2024, the FDA cleared our Investigational New Drug application ("IND") related to our ASCVD clinical development program. We initiated a Phase 2 trial of pacibekitug in patients with chronic kidney disease ("CKD") and elevated high-sensitivity CRP ("hs-CRP") in April 2024, which we refer to as the TRANQUILITY trial. We expect to report topline data from the TRANQUILITY trial in the first half of 2025. Pending a successful trial, positive results from the TRANQUILITY trial are expected to position us to be Phase 3-ready in 2025 for pacibekitug in cardiovascular disease.

We also plan to identify additional indication opportunities for pacibekitug. In addition, we continue to evaluate new in-licensing and acquisition opportunities for assets that we believe have standard-of-care changing potential for patients with immune and inflammatory diseases.

## **Corporate Information**

Prior to October 19, 2023, we were a clinical-stage biopharmaceutical company known as Talaris Therapeutics, Inc. ("Talaris") that had historically been focused on applying allogeneic hematopoietic stem cell transplantation to solid organ transplantation, autoimmune diseases and certain severe blood, immune and metabolic disorders. Talaris was originally incorporated in the State of Delaware in February 2002.

On October 19, 2023, we completed our business combination with Tourmaline Bio, Inc. ("Legacy Tourmaline") in accordance with the terms and conditions of the Agreement and Plan of Merger, dated as of June 22, 2023 (the "Merger Agreement"), by and among Talaris, Legacy Tourmaline and Terrain Merger Sub, Inc., a direct wholly owned subsidiary of Talaris ("Merger Sub"), pursuant to which Merger Sub merged with and into Legacy Tourmaline, with Legacy Tourmaline surviving as a direct wholly owned subsidiary of Talaris and the surviving corporation of the merger (the "Merger"). On October 19, 2023, in connection with and prior to the completion of the Merger, Talaris effected a 1-for-10 reverse stock split of its common stock (the "Reverse Stock Split"). Upon the completion of the Merger on October 19, 2023, Legacy Tourmaline changed its name from "Tourmaline Bio, Inc." to "Tourmaline Sub, Inc.", and Talaris changed its name from "Talaris Therapeutics, Inc." to "Tourmaline Bio, Inc."

Following the completion of the Merger, we began conducting the business conducted by Legacy Tourmaline. Our common stock began trading on The Nasdaq Global Select Market under the symbol "TRML" on October 20, 2023. On June 30, 2024, Tourmaline Sub, Inc. was merged with and into Tourmaline Bio, Inc., with Tourmaline Bio, Inc. as the surviving entity.

Our principal executive office is located at 27 West 24th Street, Suite 702, New York, New York 10010. Our telephone number is (646) 481-9832. Our website address is [www.tourmalinebio.com](http://www.tourmalinebio.com). The information contained in, or that can be accessed through, our website is not incorporated by reference herein and is not part of this prospectus.

## **Emerging Growth Company**

We are an "emerging growth company," as defined in Section 2(a) of the Securities Act, as modified by the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"), and we may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended (the "Sarbanes-Oxley Act"), reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

Further, Section 102(b)(1) of the JOBS Act exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies (that is, those that have not had a Securities Act registration statement declared effective or do not have a class of securities registered under the Exchange Act) are required to comply with the new or revised financial accounting standards. The JOBS Act provides that a company can elect to opt out of the extended transition period and comply with the requirements that apply to non-emerging growth companies but any such election to opt out is irrevocable.

We will remain an emerging growth company until the earliest to occur of: (i) the last day of the fiscal year in which we have more than \$1.235 billion in annual revenue; (ii) the date we qualify as a “large accelerated filer,” with at least \$700.0 million of equity securities held by non-affiliates; (iii) the date on which we have issued more than \$1.0 billion in non-convertible debt securities during the prior three-year period; and (iv) the last day of the fiscal year ending after the fifth anniversary of our initial public offering.

### **Smaller Reporting Company**

Additionally, we are currently a “smaller reporting company” as defined in Item 10(f)(1) of Regulation S-K. Smaller reporting companies may take advantage of certain reduced disclosure obligations, including, among other things, providing only two years of audited financial statements. We may continue to be a smaller reporting company if either (i) the market value of our stock held by non-affiliates is less than \$250.0 million or (ii) our annual revenue was less than \$100.0 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than \$700.0 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

## The Offering

Common stock offered by us	Shares of our common stock having an aggregate offering price of up to \$100,000,000.
Common stock to be outstanding after this offering	Up to 3,717,472 shares (as more fully described in the notes following this table), assuming sales of \$100.0 million of shares of our common stock in this offering at an assumed offering price of \$26.90 per share, which was the last reported sale price of our common stock on Nasdaq on November 4, 2024. The actual number of shares issued will vary depending on the prices at which shares of our common stock are sold in this offering.
Manner of offering	“At the market offering” that may be made from time to time through our sales agent, Leerink Partners. See “Plan of Distribution.”
Use of proceeds	We currently intend to use the net proceeds from this offering for continued clinical development of pipeline products, working capital and other general corporate purposes. See “Use of Proceeds.”
Risk factors	Investing in our common stock involves significant risks. See “Risk Factors” beginning on page <a href="#">S-5</a> of this prospectus, and under similar headings in documents incorporated by reference into this prospectus.
Nasdaq Global Select Market symbol	“TRML”

The number of shares to be outstanding after this offering is based on 25,642,610 shares of our common stock outstanding as of September 30, 2024, which includes 241,722 unvested shares underlying early exercised stock options subject to a repurchase option by us, and excludes:

- 2,895,223 shares of our common stock issuable upon the exercise of all stock options outstanding as of September 30, 2024, at a weighted-average exercise price of \$10.89 per share;
- 15,373 shares of our common stock issuable upon the vesting and settlement of all restricted stock units outstanding as of September 30, 2024;
- 1,499,075 shares of common stock reserved for future issuance under our 2023 equity incentive plan (the “2023 Plan”) as of September 30, 2024, plus any future annual automatic increases in the number of shares of our common stock reserved for future issuance under the 2023 Plan; and
- 406,742 shares of our common stock reserved for issuance under our 2023 employee stock purchase plan (“ESPP”) as of September 30, 2024, plus any future annual automatic increases in the number of shares of our common stock reserved for issuance under the ESPP.

## RISK FACTORS

*Investing in our common stock involves a high degree of risk. You should carefully review the risks and uncertainties described below and under the section titled “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2023, as updated by our current, quarterly, annual and other reports and documents that we have filed or subsequently file that are incorporated by reference into this prospectus, before deciding whether to purchase any common stock in this offering. Each of the risk factors could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our common stock, and the occurrence of any of these risks might cause you to lose all or part of your investment. Additional risks not presently known to us or that we currently believe are immaterial may also significantly impair our business operations. Please also carefully read the section below titled “Special Note Regarding Forward-Looking Statements.”*

### **Additional Risks Related to This Offering**

***Management will have broad discretion as to the use of the net proceeds from the shares of common stock we are selling in this offering, and we may not use these proceeds effectively.***

Our management will have broad discretion in the application of the net proceeds from the shares of common stock we are selling in this offering and could spend these proceeds in ways that do not improve our results of operations or enhance the value of our common stock. Our failure to apply these funds effectively could have a material adverse effect on our business, delay the development of our product candidates, and cause the price of our common stock to decline.

***If you purchase shares of our common stock in this offering, you may experience immediate and substantial dilution in the net tangible book value of your shares. In addition, we may issue additional equity or convertible debt securities in the future, which may result in additional dilution to you.***

The offering price per share in this offering may exceed the net tangible book value per share of our common stock outstanding prior to this offering. The prices at which we sell shares in this offering will vary and these variations may be significant. Purchasers of the shares we sell, as well as our existing stockholders, will experience significant dilution if we sell shares at prices significantly below the price at which they invested. In addition, to the extent we need to raise additional capital in the future and we issue additional shares of common stock or securities convertible or exchangeable for our common stock, our then existing stockholders may experience dilution and the new securities may have rights senior to those of our common stock offered in this offering. See the section titled “Dilution” for an illustration of the dilution you may incur if you participate in this offering.

***A sale of a substantial number of shares of our common stock may cause the price of our common stock to decline.***

Sales of a substantial number of shares of our common stock in the public market could occur at any time. If our stockholders sell, or the market perceives that our stockholders intend to sell, substantial amounts of our common stock in the public market, the market price of our common stock could decline significantly.

We cannot predict what effect, if any, sales of our shares in the public market or the availability of shares for sale will have on the market price of our common stock. However, future sales of substantial amounts of our common stock in the public market, including shares issued upon exercise of outstanding options or warrants, or the perception that such sales may occur, could adversely affect the market price of our common stock.

***The actual number of shares we will issue, and the aggregate proceeds resulting therefrom, under the sales agreement, at any one time or in total, is uncertain.***

Subject to certain limitations in the sales agreement and compliance with applicable law, we have the discretion to deliver a placement notice to Leerink Partners at any time throughout the term of the sales agreement.



The number of shares that are sold by Leerink Partners after delivering a placement notice will fluctuate based on the market price of the shares of common stock during the sales period and limits we set with Leerink Partners. Because the price per share of each share sold will fluctuate based on the market price of our common stock during the sales period, it is not possible at this stage to predict the number of shares that will be ultimately issued or the aggregate proceeds to be raised.

***The common stock offered hereby will be sold in “at the market offerings,” and investors who purchase 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 therefore may experience different outcomes in their investment results. We will have discretion, subject to market demand, to vary the timing and price of sales and the number of shares sold. In addition, subject to any restrictions in any applicable placement notice delivered to Leerink Partners, 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 their shares as a result of share sales made at prices lower than the prices they paid.

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Statements contained in this prospectus and in the documents incorporated by reference herein that are not strictly historical in nature are forward-looking statements within the meaning of Section 27A of the Securities Act, and within the meaning of Section 21E of the Exchange Act. These forward-looking statements are subject to the “safe harbor” created by Section 27A of the Securities Act and Section 21E of the Exchange Act and may include, but are not limited to, statements about:

- the success, cost and timing of our development activities, non-clinical studies and clinical trials;
- the timing and outcome of our current and future clinical trials, and the reporting of data from those trials;
- the therapeutic potential of pacibekitug (also referred to as TOUR006) and future product candidates;
- the ability to obtain funding for our operations, including funding necessary to develop and commercialize our current and future product candidates, subject to regulatory approvals;
- our ability to extend our operating capital;
- the potential of our technologies and our ability to execute on our corporate strategy;
- our ability to contract with third-party suppliers and manufacturers and their ability to perform adequately;
- our reliance on third parties to manufacture and conduct preclinical studies and clinical trials of our current and future product candidates;
- the success of competing therapies that are or may become available;
- our ability to obtain regulatory approval for our product candidates and any related restrictions, limitations and/or warnings in the label of any approved product candidate;
- existing regulations and regulatory developments in the United States (the “U.S.”) and other jurisdictions;
- the strength and breadth of our patent portfolio;
- our ability to obtain and adequately protect intellectual property rights for our product candidates;
- potential claims relating to our intellectual property;
- our financial performance;
- our ability to develop and maintain our corporate infrastructure, including our ability to design and maintain an effective system of internal controls;
- our ability to remediate the existing material weaknesses in our internal control over financial reporting;
- our ability to attract and retain key scientific, medical, commercial and management personnel;
- our ability to continue to satisfy the listing requirements of The Nasdaq Stock Market and have our stock continue to trade thereon;
- the effects of macroeconomic and geopolitical conditions and unforeseeable events;
- our expectations regarding the use of proceeds from offerings of our securities under this prospectus; and
- other factors set forth in documents filed, or to be filed, with the SEC.

In some cases, you can identify forward-looking statements by terms such as “anticipates,” “believes,” “could,” “estimates,” “expects,” “goal,” “intends,” “may,” “plans,” “potential,” “predicts,” “projects,” “should,” “will,” “would,” the negative of these words and words or similar expressions intended to identify forward-looking statements. These statements reflect our views as of the date on which they were made with respect to future events and are based on assumptions and subject to risks and uncertainties. The underlying information and expectations are likely to change over time. 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 the

statement is made, 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.

Given these uncertainties, you should not place undue reliance on these forward-looking statements as actual events or results may differ materially from those projected in the forward-looking statements due to various factors, including, but not limited to, those set forth under the heading “Risk Factors” in this prospectus and the documents incorporated by reference herein or any free writing prospectus that we authorize for use in connection with this offering. These forward-looking statements represent our estimates and assumptions only as of the date of the document containing the applicable statement. Our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements contained in this prospectus and in the documents incorporated by reference herein by these cautionary statements. Unless required by law, we undertake no obligation to update or revise any forward-looking statements to reflect new information or future events or developments. Thus, you should not assume that our silence over time means that actual events are bearing out as expressed or implied in such forward-looking statements. Before deciding to purchase our common stock in this offering, you should carefully consider the risk factors discussed herein or incorporated by reference, in addition to the other information set forth in this prospectus, any free writing prospectus we authorize for use in connection with this offering and in the documents incorporated by reference.

## USE OF PROCEEDS

We may issue and sell shares of our common stock under this prospectus having aggregate sales proceeds of up to \$100.0 million from time to time. Because we are not required to sell any shares of our common stock under the sales agreement, and any shares that may be sold pursuant to the sales agreement will be sold in "at the market offerings" at fluctuating prices, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. There can be no assurance that we will sell any shares of our common stock under or fully utilize the sales agreement with Leerink Partners as a source of financing.

We currently intend to use the net proceeds from this offering for continued clinical development of pipeline products, working capital and other general corporate purposes. We may also use the net proceeds to in-license, acquire or invest in complementary businesses, technologies, products or assets. However, we have no current commitments or obligations to do so. As of the date of this prospectus, we cannot specify with certainty all of the particular uses of the net proceeds, if any, from this offering. Accordingly, we will retain broad discretion over the use of any such proceeds. Pending the use of the net proceeds from this offering, we intend to invest the net proceeds in investment-grade, interest-bearing instruments.

## DILUTION

Our net tangible book value as of September 30, 2024 was \$321.1 million, or \$12.52 per share. Net tangible book value per share is determined by dividing our total tangible assets, less total liabilities, by the number of shares of our common stock outstanding as of September 30, 2024. Dilution with respect to net tangible book value per share represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the net tangible book value per share of our common stock immediately after this offering.

After giving effect to the sale of 3,717,472 shares of our common stock in this offering at an assumed offering price of \$26.90 per share, the last reported sale price of our common stock on Nasdaq on November 4, 2024, and after deducting offering commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of September 30, 2024 would have been \$418.1 million, or \$14.24 per share. This represents an immediate increase in net tangible book value of \$1.72 per share to existing stockholders and immediate dilution of \$12.66 per share to investors purchasing our common stock in this offering. The following table illustrates this dilution on a per share basis:

Assumed offering price per share	\$	26.90
Net tangible book value per share as of September 30, 2024	\$	12.52
Increase in net tangible book value per share attributable to this offering	\$	1.72
As adjusted net tangible book value per share as of September 30, 2024, after giving effect to this offering	\$	14.24
Dilution per share to investors purchasing our common stock in this offering	\$	<u>12.66</u>

The above discussion and table are based on 25,642,610 shares of our common stock outstanding as of September 30, 2024, which includes 241,722 unvested shares underlying early exercised stock options subject to a repurchase option by us, and excludes:

- 2,895,223 shares of our common stock issuable upon the exercise of all stock options outstanding as of September 30, 2024, at a weighted-average exercise price of \$10.89 per share;
- 15,373 shares of our common stock issuable upon the vesting and settlement of all restricted stock units outstanding as of September 30, 2024;
- 1,499,075 shares of common stock reserved for future issuance under the 2023 Plan as of September 30, 2024, plus any future annual automatic increases in the number of shares of our common stock reserved for future issuance under the 2023 Plan; and
- 406,742 shares of our common stock reserved for issuance under the ESPP as of September 30, 2024, plus any future annual automatic increases in the number of shares of our common stock reserved for issuance under the ESPP.

The table above assumes for illustrative purposes that an aggregate of 3,717,472 shares of our common stock are sold under this prospectus at a price of \$26.90 per share, the last reported sale price of our common stock on Nasdaq on November 4, 2024, for aggregate gross proceeds of \$100.0 million. The shares subject to the sales agreement are being 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 \$26.90 per share shown in the table above, assuming all of our common stock in the aggregate amount of \$100.0 million under this prospectus is sold at that price, would increase our adjusted net tangible book value per share after the offering to \$14.30 per share and would increase the dilution in net tangible book value per share to new investors in this offering to \$13.60 per share, after deducting commissions and estimated aggregate 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 \$26.90 per share shown in the table above, assuming all of our common stock in the aggregate amount of \$100.0 million under this prospectus is sold at that price, would decrease our adjusted net tangible book value per share after the offering to \$14.17 per share and would decrease the dilution in net tangible book value per share to new investors in this offering to \$11.73 per share, after deducting

commissions and estimated aggregate offering expenses payable by us. This information is supplied for illustrative purposes only and assumes no exercise of the options outstanding as of September 30, 2024 and no settlement of the restricted stock units outstanding as of September 30, 2024.

To the extent that options are exercised, restricted stock units vest or other shares are issued, investors purchasing our common stock in this offering may experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

## PLAN OF DISTRIBUTION

We have entered into the sales agreement with Leerink Partners, under which we may issue and sell from time to time shares of our common stock through Leerink Partners as our sales agent. Pursuant to this prospectus, we may issue and sell up to an aggregate offering price of \$100,000,000 of our common stock. Upon entry into the sales agreement, we terminated our prior at-the-market program pursuant to a sales agreement with Leerink Partners dated August 15, 2022. At the time of such termination, \$75,000,000 out of an aggregate of \$75,000,000 remained unsold under such sales agreement.

Sales of our common stock, if any, will be made at market prices by any method that is deemed to be an “at the market offering” as defined in Rule 415(a)(4) under the Securities Act, including sales made directly on Nasdaq or any other trading market for our common stock. The sales agreement will be filed as an exhibit to the registration statement of which this prospectus is a part. The below description of the material provisions of the sales agreement does not purport to be a complete statement of its terms and conditions.

Leerink Partners will offer 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 Leerink Partners. We will designate the maximum amount of common stock to be sold through Leerink Partners on a daily basis or otherwise determine such maximum amount together with Leerink Partners. Subject to the terms and conditions of the sales agreement, Leerink Partners will use commercially reasonable efforts consistent with its normal trading and sales practices to sell such shares up to the amount specified on such terms. We may instruct Leerink Partners not to sell common stock if the sales cannot be effected at or above the price designated by us in any such instruction. Leerink Partners or we may suspend the offering of our common stock being made through Leerink Partners under the sales agreement upon proper notice to the other party. Leerink Partners and we each have the right, by giving written notice as specified in the sales agreement, to terminate the sales agreement in each party’s sole discretion at any time.

The aggregate compensation payable to Leerink Partners as sales agent is equal to up to 3.00% of the gross proceeds of the shares sold pursuant to the sales agreement. We have also agreed to reimburse Leerink Partners for up to \$75,000 of the actual outside legal expenses incurred by Leerink Partners in connection with the establishment of the at-the-market offering, and thereafter, up to \$25,000 on a quarterly basis, and up to \$5,000 of legal expenses of Leerink Partners’ outside counsel in connection with determining the compliance of the transactions contemplated by the sales agreement with the rules of the Financial Industry Regulatory Authority, Inc. (“FINRA”). These reimbursed fees and expenses are deemed sales compensation in connection with the at-the-market offering in accordance with FINRA Rule 5110. We estimate that the total expenses in connection with the transactions contemplated by the sales agreement payable by us, excluding commissions payable to Leerink Partners under the sales agreement, will be approximately \$0.4 million.

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 common stock.

Leerink Partners will provide written confirmation to us following the close of trading on Nasdaq on each day in which shares of our common stock are sold through them as sales agent under the sales agreement. Each confirmation will include the number of shares of our common stock sold through Leerink Partners as sales agent on that day, the volume-weighted average price of the shares sold, the percentage of the daily trading volume and the net proceeds to us.

We will report at least quarterly the number of shares of our common stock sold through Leerink Partners under the sales agreement, the net proceeds to us and the compensation paid by us to Leerink Partners in connection with such sales. Settlement for sales of shares of our common stock will occur, unless the parties agree otherwise, on the first business day that is also a trading day following the date on which any sales were made in return for payment of the net proceeds to us. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

In connection with the sales of our common stock on our behalf, Leerink Partners will be deemed to be an “underwriter” within the meaning of the Securities Act, and the compensation paid to Leerink Partners will be deemed to be underwriting commissions or discounts. We have agreed in the sales agreement to provide indemnification and contribution to Leerink Partners against certain liabilities, including liabilities under the Securities Act. As sales agent, Leerink Partners will not engage in any transactions that stabilize our common stock.

Our common stock is listed and traded on Nasdaq under the symbol “TRML.” The transfer agent and registrar of our common stock is Computershare Trust Company, N.A.

Leerink Partners and/or its affiliates have provided, and may in the future provide, various investment banking and other financial services for us for which services they have received, and may in the future receive, customary fees.



## **LEGAL MATTERS**

The validity of the common stock offered by this prospectus will be passed upon by Cooley LLP, New York, New York. Leerink Partners is being represented in connection with this offering by Covington & Burling LLP, New York, New York.

## **EXPERTS**

The financial statements of Tourmaline Bio, Inc. incorporated by reference in this prospectus 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**

This prospectus is part of a registration statement we filed with the SEC. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. Neither we nor any agent, underwriter or dealer has authorized any person to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date on the front page of this prospectus, regardless of the time of delivery of this prospectus or any sale of the securities offered by this prospectus.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains a website that contains reports, proxy statements and other information regarding issuers that file electronically with the SEC, including Tourmaline Bio. The address of the SEC website is [www.sec.gov](http://www.sec.gov).

We maintain a website at [www.tourmalinebio.com](http://www.tourmalinebio.com). The information contained in, or that can be accessed through, our website is not incorporated by reference herein and is not part of this prospectus.

## INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” information that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus, while information that we file later with the SEC will automatically update and supersede the information in this prospectus. We also incorporate by reference into this prospectus the documents listed below and any future filings made by us with the SEC (other than Current Reports or portions thereof furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items and other portions of documents that are furnished, but not filed, or are otherwise not incorporated into registration statements pursuant to applicable rules promulgated by the SEC) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (i) after the date of the filing of the registration statement of which this prospectus is a part and prior to effectiveness of the registration statement, and (ii) after the effectiveness of the registration statement but prior to the termination of the offering of securities covered by this prospectus:

- our Annual Report on Form 10-K for the year ended December 31, 2023, filed with the SEC on [March 19, 2024](#), and the information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2023 from our Definitive Proxy Statement on Schedule 14A, filed with the SEC on [April 19, 2024](#);
- our Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2024, June 30, 2024, and September 30, 2024 filed with the SEC on [May 13, 2024](#), [August 8, 2024](#) and [November 7, 2024](#), respectively;
- our Current Reports on Form 8-K, filed with the SEC on [January 8, 2024](#), [January 24, 2024](#), [January 26, 2024](#), [June 7, 2024](#), [June 27, 2024](#), [September 11, 2024](#) and [October 10, 2024](#); and
- the description of our common stock, which is registered under Section 12 of the Exchange Act, described in [Exhibit 4.2](#) to our Annual Report on Form 10-K for the year ended December 31, 2023, filed with the SEC on March 19, 2024, including all amendments or reports filed for the purpose of updating such description.

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, without charge upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus but not delivered with the prospectus, including exhibits which are specifically incorporated by reference into such documents. You should direct any requests for documents by writing us at 27 West 24th Street, New York, NY 10010, or by telephoning us at (646) 481-9832.

Any statement contained herein or in a document incorporated or deemed to be incorporated by reference into this document will be deemed to be modified or superseded for purposes of the document to the extent that a statement contained in this document or any other subsequently filed document that is deemed to be incorporated by reference into this document modifies or supersedes the statement.

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Up to \$100,000,000

# TOURMALINE

Common Stock

PROSPECTUS

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# Leerink Partners

, 2024

**PART II**  
**INFORMATION NOT REQUIRED IN PROSPECTUS**

**Item 14. Other Expenses of Issuance and Distribution.**

The following table sets forth the estimated costs and expenses, other than underwriting discounts and commissions, payable by us in connection with the offering of the securities being registered. All the amounts shown below are estimates, except for the SEC registration fee and the FINRA filing fee.

SEC registration fee	\$	53,585
FINRA filing fee	\$	53,000
Accounting fees and expenses		*
Legal fees and expenses		*
Transfer agent fees and expenses		*
Trustee fees and expenses		*
Printing and miscellaneous expenses		*
Total		\$ *

\* These fees are calculated based on the securities offered and the number of issuances and accordingly cannot be estimated at this time.

**Item 15. Indemnification of Officers and Directors.**

Under Section 145 of the Delaware General Corporation Law (“DGCL”), we have broad powers to indemnify our directors and officers against liabilities they may incur in such capacities, including liabilities under the Securities Act of 1933, as amended (the “Securities Act”). Section 145 of the DGCL generally provides that a Delaware corporation has the power to indemnify its present and former directors, officers, employees and agents against expenses incurred by them in connection with any suit to which they are or are threatened to be made, a party by reason of their serving in such positions so long as they acted in good faith and in a manner they reasonably believed to be in or not opposed to, the best interests of the corporation and, with respect to any criminal action, they had no reasonable cause to believe their conduct was unlawful.

Our amended and restated certificate of incorporation and amended and restated bylaws include provisions that (i) eliminate the personal liability of our directors for monetary damages resulting from breaches of their fiduciary duty to the fullest extent permitted under applicable law, (ii) require us to indemnify our directors and executive officers to the fullest extent permitted by the DGCL or other applicable law and (iii) provide us with the power, in our discretion, to indemnify our other officers, employees and other agents as set forth in the DGCL or other applicable law. We believe that these provisions of our amended and restated certificate of incorporation and amended and restated bylaws are necessary to attract and retain qualified persons as directors and officers. These provisions do not eliminate our directors’ or officers’ duty of care, and, in appropriate circumstances, equitable remedies such as injunctive or other forms of non-monetary relief will remain available under the DGCL. In addition, each director will continue to be subject to liability pursuant to Section 174 of the DGCL, for breach of such director’s duty of loyalty to us, for acts or omissions not in good faith or involving intentional misconduct, for knowing violations of law, for acts or omissions that such director believes to be contrary to our best interests or the best interests of our stockholders, for any transaction from which such director derived an improper personal benefit, for acts or omissions involving a reckless disregard for such director’s duty to us or to our stockholders when such director was aware or should have been aware of a risk of serious injury to us or to our stockholders, for acts or omission that constitute an unexcused pattern of inattention that amounts to an abdication of such director’s duty to us or to our stockholders, for improper transactions between such director and us and for improper loans to directors and officers. These provisions also do not affect a director’s responsibilities under any other law, such as the federal securities law or state or federal environmental laws.

As permitted by Delaware law, we have entered into indemnification agreements with each of our current directors and officers pursuant to the foregoing provisions. We have an insurance policy covering our officers and directors with respect to certain liabilities, including liabilities arising under the Securities Act or otherwise.

The underwriting agreement that we may enter into, filed as Exhibit 1.1 to this Registration Statement, will provide, and the sales agreement with Leerink Partners, LLC that we have entered into, filed as Exhibit 1.2 to this Registration Statement, provides, for indemnification by any underwriters of the company, our directors, our officers who sign the registration statement and our controlling persons, if any, for some liabilities, including liabilities arising under the Securities Act.

## Item 16. Exhibits and Financial Statement Schedules

Exhibit Number	Description of Document
1.1*	Form of Underwriting Agreement.
1.2+	<a href="#">Sales Agreement, by and between the Registrant and Leerink Partners, LLC, dated November 7, 2024.</a>
4.1	<a href="#">Third Amended and Restated Certificate of Incorporation of the Registrant, as amended through October 19, 2023 (incorporated by reference to Exhibit 3.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-40384), filed with the SEC on November 14, 2023).</a>
4.2	<a href="#">Third Amended and Restated Bylaws of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-40384), filed with the SEC on September 11, 2024).</a>
4.3	<a href="#">Form of Common Stock Certificate of the registrant (incorporated by reference to Exhibit 4.1 to the registrant's Annual Report on Form 10-K (File No. 001-40384), filed with the SEC on March 19, 2024).</a>
4.4*	Form of Specimen Preferred Stock Certificate and Certificate of Designation of Preferred Stock.
4.5+	<a href="#">Form of Indenture.</a>
4.6*	Form of Senior Note.
4.7*	Form of Subordinated Note.
4.8+	<a href="#">Form of Common Stock Warrant Agreement and Warrant Certificate.</a>
4.9+	<a href="#">Form of Preferred Stock Warrant Agreement and Warrant Certificate.</a>
4.10+	<a href="#">Form of Debt Securities Warrant Agreement and Warrant Certificate.</a>
5.1+	<a href="#">Opinion of Cooley LLP.</a>
23.1+	<a href="#">Consent of Independent Registered Public Accounting Firm.</a>
23.2+	Consent of Cooley LLP (included in Exhibit 5.1).
24.1+	Power of Attorney (included on signature page).
25.1*	Statement of Eligibility of Trustee under the Indenture.
107+	<a href="#">Filing Fee Table.</a>

\* To be filed by amendment or by a report filed under the Securities Exchange Act of 1934, as amended, and incorporated herein by reference, if applicable.

+ Filed herewith

## Item 17. Undertakings

The undersigned registrant hereby undertakes:

(a)(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;

(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 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 the undertakings set forth in paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) above 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 Securities Exchange Act of 1934, as amended (the "Exchange Act"), that are incorporated by reference in this registration statement or are contained in a form of prospectus filed pursuant to Rule 424(b) that is part of this 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 the 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 the 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; (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.

(b) 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.

(c) 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.

(d) 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, as amended, 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 New York, State of New York, on November 7, 2024.

### **Tourmaline Bio, Inc.**

By: /s/ Sandeep Kulkarni  
Sandeep Kulkarni, M.D.  
Chief Executive Officer

## POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Sandeep Kulkarni, M.D., Ryan Robinson and Brad Middlekauff, and each of them, as his or her true and lawful attorneys-in-fact and agents, each with the full power of substitution, for him or her and in his or her name, place or stead, in any and all capacities, to sign any and all amendments to this registration statement (including post-effective amendments), and to sign any registration statement for the same offering covered by this registration statement that is to be effective upon filing pursuant to Rule 462(b) promulgated under the Securities Act, and all post-effective amendments thereto, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, 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 and about the premises, as fully to all intents and purposes as she or he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, 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/ Sandeep Kulkarni</u> Sandeep Kulkarni, M.D.	Chief Executive Officer and Director <i>(Principal Executive Officer)</i>	November 7, 2024
<u>/s/ Ryan Robinson</u> Ryan Robinson	Chief Financial Officer <i>(Principal Financial and Accounting Officer)</i>	November 7, 2024
<u>/s/ Clay Siegall</u> Clay Siegall, Ph.D.	Chairman of the Board	November 7, 2024
<u>/s/ Caley Castelein</u> Caley Castelein, M.D.	Director	November 7, 2024
<u>/s/ Aaron Kantoff</u> Aaron Kantoff	Director	November 7, 2024
<u>/s/ Mark McDade</u> Mark McDade	Director	November 7, 2024
<u>/s/ Sapna Srivastava</u> Sapna Srivastava, Ph.D.	Director	November 7, 2024
<u>/s/ Parvinder Thiara</u> Parvinder Thiara	Director	November 7, 2024

**Tourmaline Bio, Inc.**  
Shares of Common Stock  
(\$0.0001 par value per share)

**SALES AGREEMENT**

November 7, 2024

Leerink Partners LLC  
1301 Avenue of the Americas, 5<sup>th</sup> Floor  
New York, New York 10019

Ladies and Gentlemen:

Tourmaline Bio, Inc., a Delaware corporation (the “**Company**”), confirms its agreement (this “**Agreement**”) with Leerink Partners 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 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 November 7, 2024 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 prospectus relating to the Placement Shares to be issued from time to time pursuant to this Agreement (the “**ATM Prospectus**”), 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**”). The Company will furnish to the Agent, for use by the Agent, digital copies of the ATM Prospectus included as part of such registration statement at the time it becomes effective. The Company may file one or more additional registration statements from time to time that may contain a prospectus relating to the Placement Shares and/or a base prospectus and related prospectus supplement relating to the Placement Shares, which in each case shall be an ATM Prospectus. 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 ATM Prospectus, including all documents incorporated therein by reference, included in the Registration Statement, in the form in which it has 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 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 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 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 in writing to accept the terms contained therein for any reason, in its sole discretion, which declination must occur 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, (vi) the amount of the Placement Shares set forth

on such Placement Notice has been sold pursuant to such Placement Notice or (vii) 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(a)(4) of the Securities Act, including sales made directly on or through Nasdaq or on or through any other existing trading market for the Common Stock. 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(ss), 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. While a suspension is in effect, any

obligation under Sections 7(m), 7(n), 7(o), and 7(p) with respect to the delivery of certificates, opinions,

or comfort letters to the Agent, shall be waived. 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 would reasonably 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 Trading Day (or at such earlier time 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 Agent shall notify the Company of each sale of Placement Shares no later than the opening of the Trading Day immediately following the Trading Day on which it has made sales of Placement Shares hereunder. 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 reasonably 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 (without duplication) any commission, discount or other compensation to which it would otherwise have been entitled absent such default.

(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. 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, and as of (i) each Representation Date (as defined in Section 7(m)), (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 becomes effective and at the time the Company's most recent Annual Report on Form 10-K following the date of this Agreement is filed with the Commission, the Company will meet the then-applicable requirements for use of Form S-3 (including General Instructions I.A and I.B.1.) under the Securities Act. The Registration Statement, when filed, will meet, and the offering and sale of Placement Shares as contemplated hereby will comply with,

the requirements of Rule 415(a)(1)(x) under the Securities Act. The Agent will be named as the agent engaged by the Company in the section entitled “Plan of Distribution” in the ATM Prospectus. 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 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. Digital 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 the Prospectus and each 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 was 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) [Reserved.]

(d) From the time of initial confidential submission of the registration statement relating to the Company’s initial public offering with the Commission (or, if earlier, the first date on which the



Company engaged in any written or oral communications pursuant to Section 5(d) of the Securities Act) through the date hereof, the Company has been and is an “emerging growth company,” as defined in Section 2(a) of the Securities Act (an “**Emerging Growth Company**”).

(e) Each free writing prospectus that the Company has filed, or is required to file, pursuant to Rule 433(d) under the Securities Act or that was prepared by or on behalf of or used or referred to by the Company complies or will comply in all material respects with the requirements of Rule 433 under the Securities Act, including timely filing with the Commission, retention and legending, as applicable, and each such 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 in any material respect unless such information has been superseded or modified as of such time.

(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 in all material respects 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. To the Company’s knowledge, it is in compliance with all applicable listing requirements 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 or any of its Subsidiaries (as defined below) 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 organized and is validly existing as a corporation in good standing under the laws of the State of Delaware, with full corporate power and authority to acquire, own, lease and operate its properties, and to conduct its business as described in the Registration Statement and the Prospectus and to enter into and perform its obligations under this Agreement. The Company is duly qualified to transact business as a foreign corporation and is in good standing in the State of New York and under the laws of each other jurisdiction that requires such qualification, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure to be so qualified or

in good standing, as the case may be, would not, individually or in the aggregate, result in a material adverse change, or any development that would reasonably be expected to result in a material adverse change, in (A) the condition, financial or otherwise, or in the earnings, business, properties, operations, assets, liabilities or prospects, whether or not arising from transactions in the ordinary course of business, of the Company and its Subsidiaries, considered as one entity or (B) the ability of the Company to consummate the transactions contemplated by this Agreement or perform its obligations hereunder (a “**Material Adverse Effect**”).

(k) Each of the Company’s subsidiaries listed in Exhibit 21 to the Company’s most recent Annual Report on Form 10-K (each, a “**Subsidiary**” and collectively, the “**Subsidiaries**”) has been duly incorporated or organized, as the case may be, and is validly existing and in good standing (where such concept is recognized) under the laws of the jurisdiction of its incorporation or organization and has the power and authority (corporate or other) to own, lease and operate its properties and to conduct its business as described in the Registration Statement and the Prospectus, except where the failure to be in good standing would not, individually or in the aggregate, result in a Material Adverse Effect. Each of the Company’s Subsidiaries is duly qualified to transact business and is in good standing (where such concept is recognized) in each jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure to be so qualified or in good standing, as the case may be, would not, individually or in the aggregate, result in a Material Adverse Effect.

(l) The authorized, issued and outstanding capital stock of the Company is as set forth in the Registration Statement and the Prospectus as of the dates indicated for such information (other than for subsequent issuances, if any, pursuant to employee benefit plans, or upon the exercise of outstanding options or warrants, in each case described in the Registration Statement and the Prospectus). The Common Stock (including the Placement Shares if and when issued pursuant to the terms of this Agreement) conform in all material respects to the description thereof contained in the Registration Statement and the Prospectus. All of the issued and outstanding shares of Common Stock have been duly authorized and validly issued, are fully paid and nonassessable and have been issued in compliance with all applicable federal and state securities laws. None of the outstanding shares of Common Stock 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 equity or debt securities convertible into or exchangeable or exercisable for, any capital stock of the Company or any of its Subsidiaries other than those described in the Registration Statement and the Prospectus. The descriptions of the Company’s stock option, stock bonus and other stock plans or arrangements, and the options or other rights granted thereunder, set forth in the Registration Statement and the Prospectus accurately and fairly present, in all material respects, the information required to be shown with respect to such plans, arrangements, options and rights.

(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 shares of capital stock, securities convertible into or exchangeable or exercisable for capital stock or options, warrants or other rights to purchase capital stock or any other securities of the Company to have any right to acquire any shares of preferred stock of the Company. There are no restrictions upon the voting or transfer of the Common Stock under the Company's third amended and restated certificate of incorporation (as amended, the "**Charter**") or third amended and restated bylaws (the "**Bylaws**"), in each case as amended from time to time, or any agreement or other instrument to which the Company is a party or otherwise filed as an exhibit to the Registration Statement.

(n) There is no statute, regulation, contract, agreement or other document required to be described in the Registration Statement, Prospectus or in any Incorporated Document, or to be filed as an exhibit to the Registration Statement or any Incorporated Document which is not described or filed as required. The statements set forth or incorporated by reference in the Prospectus, insofar as they purport to constitute summaries of the terms of the statutes, regulations, 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" and "Description of Securities," insofar as such statements summarize legal matters, agreements, documents or proceedings discussed therein, are accurate in all material aspects and fair summaries of such legal matters, agreements, documents or proceedings. Neither the Company nor any of its Subsidiaries has 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 any of its Subsidiaries 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 will not be, either after receipt of payment for the Placement Shares or after the application of the proceeds therefrom as described under "Use of Proceeds" in the Prospectus, required to register as an "investment company" under the Investment Company Act of 1940, as amended (the "**Investment Company Act**").

(q) No consent, approval, authorization or other order of, or registration or filing with, any court or other governmental or regulatory authority or agency, is required for the Company's execution, delivery and performance of this Agreement and consummation of the transactions contemplated hereby and by the Registration Statement and the Prospectus, except such as have been obtained or made by the Company and are in full force and effect under the Securities Act and such as may be required under applicable state securities or blue sky laws or the Financial Industry Regulatory Authority, Inc. ("**FINRA**").

(r) Neither the Company nor any of its Subsidiaries is in violation of its charter or by-laws, partnership agreement or operating agreement or similar organizational documents, as applicable, or is in default (or, with the giving of notice or lapse of time, would be in default) (“**Default**”) under any indenture, loan, credit agreement, note, lease, license agreement, contract, franchise or other instrument (including, without limitation, any pledge agreement, security agreement, mortgage or other instrument or agreement evidencing, guaranteeing, securing or relating to indebtedness) to which the Company or any of its Subsidiaries is a party or by which it or any of them may be bound, or to which any of their respective properties or assets are subject (each, an “**Existing Instrument**”), except for such Defaults as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect. The Company’s execution, delivery and performance of this Agreement, consummation of the transactions contemplated hereby and by the Registration Statement and the Prospectus and the issuance and sale of the Placement Shares (including the use of proceeds from the sale of the Placement Shares as described in the Prospectus under the caption “Use of Proceeds”) (i) have been duly authorized by all necessary corporate action and will not result in any violation of the provisions of the charter or by-laws, partnership agreement or operating agreement or similar organizational documents, as applicable, of the Company or any Subsidiary (ii) will not conflict with or constitute a breach of, or Default or a Debt Repayment Triggering Event (as defined below) under, or result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of the Company or any of its Subsidiaries pursuant to, or require the consent of any other party to, any Existing Instrument, except for such Defaults or a Debt Repayment Triggering Event as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect, and (iii) will not result in any violation of any law, administrative regulation or administrative or court decree applicable to the Company or any of its Subsidiaries, except for such violations as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect. As used herein, a “**Debt Repayment Triggering Event**” means any event or condition which gives, or with the giving of notice or lapse of time would give, the holder of any note, debenture or other evidence of indebtedness (or any person acting on such holder’s behalf) the right to require the repurchase, redemption or repayment of all or a portion of such indebtedness by the Company or any of its Subsidiaries.

(s) Except as otherwise disclosed in the Registration Statement and the Prospectus, subsequent to the respective dates as of which information is given in the Registration Statement and the Prospectus: (i) there has been no Material Adverse Effect; (ii) the Company and its Subsidiaries, considered as one entity, have not incurred any material liability or obligation, indirect, direct or contingent, including without limitation any losses or interference with their business from fire, explosion, flood, earthquakes, accident or other calamity, whether or not covered by insurance, or from any strike, labor dispute or court or governmental action, order or decree, that are material, individually or in the aggregate, to the Company and its Subsidiaries, considered as one entity, and have not entered into any material transactions not in the ordinary course of business; and (iii) there has not been any material decrease in the capital stock or any material increase in any short-term or long-term indebtedness of the Company or its Subsidiaries and there has been no dividend or distribution of any kind declared, paid or made by the Company or any repurchase or redemption by the Company or any of its Subsidiaries of any class of capital stock.

(t) There are no persons with registration or other similar rights to have any equity or debt securities registered for sale under the Registration Statement or included in the offering contemplated by this Agreement.

(u) The financial statements included or incorporated by reference in the Registration Statement and the Prospectus present fairly, in all material respects, the consolidated financial position of

the Company and its Subsidiaries as of the dates indicated and the results of their operations, changes in stockholders' equity and cash flows for the periods specified. All of the foregoing financial statements have been prepared in conformity with generally accepted accounting principles as applied in the United States ("**GAAP**") applied on a consistent basis throughout the periods involved, except as may be expressly stated in the related notes thereto and except in the case of unaudited financial statements, which are subject to normal and recurring year-end adjustments and do not contain certain footnotes as permitted by the applicable rules of the Commission. The financial data contained or incorporated by reference in each of the Registration Statement and the Prospectus fairly present, in all material respects, the information set forth therein on a basis consistent with that of the audited or unaudited financial statements, as applicable, contained in the Registration Statement and the Prospectus. The statistical, industry-related and market-related data included or incorporated by reference in the Registration Statement and the Prospectus were obtained or derived from sources which the Company reasonably and in good faith believes are reliable and accurate, such data agree with the sources from which they are derived, and the Company has obtained the written consent to the use of such data from such sources to the extent required. To the Company's knowledge, no person who has been suspended or barred from being associated with a registered public accounting firm, or who has failed to comply with any sanction pursuant to Rule 5300 promulgated by the Public Company Accounting Oversight Board ("**PCAOB**"), has participated in the preparation of, or audited, the financial statements, supporting schedules or other financial data filed with the Commission as a part of the Registration Statement and the Prospectus.

(v) There is no action, suit, proceeding, inquiry or investigation brought by or before any legal or governmental entity now pending or, to the Company's knowledge, threatened against or affecting the Company or any of its Subsidiaries, which would reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect. Except as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect, no material labor dispute with the employees of the Company or any of its Subsidiaries, or, to the knowledge of the Company, with the employees of any principal supplier, manufacturer, customer or contractor of the Company, exists or, to the knowledge of the Company, is threatened or imminent.

(w) The Company owns or leases all such real properties as are necessary to the conduct of its operations as presently conducted in all material respects.

(x) [Reserved.]

(y) Deloitte & Touche LLP, which has expressed its opinion with respect to the financial statements (which term as used in this Agreement includes the related notes thereto) filed with the Commission as a part of the Registration Statement and the Prospectus, to the Company's knowledge, is (i) an independent registered public accounting firm as required by the Exchange Act and the Securities Act, and the rules of the PCAOB, (ii) in compliance with the applicable requirements relating to the qualification of accountants under Rule 2-01 of Regulation S-X under the Securities Act and (iii) a registered public accounting firm as defined by the PCAOB whose registration has not been suspended or revoked and who has not requested such registration to be withdrawn.

(z) There are no transfer taxes or other similar fees or charges under federal law, the laws of any state, any foreign law, or any political subdivision thereof, required to be paid in connection with the execution and delivery of this Agreement or the issuance by the Company or sale by the Company of the Placement Shares.

(aa) The Company and its Subsidiaries have filed all necessary U.S. federal, state and foreign income and franchise tax returns or have properly requested extensions thereof and have paid all taxes required to be paid by any of them and, if due and payable, any related or similar assessment, fine or penalty levied against any of them except as may be being contested in good faith and by appropriate proceedings and as would reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect. The Company has made adequate charges, accruals and reserves, in all material respects in conformity with GAAP, in the applicable financial statements referred to in Section 6(u) above in respect of all U.S. federal, state and foreign income and franchise taxes for all periods as to which the tax liability of the Company or any of its Subsidiaries has not been finally determined.

(bb) [Reserved.]

(cc) Each of the Company and its Subsidiaries are insured by recognized, financially sound and reputable institutions with policies in such amounts and with such deductibles and covering such risks as are generally deemed adequate and customary for their businesses including, but not limited to, policies covering real and personal property owned or leased by the Company and its Subsidiaries against theft, damage, destruction, acts of vandalism and earthquakes and policies covering the Company and its Subsidiaries for clinical trial liability claims. The Company has no reason to believe that it or any of its Subsidiaries will not be able (i) to renew its existing insurance coverage as and when such policies expire or (ii) to obtain comparable coverage from similar institutions as may be necessary or appropriate to conduct its business as now conducted and at a cost that would not reasonably be expected to result in a Material Adverse Effect. Neither the Company nor any of its Subsidiaries has been denied any insurance coverage which it has sought or for which it has applied.

(dd) Except as described in the Registration Statement and the Prospectus and as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect, the Company and its Subsidiaries have good and marketable title to all of the real and personal property and other assets reflected as owned in the financial statements referred to in Section 6(u) above (or elsewhere in the Registration Statement or the Prospectus), in each case free and clear of any security interests, mortgages, liens, encumbrances, equities, adverse claims and other defects. The real property, improvements, equipment and personal property held under lease by the Company or any of its Subsidiaries are held under valid and enforceable leases (subject to the effects of (i) bankruptcy, insolvency, fraudulent conveyance, fraudulent transfer, reorganization, moratorium or other similar laws relating to or affecting rights or remedies of creditors generally; (ii) the application of general principles of equity (including without limitation, concepts of materiality, reasonableness, good faith and fair dealing, regardless of whether enforcement is considered in proceedings at law or in equity); and (iii) applicable law and public policy with respect to rights to indemnity and contribution), with such exceptions as are not material and do not materially interfere with the use made or proposed to be made of such real property, improvements, equipment or personal property by the Company or such Subsidiary.

(ee) The Company and its Subsidiaries possess such valid and current certificates, authorizations or permits required by state, federal or foreign regulatory agencies or bodies to conduct their respective businesses as currently conducted and as described in the Registration Statement or the Prospectus (“**Permits**”), except where failure to so possess would not reasonably be expected to, individually or in the aggregate, result in a Material Adverse Effect. Neither the Company nor any of its Subsidiaries is in violation of, or in default under, any of the Permits or has received any notice of proceedings relating to the revocation or modification of, or non-compliance with, any such certificate, authorization or permit, except in each case as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect.

(ff) The Company has established and 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 authorization; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management's general or specific authorization; (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences; and (v) 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 is prepared in accordance with the Commission's rules and guidelines applicable thereto.

(gg) Except as otherwise disclosed in the Registration Statement and the Prospectus, the Company has established and 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 material information relating to the Company, including its consolidated Subsidiaries, 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. Except as disclosed in the Registration Statement and the Prospectus, since the end of the Company's most recent audited fiscal year, there have been no significant deficiencies or material weaknesses in the Company's internal control over financial reporting (whether or not remediated) and 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 is not aware of any change in its internal control over financial reporting that has occurred during its most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

(hh) Neither the Company nor any of its Subsidiaries has taken, directly or indirectly, without giving effect to activities by the Agent, any action designed to or that would reasonably be expected to cause or result in stabilization or manipulation of the price of the Common Stock or of any "reference security" (as defined in Rule 100 of Regulation M under the Exchange Act ("**Regulation M**")) with respect to the Common Stock, whether to facilitate the sale or resale of the Placement Shares or otherwise, and has taken no action which would directly or indirectly violate Regulation M.

(ii) Except as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect: (i) neither the Company nor any of its Subsidiaries is in violation of any federal, state, local or foreign statute, law, rule, regulation, ordinance, code, policy or rule of common law or any judicial or administrative interpretation thereof, including any judicial or administrative order, consent, decree or judgment, relating to pollution or protection of human health, the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata) or wildlife, including, without limitation, laws and regulations relating to the release or threatened release of chemicals, pollutants, contaminants, wastes, toxic substances, hazardous substances, petroleum or petroleum products (collectively, "**Hazardous Materials**") or to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials (collectively, "**Environmental Laws**"); (ii) the Company and its Subsidiaries have all permits, authorizations and approvals required under any applicable Environmental Laws and are each in compliance with their requirements; (iii) there are no pending or, to the Company's knowledge, threatened administrative,

regulatory or judicial actions, suits, demands, demand letters, claims, liens, notices of noncompliance or violation, investigation or proceedings relating to any Environmental Law against the Company or any of its Subsidiaries; and (iv) to the Company's knowledge, there are no events or circumstances that might reasonably be expected to form the basis of an order for clean-up or remediation, or an action, suit or proceeding by any private party or governmental body or agency, against or affecting the Company or any of its Subsidiaries relating to Hazardous Materials or any Environmental Laws.

(jj) The Company and its Subsidiaries and any "employee benefit plan" (as defined under the Employee Retirement Income Security Act of 1974, as amended, and the regulations and published interpretations thereunder (collectively, "**ERISA**")) established or maintained by the Company, its Subsidiaries or their "ERISA Affiliates" (as defined below) are in compliance with ERISA, except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. "**ERISA Affiliate**" means, with respect to the Company or any of its Subsidiaries, any member of any group of organizations described in Sections 414(b), (c), (m) or (o) of the Internal Revenue Code of 1986, as amended, and the regulations and published interpretations thereunder (the "**Code**") of which the Company or such subsidiary is a member. No "reportable event" (as defined under ERISA) has occurred or is reasonably expected to occur with respect to any "employee benefit plan" established or maintained by the Company, its Subsidiaries or any of their ERISA Affiliates, except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. No "employee benefit plan" established or maintained by the Company, its Subsidiaries or any of their ERISA Affiliates, if such "employee benefit plan" were terminated, would have any "amount of unfunded benefit liabilities" (as defined under ERISA), except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. Neither the Company, its Subsidiaries nor any of their ERISA Affiliates has incurred or reasonably expects to incur any material liability under (i) Title IV of ERISA with respect to termination of, or withdrawal from, any "employee benefit plan" or (ii) Sections 412, 4971, 4975 or 4980B of the Code. Each employee benefit plan established or maintained by the Company, its Subsidiaries or any of their ERISA Affiliates that is intended to be qualified under Section 401(a) of the Code is so qualified and, to the Company's knowledge, nothing has occurred, whether by action or failure to act, which would reasonably be expected to cause the loss of such qualification.

(kk) There is, and has been, no failure on the part of the Company or any of the Company's directors or officers, in their capacities as such, to comply with any applicable provision of the Sarbanes-Oxley Act of 2002, as amended and the rules and regulations promulgated in connection therewith, including Section 402 related to loans and Sections 302 and 906 related to certifications.

(ll) Neither the Company nor any of its Subsidiaries nor any director, officer, or employee of the Company or any of its Subsidiaries, nor to the knowledge of the Company, any agent, affiliate or other person acting on behalf of the Company or any of its Subsidiaries has, in the course of its actions for, or on behalf of, the Company or any of its Subsidiaries (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expenses relating to political activity; (ii) made or taken any act in furtherance of an offer, promise, or authorization of any direct or indirect unlawful payment or benefit to any foreign or domestic government official or employee, including of any government-owned or controlled entity or public international organization, or any political party, party official, or candidate for political office; (iii) violated or is in violation of any provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended (the "**FCPA**"), the UK Bribery Act 2010, or any other applicable anti-bribery or anti-corruption law; or (iv) made, offered, authorized, requested, or taken an act in furtherance of any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment or benefit. The Company and its Subsidiaries and, to the knowledge of the Company, the Company's affiliates have conducted their respective businesses in compliance with the FCPA and have



instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

(mm) The operations of the Company and its Subsidiaries are, and have been conducted at all times, in compliance with applicable financial recordkeeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all applicable jurisdictions, the rules and regulations thereunder and any related or similar applicable rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the “**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 Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(nn) Neither the Company nor any of its Subsidiaries, directors, officers, or employees, nor, to the knowledge of the Company after due inquiry, any agent, affiliate or other person acting on behalf of the Company or any of its Subsidiaries is currently the subject or the target of any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Department of the Treasury (“**OFAC**”) or the U.S. Department of State, the United Nations Security Council, the European Union, His Majesty’s Treasury of the United Kingdom, or other relevant sanctions authority (collectively, “**Sanctions**”); nor is the Company or any of its Subsidiaries located, organized or resident in a country or territory that is the subject or the target of comprehensive Sanctions, including, without limitation, the Crimea, Donetsk People’s Republic, Kherson, Luhansk People’s Republic and Zaporizhzhia regions of Ukraine and Cuba, Iran, North Korea and Syria (“**Sanctioned Countries**”); and the Company will not directly or indirectly use the proceeds of this offering, or lend, contribute or otherwise make available such proceeds to any Subsidiary, or any joint venture partner or other person or entity, for the purpose of financing the activities of or business with any person that at the time of such financing is the subject or the target of Sanctions, with a Sanctioned Country, or in any other manner that will result in a violation by any person (including any person participating in the transaction whether as underwriter, advisor, investor or otherwise) of applicable Sanctions. For the past five years, the Company and its Subsidiaries have not knowingly engaged in and are not now knowingly engaged in any dealings or transactions with any person that at the time of the dealing or transaction is or was the subject or the target of Sanctions or with any Sanctioned Country.

(oo) The Company and its Subsidiaries own, or have obtained valid and enforceable licenses for, the inventions, patent applications, patents, trademarks, trade names, service names, copyrights, trade secrets and other intellectual property described in the Registration Statement and the Prospectus as being owned or licensed by them or which are necessary for the conduct of their respective businesses as currently conducted or as currently proposed to be conducted (collectively, “**Intellectual Property**”), except to the extent the failure to own, possess or license such Intellectual Property would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect. To the Company’s knowledge, conduct of the respective businesses of the Company and its Subsidiaries does not infringe, misappropriate or otherwise conflict in any material respect with the intellectual property rights of others. The Intellectual Property of the Company has not been adjudged by a court of competent jurisdiction to be invalid or unenforceable, in whole or in part, and the Company is unaware of any facts which would form a reasonable basis for any such adjudication. To the Company’s knowledge: (i) there are no third parties who have rights to any Intellectual Property, except for customary reversionary rights of third-party licensors with respect to Intellectual Property that is disclosed in the Registration Statement and the Prospectus as licensed to the Company or one or more of its Subsidiaries; and (ii) there is no infringement by third parties of any Intellectual Property. Except as otherwise disclosed in the Registration Statement and the Prospectus, there is no pending or, to the Company’s knowledge, threatened action, suit,

proceeding or claim by others: (A) challenging the Company's rights in or to any Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; (B) challenging the validity, enforceability or scope of any Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; or (C) asserting that the Company or any of its Subsidiaries infringes or otherwise violates, or would, upon the commercialization of any product or service described in the Registration Statement or the Prospectus as under development, infringe or violate, any patent, trademark, trade name, service name, copyright, trade secret or other proprietary rights of others, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim. The Company and its Subsidiaries have complied in all material respects with the terms of each agreement pursuant to which Intellectual Property has been licensed to the Company or any subsidiary, and all such agreements are in full force and effect. To the Company's knowledge, there are no material defects in any of the patents or patent applications included in the Intellectual Property. The Company and its Subsidiaries have taken all reasonable steps to protect, maintain and safeguard their Intellectual Property, including the execution of appropriate nondisclosure, confidentiality agreements and invention assignment agreements and invention assignments with their employees, and, to the Company's knowledge, no employee of the Company is in or has been in violation of any term of any employment contract, patent disclosure agreement, invention assignment agreement, non-competition agreement, non-solicitation agreement, nondisclosure agreement, or any restrictive covenant to or with a former employer where the basis of such violation relates to such employee's employment with the Company. The duty of candor and good faith as required by the United States Patent and Trademark Office during the prosecution of the United States patents and patent applications included in the Intellectual Property have been complied with; and in all foreign offices having similar requirements, all such requirements have been complied with. None of the Company owned Intellectual Property or technology (including information technology and outsourced arrangements) employed by the Company or its Subsidiaries has been obtained or is being used by the Company or its subsidiary in violation of any contractual obligation binding on the Company or its Subsidiaries or any of their respective officers, directors or employees or otherwise in violation of the rights of any persons. The product candidates described in the Registration Statement and the Prospectus as under development by the Company or any subsidiary fall within the scope of the claims of one or more patents owned by, or exclusively licensed to, the Company or any subsidiary.

(pp) The Company and its Subsidiaries are, and at all times have been, in compliance with all applicable Health Care Laws, except as would not be expected, individually or in the aggregate, to result in a Material Adverse Effect. For purposes of this Agreement, "**Health Care Laws**" means: (i) the Federal Food, Drug, and Cosmetic Act (21 U.S.C. Section 301 et seq.), the Public Health Service Act (42 U.S.C. Section 201 et seq.), and the regulations promulgated thereunder; (ii) all applicable federal, state, local and foreign health care fraud and abuse laws, including, without limitation, the Anti-Kickback Statute (42 U.S.C. Section 1320a-7b(b)), the Civil False Claims Act (31 U.S.C. Section 3729 et seq.), the criminal false statements law (42 U.S.C. Section 1320a-7b(a)), 18 U.S.C. Sections 286 and 287, the health care fraud criminal provisions under the U.S. Health Insurance Portability and Accountability Act of 1996 ("HIPAA") (42 U.S.C. Section 1320d et seq.), the Stark Law (42 U.S.C. Section 1395nn), the civil monetary penalties law (42 U.S.C. Section 1320a-7a), the exclusion law (42 U.S.C. Section 1320a-7), the Physician Payments Sunshine Act (42 U.S.C. Section 1320-7h), and applicable laws governing government funded or sponsored healthcare programs; (iii) HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act (42 U.S.C. Section 17921 et seq.); (iv) the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010; (v) licensure, quality, safety and accreditation requirements under applicable federal, state, local or foreign laws or regulatory bodies; and (vi) all other local, state, federal, national,

supranational and foreign laws, relating to the regulation of the Company or its Subsidiaries, and (vii) the directives and regulations promulgated pursuant to such statutes and any state or non-U.S. counterpart thereof. Neither the Company nor any of its Subsidiaries has received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any court or arbitrator or governmental or regulatory authority or third party alleging that any product operation or activity is in violation of any Health Care Laws nor, to the Company's knowledge, is any such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action threatened. The Company and its Subsidiaries have filed, maintained or submitted all material 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 complete and accurate on the date filed in all material respects (or were corrected or supplemented by a subsequent submission). Neither the Company nor any of its Subsidiaries is a party to any corporate integrity agreements, monitoring agreements, consent decrees, settlement orders, or similar agreements with or imposed by any governmental or regulatory authority. Additionally, neither the Company, any of its Subsidiaries nor any of their respective employees, officers, directors, or agents 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 a governmental inquiry, investigation, proceeding, or other similar action that would reasonably be expected to result in debarment, suspension, or exclusion.

(qq) The preclinical tests and clinical trials, and other studies (collectively, "**studies**") that are described in, or the results of which are referred to in, the Registration Statement or the Prospectus were and are being conducted in all material respects in accordance with the protocols, procedures and controls designed and approved for such studies and with standard medical and scientific research procedures; each description of the results of such studies is accurate and complete in all material respects and fairly presents the data derived from such studies, and the Company and its Subsidiaries have no knowledge of any other studies the results of which are inconsistent with, or otherwise call into question, the results described or referred to in the Registration Statement or the Prospectus; the Company and its Subsidiaries have made all such filings and obtained all such approvals as may be required by the Food and Drug Administration of the U.S. Department of Health and Human Services or any committee thereof or from any other U.S. or foreign government or drug or medical device regulatory agency, or health care facility Institutional Review Board (collectively, the "**Regulatory Agencies**"); neither the Company nor any of its Subsidiaries has received any notice of, or correspondence from, any Regulatory Agency requiring the termination, suspension or modification of any clinical trials that are described or referred to in the Registration Statement or the Prospectus; and the Company and its Subsidiaries have each operated and currently are in compliance in all material respects with all applicable rules, regulations and policies of the Regulatory Agencies.

(rr) 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) 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 an executive officer or director of the Company that it was false or misleading.

(ss) 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.

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

(uu) 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.

(vv) There are no business relationships or related-party transactions involving the Company or any of its Subsidiaries or any other person required to be described in the Registration Statement or the Prospectus that have not been described as required.

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 (in each case, insofar as it relates to the transactions contemplated hereby); (ii) the Company will prepare and file with the Commission, promptly upon the Agent’s reasonable 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 offering of 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 (the determination to file any amendment or supplement with the Commission under this Section 7(a), based on the Company's reasonable opinion or reasonable objections, shall be made exclusively by the Company; provided that the Agent may, in its sole discretion, suspend sales of Placement Shares under Section 4).

(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; provided, however, that the Company may delay the filing of any amendment or supplement if, in the reasonable judgment of the Company, it is in the best interest of the Company to do so; provided further, however, that any Placement Notices previously delivered shall be

suspended during any such delay and the Company may not deliver any Placement Notices during any such delay. 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) digital 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, 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; provided that the Company will be deemed to have furnished such statement to its security holders and the Agent to the extent such statement has been filed on EDGAR.

(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 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 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 clause (vi) below), (iv) the fees and expenses incurred in connection with the listing or qualification of the Placement Shares for trading on Nasdaq, (v) 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 Placement Shares, (vi) the fees and associated expenses of the Agent's outside legal counsel for filings with the FINRA Corporate Financing Department in an amount not to exceed \$5,000 (excluding FINRA filing fees referred to in clause (v) above and in addition to the fees and disbursements referred to in clause (vii) below), 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 in connection with each Representation Date (as defined below) relating to the Company's filing of its annual report on Form 10-K and on which the Company is required to provide a certificate pursuant to Section 7(m) and (c) in an amount not to exceed \$15,000 in connection with each other Representation Date on which the Company is required to provide a certificate pursuant to Section 7(m).

(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 fifth 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 termination of this Agreement; *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 equity incentive plans, or shares of Common Stock issuable upon the exercise of options or vesting of other securities, pursuant to any employee or director stock option or benefits plan, stock ownership plan or dividend reinvestment plan (but not shares of Common Stock subject to a waiver to exceed plan limits in its dividend reinvestment plan) of the Company whether now in effect or hereafter implemented, (ii) shares of Common Stock issuable upon conversion of securities or the exercise 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, (iii) shares of Common Stock or securities convertible into or exchangeable for shares of Common Stock as consideration for mergers, acquisitions, joint ventures, collaborations, licensing agreements, other business combinations or strategic alliances occurring after the date of this Agreement which are not issued for capital raising purposes; (iv) modification of any outstanding options, warrants of any rights to purchase or acquire shares of Common Stock; and (v) file one or more registration statements on Form S-8 to register shares of Common Stock or securities convertible into or exchangeable for shares of Common Stock issued or issuable pursuant to any plans or programs described in clause (i) above.

(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, with respect to the Placement Shares, 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 (other than (x) a prospectus supplement filed in accordance with Section 7(l) of this Agreement or (y) a prospectus supplement relating solely to an offering of securities other than the Placement Shares) 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;

(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);

(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, or if a suspension is in effect with respect to any Placement Notice, 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 suspension or waiver is applicable, the Company shall cause to be furnished to the Agent the written opinion and negative assurance letter of Cooley LLP, counsel to the Company, or such other counsel satisfactory to the Agent ("**Company Counsel**"), in form and substance reasonably 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 which the Company is obligated to deliver a certificate pursuant to Section 7(m) for which no suspension or waiver is applicable, the Company shall cause to be furnished to the Agent the written opinion of Venable LLP, counsel for the Company with respect to intellectual property matters, or such other intellectual property counsel reasonably satisfactory to the Agent ("**Intellectual Property Counsel**"), in form and substance reasonably satisfactory to the Agent and its counsel, dated the date that the opinion letter is 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 opinion 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 letters (the "**Comfort Letters**"), 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, and will cause its officers, directors and Subsidiaries not to (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 to be issued and sold pursuant to this Agreement 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 and its Subsidiaries 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 and each of its Subsidiaries shall maintain, or cause to be maintained, all Permits, and the Company and each of its Subsidiaries shall conduct their businesses, or cause their businesses 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 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 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. The Company will maintain and keep accurate books and records reflecting its assets and maintain internal accounting controls in a manner designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP and including those policies and procedures that (i) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Company, (ii) provide reasonable assurance that transactions are recorded as necessary to permit the preparation of the Company's financial statements in accordance with GAAP, (iii) that receipts and expenditures of the Company are being made only in accordance with management's and the Company's directors' authorization, and (iv) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on its financial statements. The Company will maintain such controls and other procedures, including, without limitation, those required by Sections 302 and 906 of the Sarbanes-Oxley Act, and the applicable regulations thereunder that are designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms, including, without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including its principal executive officer and principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure and to ensure that material information relating to the Company is made known to it by others within the Company, particularly during the period in which such periodic reports are being prepared.

(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**"), this Agreement has not been terminated, the Company, in its sole discretion, may, 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 reasonably satisfactory to the Agent and its counsel, and, if such registration statement is not an automatic shelf registration statement, will use its commercially reasonable 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 (as defined below) 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 for up to 30 days if, in the reasonable judgment of the Company, it is in the best interest of the Company to do so, 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) 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) No Material Notices. None of the following events shall have occurred and be continuing: (i) receipt by the Company or any of its Subsidiaries 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 or any of its Subsidiaries 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.

(c) 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.

(d) 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.

(e) 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.

(f) Agent's Counsel Legal Opinion. The Agent shall have received from Covington & Burling 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.

(g) 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).

(h) 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).

(i) 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 Charter, (ii) the Bylaws, (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**).

(j) 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.

(k) Other Materials. On each date on which the Company is required to deliver a certificate pursuant to Section 7(m) for which no waiver is applicable, 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.

(l) 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.

(m) 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.

(n) 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.

(o) 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 (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; *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 any free writing prospectus 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 reasonable and documented legal expenses except as provided below and except for the reasonable and 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 and documented

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 within thirty (30) days 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 and documented 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 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 15 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 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:

Leerink Partners LLC  
1301 Avenue of the Americas, 5<sup>th</sup> Floor  
New York, New York 10019  
Attention: Peter M. Fry  
E-mail: [\*\*\*]

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

Leerink Partners LLC  
1301 Avenue of the Americas, 5<sup>th</sup> Floor  
New York, New York 10019  
Attention: Stuart R. Nayman, Esq.  
E-mail: [\*\*\*]

and if to the Company, shall be delivered to:

Tourmaline Bio, Inc.  
27 West 24th Street, Suite 702  
New York, New York 10010  
Attention: General Counsel  
E-mail: [\*\*\*]

with copies (which shall not constitute notice) to:

Cooley LLP  
55 Hudson Yards  
New York, New York 10001  
Attention: Brandon W. Fenn; Div Gupta  
E-mail: [\*\*\*]

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. The Agent and the Company agree that concurrently with the execution of this Agreement, their Sales Agreement entered into on August 15, 2022 is terminated in accordance with Section 11 of such Sales Agreement. 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 first and last sentences of the eighth paragraph under the heading "Plan of Distribution" in the Prospectus.

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,

**TOURMALINE BIO, INC.**

By: /s/ Ryan Robinson  
Name: Ryan Robinson  
Title: Chief Financial Officer

**ACCEPTED as of the date  
first-above written:**

**LEERINK PARTNERS LLC**

By: /s/ Peter M. Fry  
Name: Peter M. Fry  
Title: Head of Alternative Equities



**FORM OF PLACEMENT NOTICE**

From: [ ]  
[TITLE]  
Tourmaline Bio, Inc.  
Cc: [ ]  
To: Leerink Partners LLC  
Subject: Leerink—At the Market Offering—Placement Notice  
Ladies and Gentlemen:

Pursuant to the terms and subject to the conditions contained in the Sales Agreement, dated [●], 2024 (the “**Agreement**”), by and between Tourmaline Bio, Inc., a Delaware corporation (the “**Company**”), and Leerink Partners LLC (“**Leerink**”), I hereby request on behalf of the Company that Leerink 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**

Sandeep Kulkarni, Chief Executive Officer  
Ryan Robinson, Chief Financial Officer  
Brad Middlekauff, Chief Business Officer and General Counsel

**Leerink**

Dan Dubin  
Sean Pitt  
[\*\*\*]

**Compensation**

The Company shall pay Leerink compensation in cash up to 3.00% 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 Sandeep Kulkarni, the duly qualified and elected Chief Executive Officer of Tourmaline Bio, Inc., a Delaware corporation (the "**Company**"), and Ryan Robinson, the duly qualified and elected Chief Financial Officer of the Company, does hereby certify in his respective capacity and on behalf of the Company, pursuant to Section 7(m) of the Sales Agreement, dated November 7, 2024 (the "**Sales Agreement**"), by and between the Company and Leerink Partners 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, except for those representations and warranties that speak solely as of a specific date and which were true and correct as of such date 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, except for those representations and warranties that speak solely as of a specific date and which were true and correct as of such date.

(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) Each of the Charter and Bylaws in the form most recently filed with the Commission, is in full force and effect as of the date hereof. Each of the Charter and Bylaws has not been further amended, supplemented, modified, altered or superseded by any subsequent actions of the Company's board of directors, and no action has been taken by the officers, directors or shareholders of the Company in contemplation of, or to effect or authorize, any such amendment, supplement, modification or alteration.

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

Cooley LLP and Covington & Burling LLP are entitled to rely on this certificate in connection with the respective opinions such firms are rendering pursuant to the Sales Agreement.

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

[Signature page follows]

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

By: \_\_\_\_\_  
Name: Sandeep Kulkarni  
Title: Chief Executive Officer  
Date:

By: \_\_\_\_\_  
Name: Ryan Robinson  
Title: Chief Financial Officer  
Date:

*[Company Signature Page to Officers' Certificate]*

**TOURMALINE BIO, INC.,**  
**Issuer**

**AND**

**[TRUSTEE],**  
**Trustee**

---

**INDENTURE**

**Dated as of [●], 20\_\_**

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**Debt Securities**

## INDENTURE

**Indenture**, dated as of [●], 20\_\_, among Tourmaline Bio, Inc., a Delaware corporation (the “Company”), and [Trustee], as trustee (the “Trustee”):

**Whereas**, for its lawful corporate purposes, the Company has duly authorized the execution and delivery of this Indenture to provide for the issuance of debt securities (hereinafter referred to as the “Securities”), in an unlimited aggregate principal amount to be issued from time to time in one or more series as in this Indenture provided, as registered Securities without coupons, to be authenticated by the certificate of the Trustee;

**Whereas**, to provide the terms and conditions upon which the Securities are to be authenticated, issued and delivered, the Company has duly authorized the execution of this Indenture; and

**Whereas**, all things necessary to make this Indenture a valid agreement of the Company, in accordance with its terms, have been done.

**Now, Therefore**, in consideration of the premises and the purchase of the Securities by the holders thereof, it is mutually covenanted and agreed as follows for the equal and ratable benefit of the holders of Securities:

### ARTICLE 1

#### DEFINITIONS

##### Section 1.01 Definitions of Terms.

The terms defined in this Section (except as in this Indenture or any indenture supplemental hereto otherwise expressly provided or unless the context otherwise requires) for all purposes of this Indenture and of any indenture supplemental hereto shall have the respective meanings specified in this Section and shall include the plural as well as the singular. All other terms used in this Indenture that are defined in the Trust Indenture Act of 1939, as amended, or that are by reference in such Act defined in the Securities Act of 1933, as amended (except as herein or any indenture supplemental hereto otherwise expressly provided or unless the context otherwise requires), shall have the meanings assigned to such terms in said Trust Indenture Act and in said Securities Act as in force at the date of the execution of this instrument.

“**Authenticating Agent**” means the Trustee or an authenticating agent with respect to all or any of the series of Securities appointed by the Trustee pursuant to Section 2.10.

“**Bankruptcy Law**” means Title 11, U.S. Code, or any similar federal or state law for the relief of debtors.

“**Board of Directors**” means the Board of Directors (or the functional equivalent thereof) of the Company or any duly authorized committee of such Board.

“**Board Resolution**” means a copy of a resolution certified by the Secretary or an Assistant Secretary of the Company to have been duly adopted by the Board of Directors (or duly authorized committee thereof) and to be in full force and effect on the date of such certification.

“**Business Day**” means, with respect to any series of Securities, any day other than a day on which federal or state banking institutions in the Borough of Manhattan, the City of New York, or in the city of the Corporate Trust Office of the Trustee, are authorized or obligated by law, executive order or regulation to close.

“**Commission**” means the Securities and Exchange Commission, as from time to time constituted, created under the Exchange Act, or, if at any time after the execution of this instrument such Commission is not existing and performing the duties now assigned to it under the Trust Indenture Act, then the body performing such duties at such time.

“**Company**” means Tourmaline Bio, Inc., a corporation duly organized and existing under the laws of the State of [State], and, subject to the provisions of Article Ten, shall also include its successors and assigns.

“**Corporate Trust Office**” means the office of the Trustee at which, at any particular time, its corporate trust business shall be principally administered, which office at the date hereof is located at \_\_\_\_\_

“**Custodian**” means any receiver, trustee, assignee, liquidator or similar official under any Bankruptcy Law.

“**Defaulted Interest**” has the meaning set forth in Section 2.03.

“**Depository**” means, with respect to Securities of any series for which the Company shall determine that such Securities will be issued as a Global Security, The Depository Trust Company, another clearing agency, or any successor registered as a clearing agency under the Exchange Act, or other applicable statute or regulation, which, in each case, shall be designated by the Company pursuant to either Section 2.01 or 2.11.

“**Event of Default**” means, with respect to Securities of a particular series, any event specified in Section 6.01, continued for the period of time, if any, therein designated.

“**Exchange Act**” means the United States Securities and Exchange Act of 1934, as amended, and the rules and regulations promulgated by the Commission thereunder.

The term “**given**”, “**mailed**”, “**notify**” or “**sent**” with respect to any notice to be given to a Securityholder pursuant to this Indenture, shall mean notice (x) given to the Depository (or its designee) pursuant to the standing instructions from the Depository or its designee, including by electronic mail in accordance with accepted practices or procedures at the Depository (in the case of a Global Security) or (y) mailed to such Securityholder by first class mail, postage prepaid, at its address as it appears on the Security Register (in the case of a definitive Security). Notice so “**given**” shall be deemed to include any notice to be “**mailed**” or “**delivered**,” as applicable, under this Indenture.

“**Global Security**” means a Security issued to evidence all or a part of any series of Securities which is executed by the Company and authenticated and delivered by the Trustee to the Depository or pursuant to the Depository’s instruction, all in accordance with the Indenture, which shall be registered in the name of the Depository or its nominee.

“**Governmental Obligations**” means securities that are (a) direct obligations of the United States of America for the payment of which its full faith and credit is pledged or (b) obligations of a Person controlled or supervised by and acting as an agency or instrumentality of the United States of America, the payment of which is unconditionally guaranteed as a full faith and credit obligation by the United States of America that, in either case, are not callable or redeemable at



the option of the issuer thereof at any time prior to the stated maturity of the Securities, and shall also include a depositary receipt issued by a bank or trust company as custodian with respect to any such Governmental Obligation or a specific payment of principal of or interest on any such Governmental Obligation held by such custodian for the account of the holder of such depositary receipt; provided, however, that (except as required by law) such custodian is not authorized to make any deduction from the amount payable to the holder of such depositary receipt from any amount received by the custodian in respect of the Governmental Obligation or the specific payment of principal of or interest on the Governmental Obligation evidenced by such depositary receipt.

“*herein*”, “*hereof*” and “*hereunder*”, and other words of similar import, refer to this Indenture as a whole and not to any particular Article, Section or other subdivision.

“*Indenture*” means this instrument as originally executed or as it may from time to time be supplemented or amended by one or more indentures supplemental hereto entered into in accordance with the terms hereof and shall include the terms of particular series of Securities established as contemplated by Section 2.01.

“*Interest Payment Date*”, when used with respect to any installment of interest on a Security of a particular series, means the date specified in such Security or in a Board Resolution or in an indenture supplemental hereto with respect to such series as the fixed date on which an installment of interest with respect to Securities of that series is due and payable.

“*Officer*” means, with respect to the Company, the chairman of the Board of Directors, a chief executive officer, a president, a chief financial officer, a chief operating officer, any executive vice president, any senior vice president, any vice president, the treasurer or any assistant treasurer, the controller or any assistant controller or the secretary or any assistant secretary.

“*Officer’s Certificate*” means a certificate signed by any Officer. Each such certificate shall include the statements provided for in Section 13.07, if and to the extent required by the provisions thereof.

“*Opinion of Counsel*” means an opinion in writing subject to customary exceptions of legal counsel, who may be an employee of or counsel for the Company, that is delivered to the Trustee in accordance with the terms hereof. Each such opinion shall include the statements provided for in Section 13.07, if and to the extent required by the provisions thereof.

“*Outstanding*”, when used with reference to Securities of any series, means, subject to the provisions of Section 8.04, as of any particular time, all Securities of that series theretofore authenticated and delivered by the Trustee under this Indenture, except (a) Securities theretofore canceled by the Trustee or any paying agent, or delivered to the Trustee or any paying agent for cancellation or that have previously been canceled; (b) Securities or portions thereof for the payment or redemption of which moneys or Governmental Obligations in the necessary amount shall have been deposited in trust with the Trustee or with any paying agent (other than the Company) or shall have been set aside and segregated in trust by the Company (if the Company shall act as its own paying agent); provided, however, that if such Securities or portions of such Securities are to be redeemed prior to the maturity thereof, notice of such redemption shall have been given as provided in Article Three, or provision satisfactory to the Trustee shall have been made for giving such notice; and (c) Securities in lieu of or in substitution for which other Securities shall have been authenticated and delivered pursuant to the terms of Section 2.07.

“*Person*” means any individual, corporation, partnership, joint venture, joint-stock company, limited liability company, association, trust, unincorporated organization, any other

entity or organization, including a government or political subdivision or an agency or instrumentality thereof.

“**Predecessor Security**” of any particular Security means every previous Security evidencing all or a portion of the same debt as that evidenced by such particular Security; and, for the purposes of this definition, any Security authenticated and delivered under Section 2.07 in lieu of a lost, destroyed or stolen Security shall be deemed to evidence the same debt as the lost, destroyed or stolen Security.

“**Responsible Officer**” when used with respect to the Trustee means any officer within the Corporate Trust Office of the Trustee (or any successor group of the Trustee) or any other officer of the Trustee customarily performing functions similar to those performed by any of the above designated officers and also means, with respect to a particular corporate trust matter, any other officer to whom such matter is referred because of his or her knowledge of and familiarity with the particular subject and in each case who shall have direct responsibility for the administration of this Indenture.

“**Securities**” has the meaning stated in the first recital of this Indenture and more particularly means any Securities authenticated and delivered under this Indenture.

“**Securities Act**” means the Securities Act of 1933, as amended.

“**Securityholder**”, “**holder of Securities**”, “**registered holder**”, or other similar term, means the Person or Persons in whose name or names a particular Security is registered on the Security Register kept for that purpose in accordance with the terms of this Indenture.

“**Security Register**” and “**Security Registrar**” shall have the meanings as set forth in Section 2.05.

“**Subsidiary**” means, with respect to any Person, any corporation, association, partnership or other business entity of which more than 50% of the total voting power of shares of capital stock or other interests (including partnership interests) entitled (without regard to the occurrence of any contingency) to vote in the election of directors, managers, general partners or trustees thereof is at the time owned or controlled, directly or indirectly, by (i) such Person; (ii) such Person and one or more Subsidiaries of such Person; or (iii) one or more Subsidiaries of such Person.

“**Trustee**” means \_\_\_\_\_, and, subject to the provisions of Article Seven, shall also include its successors and assigns, and, if at any time there is more than one Person acting in such capacity hereunder, “Trustee” shall mean each such Person. The term “Trustee” as used with respect to a particular series of the Securities shall mean the trustee with respect to that series.

“**Trust Indenture Act**” means the Trust Indenture Act of 1939, as amended.

“**U.S.A. Patriot Act**” means the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001, Pub. L. 107-56, as amended and signed into law October 26, 2001.

## ARTICLE 2

## ISSUE, DESCRIPTION, TERMS, EXECUTION, REGISTRATION AND EXCHANGE OF SECURITIES

### Section 2.01 Designation and Terms of Securities.

(a) 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 up to the aggregate principal amount of Securities of that series from time to time authorized by or pursuant to a Board Resolution or pursuant to one or more indentures supplemental hereto. Prior to the initial issuance of Securities of any series, there shall be established in or pursuant to a Board Resolution, and set forth in an Officer's Certificate, or established in one or more indentures supplemental hereto:

(1) the title of the Securities of the series (which shall distinguish the Securities of that series from all other Securities);

(2) any limit upon the aggregate principal amount of the Securities of that series that 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 that series);

(3) the maturity date or dates on which the principal of the Securities of the series is payable;

(4) the form of the Securities of the series including the form of the certificate of authentication for such series;

(5) the applicability of any guarantees;

(6) whether or not the Securities will be secured or unsecured, and the terms of any secured debt;

(7) whether the Securities rank as senior debt, senior subordinated debt, subordinated debt or any combination thereof, and the terms of any subordination;

(8) if the price (expressed as a percentage of the aggregate principal amount thereof) at which such Securities will be issued is a price other than the principal amount thereof, the portion of the principal amount thereof payable upon declaration of acceleration of the maturity thereof, or if applicable, the portion of the principal amount of such Securities that is convertible into another security or the method by which any such portion shall be determined;

(9) the interest rate or rates, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;

(10) the Company's right, if any, to defer the payment of interest and the maximum length of any such deferral period;

(11) if applicable, the date or dates after which, or the period or periods during which, and the price or prices at which, the Company may at its option, redeem the series of Securities pursuant to any optional or provisional redemption provisions and the terms of those redemption provisions;

(12) the date or dates, if any, on which, and the price or prices at which the Company is obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the Securityholder's option to purchase, the series of Securities and the currency or currency unit in which the Securities are payable;

(13) the denominations in which the Securities of the series shall be issuable, if other than denominations of one thousand U.S. dollars (\$1,000) or any integral multiple thereof;

(14) any and all terms, if applicable, relating to any auction or remarketing of the Securities of that series and any security for the obligations of the Company with respect to such Securities and any other terms which may be advisable in connection with the marketing of Securities of that series;

(15) whether the Securities of the series shall be issued in whole or in part in the form of a Global Security or Securities; the terms and conditions, if any, upon which such Global Security or Securities may be exchanged in whole or in part for other individual Securities; and the Depositary for such Global Security or Securities;

(16) if applicable, the provisions relating to conversion or exchange of any Securities of the series and the terms and conditions upon which such Securities will be so convertible or exchangeable, including the conversion or exchange price, as applicable, or how it will be calculated and may be adjusted, any mandatory or optional (at the Company's option or the holders' option) conversion or exchange features, the applicable conversion or exchange period and the manner of settlement for any conversion or exchange, which may, without limitation, include the payment of cash as well as the delivery of securities;

(17) if other than the full principal amount thereof, the portion of the principal amount of Securities of the series which shall be payable upon declaration of acceleration of the maturity thereof pursuant to Section 6.01;

(18) additions to or changes in the covenants applicable to the series of Securities being issued, including, among others, the consolidation, merger or sale covenant;

(19) additions to or changes in the Events of Default with respect to the Securities and any change in the right of the Trustee or the Securityholders to declare the principal, premium, if any, and interest, if any, with respect to such Securities to be due and payable;

(20) additions to or changes in or deletions of the provisions relating to covenant defeasance and legal defeasance;

(21) additions to or changes in the provisions relating to satisfaction and discharge of this Indenture;

(22) additions to or changes in the provisions relating to the modification of this Indenture both with and without the consent of Securityholders of Securities issued under this Indenture;

(23) the currency of payment of Securities if other than U.S. dollars and the manner of determining the equivalent amount in U.S. dollars;

(24) whether interest will be payable in cash or additional Securities at the Company's or the Securityholders' option and the terms and conditions upon which the election may be made;

(25) the terms and conditions, if any, upon which the Company shall pay amounts in addition to the stated interest, premium, if any and principal amounts of the Securities of the series to any Securityholder that is not a "United States person" for federal tax purposes;

(26) any restrictions on transfer, sale or assignment of the Securities of the series; and

(27) any other specific terms, preferences, rights or limitations of, or restrictions on, the Securities, any other additions or changes in the provisions of this Indenture, and any terms that may be required by us or advisable under applicable laws or regulations.

All Securities of any one series shall be substantially identical except as may otherwise be provided in or pursuant to any such Board Resolution or in any indentures supplemental hereto.

If any of the terms of the series are established by action taken pursuant to a Board Resolution of the Company, a copy of an appropriate record of such action shall be certified by the secretary or an assistant secretary of the Company and delivered to the Trustee at or prior to the delivery of the Officer's Certificate of the Company setting forth the terms of the series.

Securities of any particular series may be issued at various times, with different dates on which the principal or any installment of principal is payable, with different rates of interest, if any, or different methods by which rates of interest may be determined, with different dates on which such interest may be payable and with different redemption dates.

#### **Section 2.02 Form of Securities and Trustee's Certificate.**

The Securities of any series and the Trustee's certificate of authentication to be borne by such Securities shall be substantially of the tenor and purport as set forth in one or more indentures supplemental hereto or as provided in a Board Resolution, and set forth in an Officer's Certificate, and they may have such letters, numbers or other marks of identification or designation and such legends or endorsements printed, lithographed or engraved thereon as the Company may deem appropriate and as are not inconsistent with the provisions of this Indenture, or as may be required to comply with any law or with any rule or regulation made pursuant thereto or with any rule or regulation of any securities exchange on which Securities of that series may be listed, or to conform to usage.

#### **Section 2.03 Denominations: Provisions for Payment.**

The Securities shall be issuable as registered Securities and in the denominations of one thousand U.S. dollars (\$1,000) or any integral multiple thereof, subject to Section 2.01(a)(13). The Securities of a particular series shall bear interest payable on the dates and at the rate specified with respect to that series. Subject to Section 2.01(a)(23), the principal of and the interest on the Securities of any series, as well as any premium thereon in case of redemption or repurchase thereof prior to maturity, and any cash amount due upon conversion or exchange thereof, shall be payable in the coin or currency of the United States of America that at the time is legal tender for public and private debt, at the office or agency of the Company maintained for that purpose. Each Security shall be dated the date of its authentication. Interest on the Securities shall be computed on the basis of a 360-day year composed of twelve 30-day months.

The interest installment on any Security that is payable, and is punctually paid or duly provided for, on any Interest Payment Date for Securities of that series shall be paid to the Person in whose name said Security (or one or more Predecessor Securities) is registered at the close of business on the regular record date for such interest installment. In the event that any Security of a particular series or portion thereof is called for redemption and the redemption date is subsequent to a regular record date with respect to any Interest Payment Date and prior to such Interest Payment Date, interest on such Security will be paid upon presentation and surrender of such Security as provided in Section 3.03.

Any interest on any Security that is payable, but is not punctually paid or duly provided for, on any Interest Payment Date for Securities of the same series (herein called "Defaulted Interest") shall forthwith cease to be payable to the registered holder on the relevant regular record date by virtue of having been such holder; and such Defaulted Interest shall be paid by the Company, at its election, as provided in clause (1) or clause (2) below:

(1) The Company may make payment of any Defaulted Interest on Securities to the Persons in whose names such Securities (or their respective Predecessor Securities) are registered in the Security Register at the close of business on a special record date for the payment of such Defaulted Interest, which shall be fixed in the following manner: the Company shall notify the Trustee in writing of the amount of Defaulted Interest proposed to be paid on each such Security and the date of the proposed payment, and at the same time the Company shall deposit with the Trustee an amount of money equal to the aggregate amount proposed to be paid in respect of such Defaulted Interest or shall make arrangements satisfactory to the Trustee for such deposit prior to the date of the proposed payment, such money when deposited to be held in trust for the benefit of the Persons entitled to such Defaulted Interest as in this clause provided. Thereupon the Trustee shall fix a special record date for the payment of such Defaulted Interest which shall not be more than 15 nor less than 10 days prior to the date of the proposed payment and not less than 10 days after the receipt by the Trustee of the notice of the proposed payment. The Trustee shall promptly notify the Company of such special record date and, in the name and at the expense of the Company, shall cause notice of the proposed payment of such Defaulted Interest and the special record date therefor to be sent, to each Securityholder not less than 10 days prior to such special record date. Notice of the proposed payment of such Defaulted Interest and the special record date therefor having been sent as aforesaid, such Defaulted Interest shall be paid to the Persons in whose names such Securities (or their respective Predecessor Securities) are registered in the Security Register on such special record date.

(2) The Company may make payment of any Defaulted Interest on any Securities in any other lawful manner not inconsistent with the requirements of any securities exchange on which such Securities may be listed, and upon such notice as may be required by such exchange, if, after notice given by the Company to the Trustee of the proposed payment pursuant to this clause, such manner of payment shall be deemed practicable by the Trustee.

Unless otherwise set forth in a Board Resolution or one or more indentures supplemental hereto establishing the terms of any series of Securities pursuant to Section 2.01 hereof, the term "regular record date" as used in this Section with respect to a series of Securities and any Interest Payment Date for such series shall mean either the fifteenth day of the month immediately preceding the month in which an Interest Payment Date established for such series pursuant to Section 2.01 hereof shall occur, if such Interest Payment Date is the first day of a month, or the first day of the month in which an Interest Payment Date established for such series pursuant to Section 2.01 hereof shall occur, if such Interest Payment Date is the fifteenth day of a month, whether or not such date is a Business Day.

Subject to the foregoing provisions of this Section, each Security of a series delivered under this Indenture upon transfer of or in exchange for or in lieu of any other Security of such series shall carry the rights to interest accrued and unpaid, and to accrue, that were carried by such other Security.

#### **Section 2.04 Execution and Authentications.**

The Securities shall be signed on behalf of the Company by one of its Officers. Signatures may be in the form of a manual or facsimile signature.

The Company may use the facsimile signature of any Person who shall have been an Officer (at the time of execution), notwithstanding the fact that at the time the Securities shall be authenticated and delivered or disposed of such Person shall have ceased to be such an officer of the Company. The Securities may contain such notations, legends or endorsements required by law, stock exchange rule or usage. Each Security shall be dated the date of its authentication by the Trustee.

A Security shall not be valid until authenticated manually by an authorized signatory of the Trustee, or by an Authenticating Agent. Such signature shall be conclusive evidence that the Security so authenticated has been duly authenticated and delivered hereunder and that the holder is entitled to the benefits of this Indenture. At any time and from time to time after the execution and delivery of this Indenture, the Company may deliver Securities of any series executed by the Company to the Trustee for authentication, together with a written order of the Company for the authentication and delivery of such Securities, signed by an Officer, and the Trustee in accordance with such written order shall authenticate and deliver such Securities.

Upon the Company's delivery of any such authentication order to the Trustee at any time after the initial issuance of Securities under this Indenture, the Trustee shall be provided with, and (subject to Sections 315(a) through 315(d) of the Trust Indenture Act) shall be fully protected in relying upon, (1) an Opinion of Counsel or reliance letter and (2) an Officer's Certificate stating that all conditions precedent to the execution, authentication and delivery of such Securities are in conformity with the provisions of this Indenture.

The Trustee shall not be required to authenticate such Securities if the issue of such Securities pursuant to this Indenture will affect the Trustee's own rights, duties or immunities under the Securities and this Indenture or otherwise in a manner that is not reasonably acceptable to the Trustee.

#### **Section 2.05 Registration of Transfer and Exchange.**

(a) Securities of any series may be exchanged upon presentation thereof at the office or agency of the Company designated for such purpose, for other Securities of such series of authorized denominations, and for a like aggregate principal amount, upon payment of a sum sufficient to cover any tax or other governmental charge in relation thereto, all as provided in this Section. In respect of any Securities so surrendered for exchange, the Company shall execute, the Trustee shall authenticate and such office or agency shall deliver in exchange therefor the Security or Securities of the same series that the Securityholder making the exchange shall be entitled to receive, bearing numbers not contemporaneously outstanding.

(b) The Company shall keep, or cause to be kept, at its office or agency designated for such purpose a register or registers (herein referred to as the "Security Register") in which, subject to such reasonable regulations as it may prescribe, the Company shall register the Securities and the transfers of Securities as in this Article provided and which at all reasonable times shall be open for inspection by the Trustee. The registrar for the purpose of

registering Securities and transfer of Securities as herein provided shall be appointed as authorized by Board Resolution or Supplemental Indenture (the "Security Registrar").

Upon surrender for transfer of any Security at the office or agency of the Company designated for such purpose, the Company shall execute, the Trustee shall authenticate and such office or agency shall deliver in the name of the transferee or transferees a new Security or Securities of the same series as the Security presented for a like aggregate principal amount.

The Company initially appoints the Trustee as Security Registrar for each series of Securities.

All Securities presented or surrendered for exchange or registration of transfer, as provided in this Section, shall be accompanied (if so required by the Company or the Security Registrar) by a written instrument or instruments of transfer, in form satisfactory to the Company or the Security Registrar, duly executed by the registered holder or by such holder's duly authorized attorney in writing.

(c) Except as provided pursuant to Section 2.01 pursuant to a Board Resolution, and set forth in an Officer's Certificate, or established in one or more indentures supplemental to this Indenture, no service charge shall be made for any exchange or registration of transfer of Securities, or issue of new Securities in case of partial redemption of any series or repurchase, conversion or exchange of less than the entire principal amount of a Security, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge in relation thereto, other than exchanges pursuant to Section 2.06, Section 3.03(b) and Section 9.04 not involving any transfer.

(d) The Company and the Security Registrar shall not be required (i) to issue, exchange or register the transfer of any Securities during a period beginning at the opening of business 15 days before the day of the sending of a notice of redemption of less than all the Outstanding Securities of the same series and ending at the close of business on the day of such sending, nor (ii) to register the transfer of or exchange any Securities of any series or portions thereof called for redemption or surrendered for repurchase, but not validly withdrawn, other than the unredeemed portion of any such Securities being redeemed in part or not surrendered for repurchase, as the case may be. The provisions of this Section 2.05 are, with respect to any Global Security, subject to Section 2.11 hereof.

The Trustee shall have no obligation or duty to monitor, determine or inquire as to compliance with any restrictions on transfer imposed under this Indenture or under applicable law with respect to any transfer of any interest in any Security (including any transfers between or among Depositary participants or beneficial owners of interests in any Global Security) other than to require delivery of such certificates and other documentation or evidence as are expressly required by, and to do so if and when expressly required by the terms of, this Indenture, and to examine the same to determine substantial compliance as to form with the express requirements hereof.

#### **Section 2.06 Temporary Securities.**

Pending the preparation of definitive Securities of any series, the Company may execute, and the Trustee shall authenticate and deliver, temporary Securities (printed, lithographed or typewritten) of any authorized denomination. Such temporary Securities shall be substantially in the form of the definitive Securities in lieu of which they are issued, but with such omissions, insertions and variations as may be appropriate for temporary Securities, all as may be determined by the Company. Every temporary Security of any series shall be executed by the Company and be authenticated by the Trustee upon the same conditions and in substantially the



same manner, and with like effect, as the definitive Securities of such series. Without unnecessary delay the Company will execute and will furnish definitive Securities of such series and thereupon any or all temporary Securities of such series may be surrendered in exchange therefor (without charge to the Securityholders), at the office or agency of the Company designated for the purpose, and the Trustee shall authenticate and such office or agency shall deliver in exchange for such temporary Securities an equal aggregate principal amount of definitive Securities of such series, unless the Company advises the Trustee to the effect that definitive Securities need not be executed and furnished until further notice from the Company. Until so exchanged, the temporary Securities of such series shall be entitled to the same benefits under this Indenture as definitive Securities of such series authenticated and delivered hereunder.

#### **Section 2.07 Mutilated, Destroyed, Lost or Stolen Securities.**

In case any temporary or definitive Security shall become mutilated or be destroyed, lost or stolen, the Company (subject to the next succeeding sentence) shall execute, and upon the Company's request the Trustee (subject as aforesaid) shall authenticate and deliver, a new Security of the same series, bearing a number not contemporaneously outstanding, in exchange and substitution for the mutilated Security, or in lieu of and in substitution for the Security so destroyed, lost or stolen. In every case the applicant for a substituted Security shall furnish to the Company and the Trustee such security or indemnity as may be required by them to save each of them harmless, and, in every case of destruction, loss or theft, the applicant shall also furnish to the Company and the Trustee evidence to their satisfaction of the destruction, loss or theft of the applicant's Security and of the ownership thereof. The Trustee may authenticate any such substituted Security and deliver the same upon the written request or authorization of any officer of the Company. Upon the issuance of any substituted Security, 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.

In case any Security that has matured or is about to mature shall become mutilated or be destroyed, lost or stolen, the Company may, instead of issuing a substitute Security, pay or authorize the payment of the same (without surrender thereof except in the case of a mutilated Security) if the applicant for such payment shall furnish to the Company and the Trustee such security or indemnity as they may require to save them harmless, and, in case of destruction, loss or theft, evidence to the satisfaction of the Company and the Trustee of the destruction, loss or theft of such Security and of the ownership thereof.

Every replacement Security issued pursuant to the provisions of this Section shall constitute an additional contractual obligation of the Company whether or not the mutilated, destroyed, lost or stolen Security shall be found at any time, or be enforceable by anyone, and shall be entitled to all the benefits of this Indenture equally and proportionately with any and all other Securities of the same series duly issued hereunder. All Securities shall be held and owned upon the express condition that the foregoing provisions are exclusive with respect to the replacement or payment of mutilated, destroyed, lost or stolen Securities, and shall preclude (to the extent lawful) any and all other rights or remedies, notwithstanding any law or statute existing or hereafter enacted to the contrary with respect to the replacement or payment of negotiable instruments or other securities without their surrender.

#### **Section 2.08 Cancellation.**

All Securities surrendered for the purpose of payment, redemption, repurchase, exchange, registration of transfer or conversion shall, if surrendered to the Company or any paying agent (or any other applicable agent), be delivered to the Trustee for cancellation, or, if surrendered to the Trustee, shall be cancelled by it, and no Securities shall be issued in lieu thereof except as

expressly required or permitted by any of the provisions of this Indenture. On request of the Company at the time of such surrender, the Trustee shall deliver to the Company canceled Securities held by the Trustee. In the absence of such request the Trustee may dispose of canceled Securities in accordance with its standard procedures and deliver a certificate of disposition to the Company. If the Company shall otherwise acquire any of the Securities, however, such acquisition shall not operate as a redemption or satisfaction of the indebtedness represented by such Securities unless and until the same are delivered to the Trustee for cancellation.

#### **Section 2.09 Benefits of Indenture.**

Nothing in this Indenture or in the Securities, express or implied, shall give or be construed to give to any Person, other than the parties hereto and the holders of the Securities any legal or equitable right, remedy or claim under or in respect of this Indenture, or under any covenant, condition or provision herein contained; all such covenants, conditions and provisions being for the sole benefit of the parties hereto and of the holders of the Securities.

#### **Section 2.10 Authenticating Agent.**

So long as any of the Securities of any series remain Outstanding there may be an Authenticating Agent for any or all such series of Securities which the Trustee shall have the right to appoint. Said Authenticating Agent shall be authorized to act on behalf of the Trustee to authenticate Securities of such series issued upon exchange, transfer or partial redemption, repurchase or conversion thereof, and Securities so authenticated shall be entitled to the benefits of this Indenture and shall be valid and obligatory for all purposes as if authenticated by the Trustee hereunder. All references in this Indenture to the authentication of Securities by the Trustee shall be deemed to include authentication by an Authenticating Agent for such series. Each Authenticating Agent shall be acceptable to the Company and shall be a corporation that has a combined capital and surplus, as most recently reported or determined by it, sufficient under the laws of any jurisdiction under which it is organized or in which it is doing business to conduct a trust business, and that is otherwise authorized under such laws to conduct such business and is subject to supervision or examination by federal or state authorities. If at any time any Authenticating Agent shall cease to be eligible in accordance with these provisions, it shall resign immediately.

Any Authenticating Agent may at any time resign by giving written notice of resignation to the Trustee and to the Company. The Trustee may at any time (and upon request by the Company shall) terminate the agency of any Authenticating Agent by giving written notice of termination to such Authenticating Agent and to the Company. Upon resignation, termination or cessation of eligibility of any Authenticating Agent, the Trustee may appoint an eligible successor Authenticating Agent acceptable to the Company. Any successor Authenticating Agent, upon acceptance of its appointment hereunder, shall become vested with all the rights, powers and duties of its predecessor hereunder as if originally named as an Authenticating Agent pursuant hereto.

#### **Section 2.11 Global Securities.**

(a) If the Company shall establish pursuant to Section 2.01 that the Securities of a particular series are to be issued as a Global Security, then the Company shall execute and the Trustee shall, in accordance with Section 2.04, authenticate and deliver, a Global Security that (i) shall represent, and shall be denominated in an amount equal to the aggregate principal amount of, all of the Outstanding Securities of such series, (ii) shall be registered in the name of the Depositary or its nominee, (iii) shall be delivered by the Trustee to the Depositary or pursuant to the Depositary's instruction (or if the Depositary names the Trustee as its custodian, retained

by the Trustee), and (iv) shall bear a legend substantially to the following effect: “Except as otherwise provided in Section 2.11 of the Indenture, this Security may be transferred, in whole but not in part, only to another nominee of the Depository or to a successor Depository or to a nominee of such successor Depository.”

(b) Notwithstanding the provisions of Section 2.05, the Global Security of a series may be transferred, in whole but not in part and in the manner provided in Section 2.05, only to another nominee of the Depository for such series, or to a successor Depository for such series selected or approved by the Company or to a nominee of such successor Depository.

(c) If at any time the Depository for a series of the Securities notifies the Company that it is unwilling or unable to continue as Depository for such series or if at any time the Depository for such series shall no longer be registered or in good standing under the Exchange Act, or other applicable statute or regulation, and a successor Depository for such series is not appointed by the Company within 90 days after the Company receives such notice or becomes aware of such condition, as the case may be, or if an Event of Default has occurred and is continuing and the Company has received a request from the Depository or from the Trustee, this Section 2.11 shall no longer be applicable to the Securities of such series and the Company will execute, and subject to Section 2.04, the Trustee will authenticate and deliver the Securities of such series in definitive registered form without coupons, in authorized denominations, and in an aggregate principal amount equal to the principal amount of the Global Security of such series in exchange for such Global Security. In addition, the Company may at any time determine that the Securities of any series shall no longer be represented by a Global Security and that the provisions of this Section 2.11 shall no longer apply to the Securities of such series. In such event the Company will execute and, subject to Section 2.04, the Trustee, upon receipt of an Officer’s Certificate evidencing such determination by the Company, will authenticate and deliver the Securities of such series in definitive registered form without coupons, in authorized denominations, and in an aggregate principal amount equal to the principal amount of the Global Security of such series in exchange for such Global Security. Upon the exchange of the Global Security for such Securities in definitive registered form without coupons, in authorized denominations, the Global Security shall be canceled by the Trustee. Such Securities in definitive registered form issued in exchange for the Global Security pursuant to this Section 2.11(c) shall be registered in such names and in such authorized denominations as the Depository, pursuant to instructions from its direct or indirect participants or otherwise, shall instruct the Trustee. The Trustee shall deliver such Securities to the Depository for delivery to the Persons in whose names such Securities are so registered.

#### **Section 2.12 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 Securityholders; 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 will promptly notify the Trustee of any change in the “CUSIP” numbers.

## ARTICLE 3

### REDEMPTION OF SECURITIES AND SINKING FUND PROVISIONS

#### Section 3.01 Redemption.

The Company may redeem the Securities of any series issued hereunder on and after the dates and in accordance with the terms established for such series pursuant to Section 2.01 hereof.

#### Section 3.02 Notice of Redemption.

(a) In case the Company shall desire to exercise such right to redeem all or, as the case may be, a portion of the Securities of any series in accordance with any right the Company reserved for itself to do so pursuant to Section 2.01 hereof, the Company shall, or shall cause the Trustee to, give notice of such redemption to holders of the Securities of such series to be redeemed by mailing (or with regard to any Global Security held in book entry form, by electronic mail in accordance with the applicable procedures of the Depositary), a notice of such redemption not less than 30 days and not more than 90 days before the date fixed for redemption of that series to such Securityholders, unless a shorter period is specified in the Securities to be redeemed. Any notice that is mailed in the manner herein provided shall be conclusively presumed to have been duly given, whether or not the registered holder receives the notice. In any case, failure duly to give such notice to the holder of any Security of any series designated for redemption in whole or in part, or any defect in the notice, shall not affect the validity of the proceedings for the redemption of any other Securities of such series or any other series. In the case of any redemption of Securities prior to the expiration of any restriction on such redemption provided in the terms of such Securities or elsewhere in this Indenture, the Company shall furnish the Trustee with an Officer's Certificate evidencing compliance with any such restriction.

Each such notice of redemption shall identify the Securities to be redeemed (including CUSIP numbers, if any), specify the date fixed for redemption and the redemption price at which Securities of that series are to be redeemed, and shall state that payment of the redemption price of such Securities to be redeemed will be made at the office or agency of the Company, upon presentation and surrender of such Securities, that interest accrued to the date fixed for redemption will be paid as specified in said notice, that from and after said date interest will cease to accrue and that the redemption is from a sinking fund, if such is the case. If less than all the Securities of a series are to be redeemed, the notice to the holders of Securities of that series to be redeemed in part shall specify the particular Securities to be so redeemed.

In case any Security is to be redeemed in part only, the notice that relates to such Security shall state the portion of the principal amount thereof to be redeemed, and shall state that on and after the redemption date, upon surrender of such Security, a new Security or Securities of such series in principal amount equal to the unredeemed portion thereof will be issued.

(b) If less than all the Securities of a series are to be redeemed, the Company shall give the Trustee at least 45 days' notice (unless a shorter notice shall be satisfactory to the Trustee) in advance of the date fixed for redemption as to the aggregate principal amount of Securities of the series to be redeemed, and thereupon the Securities to be redeemed shall be selected, by lot, on a pro rata basis, or in such other manner as the Company shall deem appropriate and fair in its discretion and that may provide for the selection of a portion or portions (equal to one thousand U.S. dollars (\$1,000) or any integral multiple thereof) of the principal amount of such Securities of a denomination larger than \$1,000, the Securities to be redeemed and shall thereafter promptly notify the Company in writing of the numbers of the Securities to be redeemed, in whole or in part. The Company may, if and whenever it shall so

elect, by delivery of instructions signed on its behalf by an Officer, instruct the Trustee or any paying agent to call all or any part of the Securities of a particular series for redemption and to give notice of redemption in the manner set forth in this Section, such notice to be in the name of the Company or its own name as the Trustee or such paying agent may deem advisable. In any case in which notice of redemption is to be given by the Trustee or any such paying agent, the Company shall deliver or cause to be delivered to, or permit to remain with, the Trustee or such paying agent, as the case may be, such Security Register, transfer books or other records, or suitable copies or extracts therefrom, sufficient to enable the Trustee or such paying agent to give any notice by mail that may be required under the provisions of this Section.

### **Section 3.03 Payment Upon Redemption.**

(a) If the giving of notice of redemption shall have been completed as above provided, the Securities or portions of Securities of the series to be redeemed specified in such notice shall become due and payable on the date and at the place stated in such notice at the applicable redemption price, together with interest accrued to, but excluding, the date fixed for redemption and interest on such Securities or portions of Securities shall cease to accrue on and after the date fixed for redemption, unless the Company shall default in the payment of such redemption price and accrued interest with respect to any such Security or portion thereof. On presentation and surrender of such Securities on or after the date fixed for redemption at the place of payment specified in the notice, said Securities shall be paid and redeemed at the applicable redemption price for such series, together with interest accrued thereon to, but excluding, the date fixed for redemption (but if the date fixed for redemption is an Interest Payment Date, the interest installment payable on such date shall be payable to the registered holder at the close of business on the applicable record date pursuant to Section 2.03).

(b) Upon presentation of any Security of such series that is to be redeemed in part only, the Company shall execute and the Trustee shall authenticate and the office or agency where the Security is presented shall deliver to the Securityholder thereof, at the expense of the Company, a new Security of the same series of authorized denominations in principal amount equal to the unredeemed portion of the Security so presented.

### **Section 3.04 Sinking Fund.**

The provisions of Sections 3.04, 3.05 and 3.06 shall be applicable to any sinking fund for the retirement of Securities of a series, except as otherwise specified as contemplated by Section 2.01 for Securities of such series.

The minimum amount of any sinking fund payment provided for by the terms of Securities of any series is herein referred to as a "mandatory sinking fund payment," and any payment in excess of such minimum amount provided for by the terms of Securities of any 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 3.05. Each sinking fund payment shall be applied to the redemption of Securities of any series as provided for by the terms of Securities of such series.

### **Section 3.05 Satisfaction of Sinking Fund Payments with Securities.**

The Company (i) may deliver Outstanding Securities of a series and (ii) may apply as a credit Securities of a series that have been redeemed either at the election of the Company pursuant to the terms of such Securities or through the application of permitted optional sinking fund payments pursuant to the terms of such Securities, in each case in satisfaction of all or any part of any sinking fund payment with respect to the Securities of such series required to be made pursuant to the terms of such Securities as provided for by the terms of such series, provided that

such Securities have not been previously so credited. Such Securities shall be received and credited for such purpose by the Trustee at the redemption 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.

### **Section 3.06 Redemption of Securities for Sinking Fund.**

Not less than 45 days prior to each sinking fund payment date for any series of Securities (unless a shorter period shall be satisfactory to the Trustee), the Company will deliver to the Trustee an Officer's Certificate specifying the amount of the next ensuing sinking fund payment for that series pursuant to the terms of the series, the portion thereof, if any, that is to be satisfied by delivering and crediting Securities of that series pursuant to Section 3.05 and the basis for such credit and will, together with such Officer's Certificate, deliver to the Trustee any Securities to be so delivered. Not less than 30 days before each such sinking fund payment date the Securities to be redeemed upon such sinking fund payment date shall be selected in the manner specified in Section 3.02 and the Company shall cause notice of the redemption thereof to be given in the name of and at the expense of the Company in the manner provided in Section 3.02. Such notice having been duly given, the redemption of such Securities shall be made upon the terms and in the manner stated in Section 3.03.

## **ARTICLE 4**

### **COVENANTS**

#### **Section 4.01 Payment of Principal, Premium and Interest.**

The Company will duly and punctually pay or cause to be paid the principal of (and premium, if any) and interest on the Securities of that series at the time and place and in the manner provided herein and established with respect to such Securities. Payments of principal on the Securities may be made at the time provided herein and established with respect to such Securities by U.S. dollar check drawn on and mailed to the address of the Securityholder entitled thereto as such address shall appear in the Security Register, or U.S. dollar wire transfer to, a U.S. dollar account if such Securityholder shall have furnished wire instructions to the Trustee no later than 15 days prior to the relevant payment date. Payments of interest on the Securities may be made at the time provided herein and established with respect to such Securities by U.S. dollar check mailed to the address of the Securityholder entitled thereto as such address shall appear in the Security Register, or U.S. dollar wire transfer to, a U.S. dollar account if such Securityholder shall have furnished wire instructions in writing to the Security Registrar and the Trustee no later than 15 days prior to the relevant payment date.

#### **Section 4.02 Maintenance of Office or Agency.**

So long as any series of the Securities remain Outstanding, the Company agrees to maintain an office or agency with respect to each such series and at such other location or locations as may be designated as provided in this Section 4.02, where (i) Securities of that series may be presented for payment, (ii) Securities of that series may be presented as herein above authorized for registration of transfer and exchange, and (iii) notices and demands to or upon the Company in respect of the Securities of that series and this Indenture may be given or served, such designation to continue with respect to such office or agency until the Company shall, by written notice signed by any officer authorized to sign an Officer's Certificate and delivered to the Trustee, designate some other office or agency for such purposes or any of them. If at any time the Company shall fail to maintain any such required office or agency or shall fail to furnish the Trustee with the address thereof, such presentations, 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, notices and demands. The Company initially appoints the Corporate Trust Office of the Trustee as its paying agent with respect to the Securities.

#### **Section 4.03 Paying Agents.**

(a) If the Company shall appoint one or more paying agents for all or any series of the Securities, other than the Trustee, the Company will cause each such paying agent to execute and deliver to the Trustee an instrument in which such agent shall agree with the Trustee, subject to the provisions of this Section:

(1) that it will hold all sums held by it as such agent for the payment of the principal of (and premium, if any) or interest on the Securities of that series (whether such sums have been paid to it by the Company or by any other obligor of such Securities) in trust for the benefit of the Persons entitled thereto;

(2) that it will give the Trustee notice of any failure by the Company (or by any other obligor of such Securities) to make any payment of the principal of (and premium, if any) or interest on the Securities of that series when the same shall be due and payable;

(3) that it will, at any time during the continuance of any failure referred to in the preceding paragraph (a)(2) above, upon the written request of the Trustee, forthwith pay to the Trustee all sums so held in trust by such paying agent; and

(4) that it will perform all other duties of paying agent as set forth in this Indenture.

(b) If the Company shall act as its own paying agent with respect to any series of the Securities, it will on or before each due date of the principal of (and premium, if any) or interest on Securities of that series, set aside, segregate and hold in trust for the benefit of the Persons entitled thereto a sum sufficient to pay such principal (and premium, if any) or interest so becoming due on Securities of that series until such sums shall be paid to such Persons or otherwise disposed of as herein provided and will promptly notify the Trustee of such action, or any failure (by it or any other obligor on such Securities) to take such action. Whenever the Company shall have one or more paying agents for any series of Securities, it will, prior to each due date of the principal of (and premium, if any) or interest on any Securities of that series, deposit with the paying agent a sum sufficient to pay the principal (and premium, if any) or interest so becoming due, such sum to be held in trust for the benefit of the Persons entitled to such principal, premium or interest, and (unless such paying agent is the Trustee) the Company will promptly notify the Trustee of this action or failure so to act.

(c) Notwithstanding anything in this Section to the contrary, (i) the agreement to hold sums in trust as provided in this Section is subject to the provisions of Section 11.05, and (ii) the Company may at any time, for the purpose of obtaining the satisfaction and discharge of this Indenture or for any other purpose, pay, or direct any paying agent to pay, to the Trustee all sums held in trust by the Company or such paying agent, such sums to be held by the Trustee upon the same terms and conditions as those upon which such sums were held by the Company or such paying agent; and, upon such payment by the Company or any paying agent to the Trustee, the Company or such paying agent shall be released from all further liability with respect to such money.

#### **Section 4.04 Appointment to Fill Vacancy in Office of Trustee.**

The Company, whenever necessary to avoid or fill a vacancy in the office of Trustee, will appoint, in the manner provided in Section 7.10, a Trustee, so that there shall at all times be a Trustee hereunder.

### **ARTICLE 5**

#### **SECURITYHOLDERS' LISTS AND REPORTS BY THE COMPANY AND THE TRUSTEE**

##### **Section 5.01 Company to Furnish Trustee Names and Addresses of Securityholders.**

The Company will furnish or cause to be furnished to the Trustee (a) within 15 days after each regular record date (as defined in Section 2.03) a list, in such form as the Trustee may reasonably require, of the names and addresses of the holders of each series of Securities as of such regular record date, provided that the Company shall not be obligated to furnish or cause to furnish such list at any time that the list shall not differ in any respect from the most recent list furnished to the Trustee by the Company and (b) at such other times as the Trustee may request in writing within 30 days after the receipt by the Company of any such request, a list of similar form and content as of a date not more than 15 days prior to the time such list is furnished; provided, however, that, in either case, no such list need be furnished for any series for which the Trustee shall be the Security Registrar.

##### **Section 5.02 Preservation Of Information; Communications With Securityholders.**

(a) The Trustee shall preserve, in as current a form as is reasonably practicable, all information as to the names and addresses of the holders of Securities contained in the most recent list furnished to it as provided in Section 5.01 and as to the names and addresses of holders of Securities received by the Trustee in its capacity as Security Registrar (if acting in such capacity).

(b) The Trustee may destroy any list furnished to it as provided in Section 5.01 upon receipt of a new list so furnished.

(c) Securityholders may communicate as provided in Section 312(b) of the Trust Indenture Act with other Securityholders with respect to their rights under this Indenture or under the Securities, and, in connection with any such communications, the Trustee shall satisfy its obligations under Section 312(b) of the Trust Indenture Act in accordance with the provisions of Section 312(b) of the Trust Indenture Act.

##### **Section 5.03 Reports by the Company.**

(a) The Company will at all times comply with Section 314(a) of the Trust Indenture Act. The Company covenants and agrees to provide (which delivery may be via electronic mail) to the Trustee within 30 days, after the Company files the same with the Commission, 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 Commission may from time to time by rules and regulations prescribe) that the Company is required to file with the Commission pursuant to Section 13 or Section 15(d) of the Exchange Act; provided, however, the Company shall not be required to deliver to the Trustee any correspondence filed with the Commission or any materials for which the Company has sought and received confidential treatment by the Commission; and provided further, that so long as such filings by the Company are available on



the Commission's Electronic Data Gathering, Analysis and Retrieval System (EDGAR), or any successor system, such filings shall be deemed to have been filed with the Trustee for purposes hereof without any further action required by the Company. For the avoidance of doubt, a failure by the Company to file annual reports, information and other reports with the Commission within the time period prescribed thereof by the Commission shall not be deemed a breach of this Section 5.03.

(b) Delivery of reports, information and documents to the Trustee under Section 5.03 is for informational purposes only and the information and the Trustee's receipt of the foregoing shall not constitute constructive notice of any information contained therein, or determinable from information contained therein including the Company's compliance with any of their covenants thereunder (as to which the Trustee is entitled to rely exclusively on an Officer's Certificate). The Trustee is under no duty to examine any such reports, information or documents delivered to the Trustee or filed with the Commission via EDGAR to ensure compliance with the provision of this Indenture or to ascertain the correctness or otherwise of the information or the statements contained therein. The Trustee shall have no responsibility or duty whatsoever to ascertain or determine whether the above referenced filings with the Commission on EDGAR (or any successor system) has occurred.

#### **Section 5.04 Reports by the Trustee.**

(a) If required by Section 313(a) of the Trust Indenture Act, the Trustee, within sixty (60) days after each May 1, shall send to the Securityholders a brief report dated as of such May 1, which complies with Section 313(a) of the Trust Indenture Act.

(b) The Trustee shall comply with Section 313(b) and 313(c) of the Trust Indenture Act.

(c) A copy of each such report shall, at the time of such transmission to Securityholders, be filed by the Trustee with the Company, with each securities exchange upon which any Securities are listed (if so listed) and also with the Commission. The Company agrees to notify the Trustee when any Securities become listed on any securities exchange.

### **ARTICLE 6**

#### **REMEDIES OF THE TRUSTEE AND SECURITYHOLDERS ON EVENT OF DEFAULT**

##### **Section 6.01 Events of Default.**

(a) Whenever used herein with respect to Securities of a particular series, "Event of Default" means any one or more of the following events that has occurred and is continuing:

(1) the Company defaults in the payment of any installment of interest upon any of the Securities of that series, as and when the same shall become due and payable, and such default continues for a period of 90 days; provided, however, that a valid extension of an interest payment period by the Company in accordance with the terms of any indenture supplemental hereto shall not constitute a default in the payment of interest for this purpose;

(2) the Company defaults in the payment of the principal of (or premium, if any, on) any of the Securities of that series as and when the same shall become due and payable whether at maturity, upon redemption, by declaration or otherwise, or in any payment required by any sinking or analogous fund established with respect to that series;

provided, however, that a valid extension of the maturity of such Securities in accordance with the terms of any indenture supplemental hereto shall not constitute a default in the payment of principal or premium, if any;

(3) the Company fails to observe or perform any other of its covenants or agreements with respect to that series contained in this Indenture or otherwise established with respect to that series of Securities pursuant to Section 2.01 hereof (other than a covenant or agreement that has been expressly included in this Indenture solely for the benefit of one or more series of Securities other than such series) for a period of 90 days after the date on which written notice of such failure, requiring the same to be remedied and stating that such notice is a “Notice of Default” hereunder, shall have been given to the Company by the Trustee, by registered or certified mail, or to the Company and the Trustee by the holders of at least 25% in principal amount of the Securities of that series at the time Outstanding;

(4) 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 or (iv) makes a general assignment for the benefit of its creditors; or

(5) a court of competent jurisdiction enters an order under any Bankruptcy Law that (i) is for relief against the Company in an involuntary case, (ii) appoints a Custodian of the Company 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 90 days.

(b) In each and every such case (other than an Event of Default specified in clause (4) or clause (5) above), unless the principal of all the Securities of that series shall have already become due and payable, either the Trustee or the holders of not less than 25% in aggregate principal amount of the Securities of that series then Outstanding hereunder, by notice in writing to the Company (and to the Trustee if given by such Securityholders), may declare the principal of (and premium, if any, on) and accrued and unpaid interest on all the Securities of that series to be due and payable immediately, and upon any such declaration the same shall become and shall be immediately due and payable. If an Event of Default specified in clause (4) or clause (5) above occurs, the principal of and accrued and unpaid interest on all the Securities of that series shall automatically be immediately due and payable without any declaration or other act on the part of the Trustee or the holders of the Securities.

(c) At any time after the principal of (and premium, if any, on) and accrued and unpaid interest on the Securities of that series shall have been so declared due and payable, and before any judgment or decree for the payment of the moneys due shall have been obtained or entered as hereinafter provided, the holders of a majority in aggregate principal amount of the Securities of that series then Outstanding hereunder, by written notice to the Company and the Trustee, may rescind and annul such declaration and its consequences if: (i) the Company has paid or deposited with the Trustee a sum sufficient to pay all matured installments of interest upon all the Securities of that series and the principal of (and premium, if any, on) any and all Securities of that series that shall have become due otherwise than by acceleration (with interest upon such principal and premium, if any, and, to the extent that such payment is enforceable under applicable law, upon overdue installments of interest, at the rate per annum expressed in the Securities of that series to the date of such payment or deposit) and the amount payable to the Trustee under Section 7.06, and (ii) any and all Events of Default under the Indenture with respect to such series, other than the nonpayment of principal on (and premium, if any, on) and accrued and unpaid interest on Securities of that series that shall not have become due by their terms, shall have been remedied or waived as provided in Section 6.06.

No such rescission and annulment shall extend to or shall affect any subsequent default or impair any right consequent thereon.

(d) In case the Trustee shall have proceeded to enforce any right with respect to Securities of that series under this Indenture and such proceedings shall have been discontinued or abandoned because of such rescission or annulment or for any other reason or shall have been determined adversely to the Trustee, then and in every such case, subject to any determination in such proceedings, the Company and the Trustee shall be restored respectively to their former positions and rights hereunder, and all rights, remedies and powers of the Company and the Trustee shall continue as though no such proceedings had been taken.

#### **Section 6.02 Collection of Indebtedness and Suits for Enforcement by Trustee.**

(a) The Company covenants that (i) in case it shall default in the payment of any installment of interest on any of the Securities of a series, or in any payment required by any sinking or analogous fund established with respect to that series as and when the same shall have become due and payable, and such default shall have continued for a period of 90 days, or (ii) in case it shall default in the payment of the principal of (or premium, if any, on) any of the Securities of a series when the same shall have become due and payable, whether upon maturity of the Securities of a series or upon redemption or upon declaration or otherwise then, upon demand of the Trustee, the Company will pay to the Trustee, for the benefit of the holders of the Securities of that series, the whole amount that then shall have become due and payable on all such Securities for principal (and premium, if any) or interest, or both, as the case may be, with interest upon the overdue principal (and premium, if any) and (to the extent that payment of such interest is enforceable under applicable law) upon overdue installments of interest at the rate per annum expressed in the Securities of that series; and, in addition thereto, such further amount as shall be sufficient to cover the costs and expenses of collection, and the amount payable to the Trustee under Section 7.06.

(b) If the Company shall fail to pay such amounts forthwith upon such demand, the Trustee, in its own name and as trustee of an express trust, shall be entitled and empowered to institute any action or proceedings at law or in equity for the collection of the sums so due and unpaid, and may prosecute any such action or proceeding to judgment or final decree, and may enforce any such judgment or final decree against the Company or other obligor upon the Securities of that series and collect the moneys adjudged or decreed to be payable in the manner provided by law or equity out of the property of the Company or other obligor upon the Securities of that series, wherever situated.

(c) In case of any receivership, insolvency, liquidation, bankruptcy, reorganization, readjustment, arrangement, composition or judicial proceedings affecting the Company, or its creditors or property, the Trustee shall have power to intervene in such proceedings and take any action therein that may be permitted by the court and shall (except as may be otherwise provided by law) be entitled to file such proofs of claim and other papers and documents as may be necessary or advisable in order to have the claims of the Trustee and of the holders of Securities of such series allowed for the entire amount due and payable by the Company under the Indenture at the date of institution of such proceedings and for any additional amount that may become due and payable by the Company after such date, and to collect and receive any moneys or other property payable or deliverable on any such claim, and to distribute the same after the deduction of the amount payable to the Trustee under Section 7.06; and any receiver, assignee or trustee in bankruptcy or reorganization is hereby authorized by each of the holders of Securities of such series to make such payments to the Trustee, and, in the event that the Trustee shall consent to the making of such payments directly to such Securityholders, to pay to the Trustee any amount due it under Section 7.06.

(d) All rights of action and of asserting claims under this Indenture, or under any of the terms established with respect to Securities of that series, may be enforced by the Trustee without the possession of any of such Securities, or the production thereof at any trial or other proceeding relative thereto, and any such suit or 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 payment to the Trustee of any amounts due under Section 7.06, be for the ratable benefit of the holders of the Securities of such series.

In case of an Event of Default hereunder, the Trustee may in its discretion proceed to protect and enforce the rights vested in it by this Indenture by such appropriate judicial proceedings as the Trustee shall deem most effectual to protect and enforce any of such rights, either at law or in equity or in bankruptcy or otherwise, whether for the specific enforcement of any covenant or agreement contained in the Indenture or in aid of the exercise of any power granted in this Indenture, or to enforce any other legal or equitable right vested in the Trustee by this Indenture or by law.

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

### **Section 6.03 Application of Moneys Collected.**

Any moneys collected by the Trustee pursuant to this Article with respect to a particular series of Securities shall be applied in the following order, at the date or dates fixed by the Trustee and, in case of the distribution of such moneys on account of principal (or premium, if any) or interest, upon presentation of the Securities of that series, and notation thereon of the payment, if only partially paid, and upon surrender thereof if fully paid:

FIRST: To the payment of costs and expenses of collection and of all amounts payable to the Trustee under Section 7.06;

SECOND: To the payment of the amounts then due and unpaid upon Securities of such series for principal (and premium, if any) and interest, 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 premium, if any) and interest, respectively; and

THIRD: To the payment of the remainder, if any, to the Company or any other Person lawfully entitled thereto.

### **Section 6.04 Limitation on Suits.**

No holder of any Security of any series shall have any right by virtue or by availing of any provision of this Indenture to institute any suit, action or proceeding in equity or at law upon or under or with respect to this Indenture or for the appointment of a receiver or trustee, or for any other remedy hereunder, unless (i) such Securityholder previously shall have given to the Trustee written notice of an Event of Default and of the continuance thereof with respect to the Securities of such series specifying such Event of Default, as hereinbefore provided; (ii) the holders of not less than 25% in aggregate principal amount of the Securities of such series then Outstanding shall have made written request upon the Trustee to institute such action, suit or proceeding in its own name as Trustee hereunder; (iii) such Securityholder or Securityholders shall have offered to the Trustee indemnity satisfactory to it against the costs, expenses and

liabilities to be incurred in compliance with such request; (iv) the Trustee for 90 days after its receipt of such notice, request and offer of indemnity, shall have failed to institute any such action, suit or proceeding and (v) during such 90 day period, the holders of a majority in principal amount of the Securities of that series do not give the Trustee a direction inconsistent with the request.

Notwithstanding anything contained herein to the contrary or any other provisions of this Indenture, the right of any holder of any Security to receive payment of the principal of (and premium, if any) and interest on such Security, as therein provided, on or after the respective due dates expressed in such Security (or in the case of redemption, on the redemption date), or to institute suit for the enforcement of any such payment on or after such respective dates or redemption date, shall not be impaired or affected without the consent of such holder and by accepting a Security hereunder it is expressly understood, intended and covenanted by the taker and holder of every Security of such series with every other such taker and holder and the Trustee, that no one or more holders of Securities of such series shall have any right in any manner whatsoever by virtue or by availing of any provision of this Indenture to affect, disturb or prejudice the rights of the holders of any other of such Securities, or to obtain or seek to obtain priority over or preference to any other such holder, or to enforce any right under this Indenture, except in the manner herein provided and for the equal, ratable and common benefit of all holders of Securities of such series. For the protection and enforcement of the provisions of this Section, each and every Securityholder and the Trustee shall be entitled to such relief as can be given either at law or in equity.

#### **Section 6.05 Rights and Remedies Cumulative; Delay or Omission Not Waiver.**

(a) Except as otherwise provided in Section 2.07, all powers and remedies given by this Article to the Trustee or to the Securityholders shall, to the extent permitted by law, be deemed cumulative and not exclusive of any other powers and remedies available to the Trustee or the holders of the Securities, by judicial proceedings or otherwise, to enforce the performance or observance of the covenants and agreements contained in this Indenture or otherwise established with respect to such Securities.

(b) No delay or omission of the Trustee or of any holder of any of the Securities to exercise any right or power accruing upon any Event of Default occurring and continuing as aforesaid shall impair any such right or power, or shall be construed to be a waiver of any such default or an acquiescence therein; and, subject to the provisions of Section 6.04, every power and remedy given by this Article or by law to the Trustee or the Securityholders may be exercised from time to time, and as often as shall be deemed expedient, by the Trustee or by the Securityholders.

#### **Section 6.06 Control by Securityholders.**

The holders of a majority in aggregate principal amount of the Securities of any series at the time Outstanding, determined in accordance with Section 8.04, 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 such series; provided, however, that such direction shall not be in conflict with any rule of law or with this Indenture or subject the Trustee in its sole discretion to personal liability. Subject to the provisions of Section 7.01, the Trustee shall have the right to decline to follow any such direction if the Trustee in good faith shall, by a Responsible Officer or officers of the Trustee, determine that the proceeding so directed, subject to the Trustee's duties under the Trust Indenture Act, would involve the Trustee in personal liability or might be unduly prejudicial to the Securityholders not involved in the proceeding. The holders of a majority in aggregate principal amount of the Securities of any series at the time Outstanding affected thereby, determined in

accordance with Section 8.04, may on behalf of the holders of all of the Securities of such series waive any past default in the performance of any of the covenants contained herein or established pursuant to Section 2.01 with respect to such series and its consequences, except a default in the payment of the principal of, or premium, if any, or interest on, any of the Securities of that series as and when the same shall become due by the terms of such Securities otherwise than by acceleration (unless such default has been cured and a sum sufficient to pay all matured installments of interest and principal and any premium has been deposited with the Trustee (in accordance with Section 6.01(c)). Upon any such waiver, the default covered thereby shall be deemed to be cured for all purposes of this Indenture and the Company, the Trustee and the holders of the Securities of such series shall be restored to their former positions and rights hereunder, respectively; but no such waiver shall extend to any subsequent or other default or impair any right consequent thereon.

#### **Section 6.07 Undertaking to Pay Costs.**

All parties to this Indenture agree, and each holder of any Securities by such holder's 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 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 and expenses, 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 Trustee, to any suit instituted by any Securityholder, or group of Securityholders, holding more than 10% in aggregate principal amount of the Outstanding Securities of any series, or to any suit instituted by any Securityholder for the enforcement of the payment of the principal of (or premium, if any) or interest on any Security of such series, on or after the respective due dates expressed in such Security or established pursuant to this Indenture.

### **ARTICLE 7**

#### **CONCERNING THE TRUSTEE**

#### **Section 7.01 Certain Duties and Responsibilities of Trustee.**

(a) The Trustee, prior to the occurrence of an Event of Default with respect to the Securities of a series and after the curing of all Events of Default with respect to the Securities of that series that may have occurred, shall undertake to perform with respect to the Securities of such series such duties and only such duties as are specifically set forth in this Indenture, and no implied covenants shall be read into this Indenture against the Trustee. In case an Event of Default with respect to the Securities of a series has occurred (that has not been cured or waived), the Trustee shall exercise with respect to Securities of that series such of 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 man would exercise or use under the circumstances in the conduct of his or her own affairs.

(b) No provision of this Indenture shall be construed to relieve the Trustee from liability for its own negligent action, its own negligent failure to act, or its own willful misconduct, except that:

(i) prior to the occurrence of an Event of Default with respect to the Securities of a series and after the curing or waiving of all such Events of Default with respect to that series that may have occurred:

(A) the duties and obligations of the Trustee shall with respect to the Securities of such series be determined solely by the express provisions of this Indenture, and the Trustee shall not be liable with respect to the Securities of such series except for the performance of such duties and obligations as are specifically set forth in this Indenture, and no implied covenants or obligations shall be read into this Indenture against the Trustee; and

(B) in the absence of bad faith on the part of the Trustee, the Trustee may with respect to the Securities of such series conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon any certificates or opinions furnished to the Trustee and conforming to the requirements of this Indenture; but in the case of any such certificates or opinions that by any provision hereof are specifically required to be furnished to the Trustee, the Trustee shall be under a duty to examine the same to determine whether or not they conform to the requirements of this Indenture;

(ii) the Trustee shall not be liable to any Securityholder or to any other Person for any error of judgment made in good faith by a Responsible Officer or Responsible Officers of the Trustee, unless it shall be proved that the Trustee was negligent in ascertaining the pertinent facts;

(iii) the Trustee shall not be liable with respect to any action taken or omitted to be taken by it in good faith in accordance with the direction of the holders of not less than a majority in principal amount of the Securities of any series at the time Outstanding 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 that series;

(iv) none of the provisions contained in this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur personal financial liability in the performance of any of its duties or in the exercise of any of its rights or powers if there is reasonable ground for believing that the repayment of such funds or liability is not reasonably assured to it under the terms of this Indenture or adequate indemnity against such risk is not reasonably assured to it;

(v) The Trustee shall not be required to give any bond or surety in respect of the performance of its powers or duties hereunder;

(vi) The permissive right of the Trustee to do things enumerated in this Indenture shall not be construed as a duty of the Trustee; and

(vii) No Trustee shall have any duty or responsibility for any act or omission of any other Trustee appointed with respect to a series of Securities hereunder.

#### **Section 7.02 Certain Rights of Trustee.**

Except as otherwise provided in Section 7.01:

(a) The Trustee may conclusively rely and shall be protected in acting or refraining from acting upon any resolution, certificate, statement, instrument, opinion, report, notice, request, consent, order, approval, bond, security or other paper or document believed by it to be genuine and to have been signed or presented by the proper party or parties;

(b) Any request, direction, order or demand of the Company mentioned herein shall be sufficiently evidenced by a Board Resolution or an instrument signed in the name of the Company by any authorized Officer of the Company (unless other evidence in respect thereof is specifically prescribed herein);

(c) The Trustee may consult with counsel and the opinion or written advice of such counsel or, if requested, any Opinion of Counsel shall be full and complete authorization and protection in respect of any action taken or suffered or omitted hereunder in good faith and in reliance thereon;

(d) The Trustee shall be under no obligation to exercise any of the rights or powers vested in it by this Indenture at the request, order or direction of any of the Securityholders pursuant to the provisions of this Indenture, unless such Securityholders shall have offered to the Trustee security or indemnity reasonably acceptable to the Trustee against the costs, expenses and liabilities that may be incurred therein or thereby; nothing contained herein shall, however, relieve the Trustee of the obligation, upon the occurrence of an Event of Default with respect to a series of the Securities (that has not been cured or waived), to exercise with respect to Securities of that series such of the rights and powers vested in it by this Indenture, and to use the same degree of care and skill in their exercise, as a prudent man would exercise or use under the circumstances in the conduct of his or her own affairs;

(e) The Trustee shall not be liable for any action taken or omitted to be taken by it in good faith and believed by it to be authorized or within the discretion or rights or powers conferred upon it by this Indenture;

(f) 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, consent, order, approval, bond, security, or other papers or documents or inquire as to the performance by the Company of one of its covenants under this Indenture, unless requested in writing so to do by the holders of not less than a majority in principal amount of the Outstanding Securities of the particular series affected thereby (determined as provided in Section 8.04); provided, however, that if the payment within a reasonable time to the Trustee of the costs, expenses or liabilities likely to be incurred by it in the making of such investigation is, in the opinion of the Trustee, not reasonably assured to the Trustee by the security afforded to it by the terms of this Indenture, the Trustee may require security or indemnity reasonably acceptable to the Trustee against such costs, expenses or liabilities as a condition to so proceeding. The reasonable expense of every such examination shall be paid by the Company or, if paid by the Trustee, shall be repaid by the Company upon demand;

(g) The Trustee may execute any of the trusts or powers hereunder or perform any duties hereunder either directly or by or through agents or attorneys and the Trustee shall not be responsible for any misconduct or negligence on the part of any agent or attorney appointed with due care by it hereunder;

(h) 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 efforts which are consistent with accepted practices in the banking industry to resume performance as soon as practicable under the circumstances;

(i) In no event shall the Trustee be responsible or liable for special, indirect, punitive or consequential loss or damage of any kind whatsoever (including, but not limited to, loss of profit) irrespective of whether the Trustee has been advised of the likelihood of such loss or damage and regardless of the form of action; and



(j) The Trustee agrees to accept and act upon instructions or directions pursuant to this Indenture sent by unsecured e-mail, facsimile transmission or other similar unsecured electronic methods; provided, however, that such instructions or directions shall be signed by an authorized representative of the party providing such instructions or directions. If the party elects to give the Trustee e-mail or facsimile instructions (or instructions by a similar electronic method) and the Trustee in its discretion elects to act upon such instructions, the Trustee's understanding of such instructions shall be deemed controlling. The Trustee shall not be liable for any losses, costs or expenses arising directly or indirectly from the Trustee's reliance upon and compliance with such instructions notwithstanding such instructions conflict or are inconsistent with a subsequent written instruction. The party providing electronic instructions agrees to assume all risks arising out of the use of such electronic methods to submit instructions and directions to the Trustee, including without limitation the risk of the Trustee acting on unauthorized instructions, and the risk of interception and misuse by third parties. The Trustee may request that the Company deliver an Officer's Certificate setting forth the names of individuals and/or titles of officers authorized at such time to furnish the Trustee with Officer's Certificates, Company Orders and any other matters or directions pursuant to this Indenture;

(k) 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 under the Securities, and each agent, custodian or other person employed to act under this Indenture; and

(l) The Trustee shall not be deemed to have knowledge of any Default or Event of Default (other than an Event of Default constituting the failure to pay the interest on, or the principal of, the Securities if the Trustee also serves as the paying agent for such Securities) until the Trustee shall have received written notification in the manner set forth in this Indenture or a Responsible Officer of the Trustee shall have obtained actual knowledge.

### **Section 7.03 Trustee Not Responsible for Recitals or Issuance or Securities.**

(a) The recitals contained herein and in the Securities shall be taken as the statements of the Company, and the Trustee assumes no responsibility for the correctness of the same. The Trustee shall not be responsible for any statement in any registration statement, prospectus, or any other document in connection with the sale of Securities. The Trustee shall not be responsible for any rating on the Securities or any action or omission of any rating agency.

(b) The Trustee makes no representations as to the validity or sufficiency of this Indenture or of the Securities.

(c) The Trustee shall not be accountable for the use or application by the Company of any of the Securities or of the proceeds of such Securities, or for the use or application of any moneys paid over by the Trustee in accordance with any provision of this Indenture or established pursuant to Section 2.01, or for the use or application of any moneys received by any paying agent other than the Trustee.

### **Section 7.04 May Hold Securities.**

The Trustee or any paying agent or Security Registrar, in its individual or any other capacity, may become the owner or pledgee of Securities with the same rights it would have if it were not Trustee, paying agent or Security Registrar.

### **Section 7.05 Moneys Held in Trust.**

Subject to the provisions of Section 11.05, all moneys received by the Trustee shall, until used or applied as herein provided, be held in trust for the purposes for which they were received, but need not be segregated from other funds except to the extent required by law. The Trustee shall be under no liability for interest on any moneys received by it hereunder except such as it may agree with the Company to pay thereon.

### **Section 7.06 Compensation and Reimbursement.**

(a) The Company shall pay to the Trustee for each of its capacities hereunder 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.

(b) The Company shall indemnify each of the Trustee in each of its capacities hereunder against any loss, liability or expense (including the cost of defending itself and including the reasonable compensation and expenses of the Trustee's agents and counsel) incurred by it except as set forth in Section 7.06(c) in the exercise or performance of its powers, rights or duties under this Indenture as Trustee or Agent. The Trustee shall notify the Company promptly of any claim for which it may seek indemnity. The Company shall defend the claim and the Trustee shall cooperate in the defense. The Trustee may have one 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 shall not be unreasonably withheld. This indemnification shall apply to officers, directors, employees, shareholders and agents of the Trustee.

(c) 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 negligence or bad faith.

(d) To ensure the Company's payment obligations in this Section, the Trustee shall have a lien prior to the Securities on all funds or property held or collected by the Trustee, except that held in trust to pay principal of or interest on particular Securities. When the Trustee incurs expenses or renders services in connection with an Event of Default specified in Section 6.01(4) or (5), the expenses (including the reasonable fees and expenses of its counsel) and the compensation for services in connection therewith are to constitute expenses of administration under any bankruptcy law. The provisions of this Section 7.06 shall survive the termination of this Indenture and the resignation or removal of the Trustee.

### **Section 7.07 Reliance on Officer's Certificate.**

Except as otherwise provided in Section 7.01, whenever in the administration of the provisions of this Indenture the Trustee shall deem it reasonably necessary or desirable that a matter be proved or established prior to taking or suffering or omitting to take any action hereunder, such matter (unless other evidence in respect thereof be herein specifically prescribed) may, in the absence of negligence or bad faith on the part of the Trustee, be deemed to be conclusively proved and established by an Officer's Certificate delivered to the Trustee and such certificate, in the absence of negligence or bad faith on the part of the Trustee, shall be full warrant to the Trustee for any action taken, suffered or omitted to be taken by it under the provisions of this Indenture upon the faith thereof.

### **Section 7.08 Disqualification; Conflicting Interests.**

If the Trustee has or shall acquire any “conflicting interest” within the meaning of Section 310(b) of the Trust Indenture Act, the Trustee and the Company shall in all respects comply with the provisions of Section 310(b) of the Trust Indenture Act.

### **Section 7.09 Corporate Trustee Required; Eligibility.**

There shall at all times be a Trustee with respect to the Securities issued hereunder which shall at all times be a corporation organized and doing business under the laws of the United States of America or any state or territory thereof or of the District of Columbia, or a corporation or other Person permitted to act as trustee by the Commission, authorized under such laws to exercise corporate trust powers, having a combined capital and surplus of at least fifty million U.S. dollars (\$50,000,000), and subject to supervision or examination by federal, state, territorial, or District of Columbia authority.

If such corporation or other Person publishes reports of condition at least annually, pursuant to law or to the requirements of the aforesaid supervising or examining authority, then for the purposes of this Section, the combined capital and surplus of such corporation or other Person shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published. The Company may not, nor may any Person directly or indirectly controlling, controlled by, or under common control with the Company, serve as Trustee. In case at any time the Trustee shall cease to be eligible in accordance with the provisions of this Section, the Trustee shall resign immediately in the manner and with the effect specified in Section 7.10.

### **Section 7.10 Resignation and Removal; Appointment of Successor.**

(a) The Trustee or any successor hereafter appointed may at any time resign with respect to the Securities of one or more series by giving written notice thereof to the Company and the Securityholders of such series. Upon receiving such notice of resignation, the Company shall promptly appoint a successor trustee with respect to Securities of such series by written instrument, in duplicate, executed by order of the Board of Directors, one copy of which instrument shall be delivered to the resigning Trustee and one copy to the successor trustee. If no successor trustee shall have been so appointed and have accepted appointment within 30 days after the sending of such notice of resignation, the resigning Trustee may petition any court of competent jurisdiction for the appointment of a successor trustee with respect to Securities of such series, or any Securityholder of that series who has been a bona fide holder of a Security or Securities for at least six months may on behalf of himself and all others similarly situated, petition any such court for the appointment of a successor trustee. Such court may thereupon after such notice, if any, as it may deem proper and prescribe, appoint a successor trustee.

(b) In case at any time any one of the following shall occur:

(i) the Trustee shall fail to comply with the provisions of Section 7.08 after written request therefor by the Company or by any Securityholder who has been a bona fide holder of a Security or Securities for at least six months; or

(ii) the Trustee shall cease to be eligible in accordance with the provisions of Section 7.09 and shall fail to resign after written request therefor by the Company or by any such Securityholder; or

(iii) the Trustee shall become incapable of acting, or shall be adjudged a bankrupt or insolvent, or commence a voluntary bankruptcy proceeding, or a receiver of the

Trustee or of its property shall be appointed or consented to, or any public officer shall take charge or control of the Trustee or of its property or affairs for the purpose of rehabilitation, conservation or liquidation;

then, in any such case, the Company may remove the Trustee with respect to all Securities and appoint a successor trustee by written instrument, in duplicate, executed by order of the Board of Directors, one copy of which instrument shall be delivered to the Trustee so removed and one copy to the successor trustee, or any Securityholder who has been a bona fide holder of a Security or Securities for at least six months may, on behalf of that holder and all others similarly situated, petition any court of competent jurisdiction for the removal of the Trustee and the appointment of a successor trustee. Such court may thereupon after such notice, if any, as it may deem proper and prescribe, remove the Trustee and appoint a successor trustee.

(c) The holders of a majority in aggregate principal amount of the Securities of any series at the time Outstanding may at any time remove the Trustee with respect to such series by so notifying the Trustee and the Company and may appoint a successor Trustee for such series with the consent of the Company.

(d) Any resignation or removal of the Trustee and appointment of a successor trustee with respect to the Securities of a series pursuant to any of the provisions of this Section shall become effective upon acceptance of appointment by the successor trustee as provided in Section 7.11.

(e) Any successor trustee appointed pursuant to this Section may be appointed with respect to the Securities of one or more series or all of such series, and at any time there shall be only one Trustee with respect to the Securities of any particular series.

#### **Section 7.11 Acceptance of Appointment By Successor.**

(a) In case of the appointment hereunder of a successor trustee with respect to all Securities, every such successor trustee so appointed shall execute, acknowledge and deliver to the Company and to the retiring Trustee an instrument accepting such appointment, and thereupon the resignation or removal of the retiring Trustee shall become effective and such successor trustee, without any further act, deed or conveyance, shall become vested with all the rights, powers, trusts and duties of the retiring Trustee; but, on the request of the Company or the successor trustee, such retiring Trustee shall, upon payment of any amounts due to it pursuant to the provisions of Section 7.06, execute and deliver an instrument transferring to such successor trustee all the rights, powers, and trusts of the retiring Trustee and shall duly assign, transfer and deliver to such successor trustee all property and money held by such retiring Trustee hereunder.

(b) In case of the appointment hereunder of a successor trustee with respect to the Securities of one or more (but not all) series, the Company, the retiring Trustee and each successor trustee with respect to the Securities of one or more series shall execute and deliver an indenture supplemental hereto wherein each successor trustee shall accept such appointment and which (i) shall contain such provisions as shall be necessary or desirable to transfer and confirm to, and to vest in, each successor trustee all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series to which the appointment of such successor trustee relates, (ii) shall contain such provisions as shall be deemed necessary or desirable to confirm that all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series as to which the retiring Trustee is not retiring shall continue to be vested in the retiring Trustee, and (iii) shall 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, it being understood that nothing herein or in such supplemental indenture shall constitute such Trustees co-trustees of the same trust, that each such

Trustee shall be trustee of a trust or trusts hereunder separate and apart from any trust or trusts hereunder administered by any other such Trustee and that no Trustee shall be responsible for any act or failure to act on the part of any other Trustee hereunder; and upon the execution and delivery of such supplemental indenture the resignation or removal of the retiring Trustee shall become effective to the extent provided therein, such retiring Trustee shall with respect to the Securities of that or those series to which the appointment of such successor trustee relates have no further responsibility for the exercise of rights and powers or for the performance of the duties and obligations vested in the Trustee under this Indenture, and each such successor trustee, without any further act, deed or conveyance, shall become vested with all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series to which the appointment of such successor trustee relates; but, on request of the Company or any successor trustee, such retiring Trustee shall duly assign, transfer and deliver to such successor trustee, to the extent contemplated by such supplemental indenture, the property and money held by such retiring Trustee hereunder with respect to the Securities of that or those series to which the appointment of such successor trustee relates.

(c) Upon request of any such successor trustee, the Company shall execute any and all instruments for more fully and certainly vesting in and confirming to such successor trustee all such rights, powers and trusts referred to in paragraph (a) or (b) of this Section, as the case may be.

(d) No successor trustee shall accept its appointment unless at the time of such acceptance such successor trustee shall be qualified and eligible under this Article.

(e) Upon acceptance of appointment by a successor trustee as provided in this Section, the Company shall send notice of the succession of such trustee hereunder to the Securityholders. If the Company fails to send such notice within ten days after acceptance of appointment by the successor trustee, the successor trustee shall cause such notice to be sent at the expense of the Company.

#### **Section 7.12 Merger, Conversion, Consolidation or Succession to Business.**

Any corporation into which the Trustee may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which the Trustee shall be a party, or any corporation succeeding to all or substantially all the corporate trust business of the Trustee, including the administration of the trust created by this Indenture, shall be the successor of the Trustee hereunder, provided that such corporation shall be qualified under the provisions of Section 7.08 and eligible under the provisions of Section 7.09, without the execution or filing of any paper or any further act on the part of any of the parties hereto, anything herein to the contrary notwithstanding. In case any Securities shall have been authenticated, but not delivered, by the Trustee then in office, any successor by merger, conversion or consolidation to such authenticating Trustee may adopt such authentication and deliver the Securities so authenticated with the same effect as if such successor Trustee had itself authenticated such Securities.

#### **Section 7.13 Preferential Collection of Claims Against the Company.**

The Trustee shall comply with Section 311(a) of the Trust Indenture Act, excluding any creditor relationship described in Section 311(b) of the Trust Indenture Act. A Trustee who has resigned or been removed shall be subject to Section 311(a) of the Trust Indenture Act to the extent included therein.

#### **Section 7.14 Notice of Default.**

If any Event of Default occurs and is continuing and if such Event of Default is known to a Responsible Officer of the Trustee, the Trustee shall send to each Securityholder in the manner and to the extent provided in Section 313(c) of the Trust Indenture Act notice of the Event of Default within the earlier of 90 days after it occurs and 30 days after it is known to a Responsible Officer of the Trustee or written notice of it is received by the Trustee, unless such Event of Default has been cured; *provided, however*, that, except in the case of a default in the payment of the principal of (or premium, if any) or interest on any Security, the Trustee shall be protected in withholding such notice if and so long as the Responsible Officers of the Trustee in good faith determine that the withholding of such notice is in the interest of the Securityholders.

## **ARTICLE 8**

### **CONCERNING THE SECURITYHOLDERS**

#### **Section 8.01 Evidence of Action by Securityholders.**

Whenever in this Indenture it is provided that the holders of a majority or specified percentage in aggregate principal amount of the Securities of a particular series may take any action (including the making of any demand or request, the giving of any notice, consent or waiver or the taking of any other action), the fact that at the time of taking any such action the holders of such majority or specified percentage of that series have joined therein may be evidenced by any instrument or any number of instruments of similar tenor executed by such holders of Securities of that series in person or by agent or proxy appointed in writing.

If the Company shall solicit from the Securityholders of any series any request, demand, authorization, direction, notice, consent, waiver or other action, the Company may, at its option, as evidenced by an Officer's Certificate, fix in advance a record date for such series for the determination of Securityholders entitled to give such request, demand, authorization, direction, notice, consent, waiver or other action, 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 action may be given before or after the record date, but only the Securityholders of record at the close of business on the record date shall be deemed to be Securityholders for the purposes of determining whether Securityholders of the requisite proportion of Outstanding Securities of that series have authorized or agreed or consented to such request, demand, authorization, direction, notice, consent, waiver or other action, and for that purpose the Outstanding Securities of that series shall be computed as of the record date; provided, however, that no such authorization, agreement or consent by such Securityholders on the 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.

#### **Section 8.02 Proof of Execution by Securityholders.**

Subject to the provisions of Section 7.01, proof of the execution of any instrument by a Securityholder (such proof will not require notarization) or his or her agent or proxy and proof of the holding by any Person of any of the Securities shall be sufficient if made in the following manner:

(a) The fact and date of the execution by any such Person of any instrument may be proved in any reasonable manner acceptable to the Trustee.

(b) The ownership of Securities shall be proved by the Security Register of such Securities or by a certificate of the Security Registrar thereof.

The Trustee may require such additional proof of any matter referred to in this Section as it shall deem necessary.

### **Section 8.03 Who May be Deemed Owners.**

Prior to the due presentment for registration of transfer of any Security, the Company, the Trustee, any paying agent and any Security Registrar may deem and treat the Person in whose name such Security shall be registered upon the books of the Security Registrar as the absolute owner of such Security (whether or not such Security shall be overdue and notwithstanding any notice of ownership or writing thereon made by anyone other than the Security Registrar) for the purpose of receiving payment of or on account of the principal of, premium, if any, and (subject to Section 2.03) interest on such Security and for all other purposes; and neither the Company nor the Trustee nor any paying agent nor any Security Registrar shall be affected by any notice to the contrary.

### **Section 8.04 Certain Securities Owned by Company Disregarded**

In determining whether the holders of the requisite aggregate principal amount of Securities of a particular series have concurred in any direction, consent or waiver under this Indenture, the Securities of that series that are owned by the Company or any other obligor on the Securities of that series or by any Person directly or indirectly controlling or controlled by or under common control with the Company or any other obligor on the Securities of that series shall be disregarded and deemed not to be Outstanding for the purpose of any such determination, except that for the purpose of determining whether the Trustee shall be protected in relying on any such direction, consent or waiver, only Securities of such series that the Trustee actually knows are so owned shall be so disregarded. The Securities so owned that have been pledged in good faith may be regarded as Outstanding for the purposes of this Section, if the pledgee shall establish to the satisfaction of the Trustee the pledgee's right so to act with respect to such Securities and that the pledgee is not a Person directly or indirectly controlling or controlled by or under direct or indirect common control with the Company or any such other obligor. In case of a dispute as to such right, any decision by the Trustee taken upon the advice of counsel shall be full protection to the Trustee.

### **Section 8.05 Actions Binding on Future Securityholders.**

At any time prior to (but not after) the evidencing to the Trustee, as provided in Section 8.01, of the taking of any action by the holders of the majority or percentage in aggregate principal amount of the Securities of a particular series specified in this Indenture in connection with such action, any holder of a Security of that series that is shown by the evidence to be included in the Securities the holders of which have consented to such action may, by filing written notice with the Trustee, and upon proof of holding as provided in Section 8.02, revoke such action so far as concerns such Security. Except as aforesaid any such action taken by the holder of any Security shall be conclusive and binding upon such holder and upon all future holders and owners of such Security, and of any Security issued in exchange therefor, on registration of transfer thereof or in place thereof, irrespective of whether or not any notation in regard thereto is made upon such Security. Any action taken by the holders of the majority or percentage in aggregate principal amount of the Securities of a particular series specified in this Indenture in connection with such action shall be conclusively binding upon the Company, the Trustee and the holders of all the Securities of that series.

## ARTICLE 9

### SUPPLEMENTAL INDENTURES

#### Section 9.01 Supplemental Indentures Without the Consent of Securityholders.

In addition to any supplemental indenture otherwise authorized by this Indenture, the Company and the Trustee may from time to time and at any time enter into an indenture or indentures supplemental hereto (which shall conform to the provisions of the Trust Indenture Act as then in effect), without the consent of the Securityholders, for one or more of the following purposes:

- (a) to cure any ambiguity, defect, or inconsistency herein or in the Securities of any series;
- (b) to comply with Article Ten;
- (c) to provide for uncertificated Securities in addition to or in place of certificated Securities;

(d) to add to the covenants, restrictions, conditions or provisions relating to the Company for the benefit of the holders of all or any series of Securities (and if such covenants, restrictions, conditions or provisions are to be for the benefit of less than all series of Securities, stating that such covenants, restrictions, conditions or provisions are expressly being included solely for the benefit of such series), to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an Event of Default, or to surrender any right or power herein conferred upon the Company;

(e) to add to, delete from, or revise the conditions, limitations, and restrictions on the authorized amount, terms, or purposes of issue, authentication, and delivery of Securities, as herein set forth;

- (f) to make any change that does not adversely affect the rights of any Securityholder in any material respect;

(g) to provide for the issuance of and establish the form and terms and conditions of the Securities of any series as provided in Section 2.01, to establish the form of any certifications required to be furnished pursuant to the terms of this Indenture or any series of Securities, or to add to the rights of the holders of any series of Securities;

- (h) to evidence and provide for the acceptance of appointment hereunder by a successor trustee; or

(i) to comply with any requirements of the Commission or any successor in connection with the qualification of this Indenture under the Trust Indenture Act.

The Trustee is hereby authorized to join with the Company in the execution of any such supplemental indenture, and to make any further appropriate agreements and stipulations that may be therein contained, but the Trustee shall not be obligated to enter into any such supplemental indenture that affects the Trustee's own rights, duties or immunities under this Indenture or otherwise.



Any supplemental indenture authorized by the provisions of this Section may be executed by the Company and the Trustee without the consent of the holders of any of the Securities at the time Outstanding, notwithstanding any of the provisions of Section 9.02.

### **Section 9.02 Supplemental Indentures With Consent of Securityholders.**

With the consent (evidenced as provided in Section 8.01) of the holders of not less than a majority in aggregate principal amount of the Securities of each series affected by such supplemental indenture or indentures at the time Outstanding, the Company, when authorized by a Board Resolution, and the Trustee may from time to time and at any time enter into an indenture or indentures supplemental hereto (which shall conform to the provisions of the Trust Indenture Act as then in effect) 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 not covered by Section 9.01 the rights of the holders of the Securities of such series under this Indenture; provided, however, that no such supplemental indenture shall, without the consent of the holders of each Security then Outstanding and affected thereby, (a) extend the fixed maturity of any Securities of any series, or reduce the principal amount thereof, or reduce the rate or extend the time of payment of interest thereon, or reduce any premium payable upon the redemption thereof or (b) reduce the aforesaid percentage of Securities, the holders of which are required to consent to any such supplemental indenture.

It shall not be necessary for the consent of the Securityholders of any series affected thereby under this Section to approve the particular form of any proposed supplemental indenture, but it shall be sufficient if such consent shall approve the substance thereof.

### **Section 9.03 Effect of Supplemental Indentures.**

Upon the execution of any supplemental indenture pursuant to the provisions of this Article or of Section 10.01, this Indenture shall, with respect to such series, be and be deemed to be modified and amended in accordance therewith and the respective rights, limitations of rights, obligations, duties and immunities under this Indenture of the Trustee, the Company and the holders of Securities of the series affected thereby shall thereafter be determined, exercised and enforced hereunder subject in all respects to such modifications and amendments, and all the terms and conditions of any such supplemental indenture shall be and be deemed to be part of the terms and conditions of this Indenture for any and all purposes.

### **Section 9.04 Securities Affected by Supplemental Indentures.**

Securities of any series affected by a supplemental indenture, authenticated and delivered after the execution of such supplemental indenture pursuant to the provisions of this Article or of Section 10.01, may bear a notation in form approved by the Company, provided such form meets the requirements of any securities exchange upon which such series may be listed, as to any matter provided for in such supplemental indenture. If the Company shall so determine, new Securities of that series so modified as to conform, in the opinion of the Board of Directors, to any modification of this Indenture contained in any such supplemental indenture may be prepared by the Company, authenticated by the Trustee and delivered in exchange for the Securities of that series then Outstanding.

### **Section 9.05 Execution of Supplemental Indentures.**

Upon the request of the Company, accompanied by its Board Resolutions authorizing the execution of any such supplemental indenture, and upon the filing with the Trustee of evidence of the consent of Securityholders required to consent thereto as aforesaid, the Trustee shall join with the Company in the execution of such supplemental indenture unless such supplemental

indenture affects the Trustee's own rights, duties or immunities under this Indenture or otherwise, in which case the Trustee may in its discretion but shall not be obligated to enter into such supplemental indenture. The Trustee, subject to the provisions of Section 7.01, shall receive an Officer's Certificate or an Opinion of Counsel as conclusive evidence that any supplemental indenture executed pursuant to this Article is authorized or permitted by the terms of this Article and that all conditions precedent to the execution of the supplemental indenture have been complied with; provided, however, that such Officer's Certificate or Opinion of Counsel need not be provided in connection with the execution of a supplemental indenture that establishes the terms of a series of Securities pursuant to Section 2.01 hereof.

Promptly after the execution by the Company and the Trustee of any supplemental indenture pursuant to the provisions of this Section, the Company shall (or shall direct the Trustee to) send a notice, setting forth in general terms the substance of such supplemental indenture, to the Securityholders of all series affected thereby as their names and addresses appear upon the Security Register. Any failure of the Company to send, or cause the sending of, such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such supplemental indenture.

## **ARTICLE 10**

### **SUCCESSOR ENTITY**

#### **Section 10.01 Company May Consolidate, Etc.**

Nothing contained in this Indenture shall prevent any consolidation or merger of the Company with or into any other Person (whether or not affiliated with the Company) or successive consolidations or mergers in which the Company or its successor or successors shall be a party or parties, or shall prevent any sale, conveyance, transfer or other disposition of the property of the Company or its successor or successors as an entirety, or substantially as an entirety, to any other Person (whether or not affiliated with the Company or its successor or successors); provided, however, the Company hereby covenants and agrees that, upon any such consolidation or merger (in each case, if the Company is not the survivor of such transaction) or any such sale, conveyance, transfer or other disposition (other than a sale, conveyance, transfer or other disposition to a Subsidiary of the Company), the due and punctual payment of the principal of (premium, if any) and interest on all of the Securities of all series in accordance with the terms of each series, according to their tenor, and the due and punctual performance and observance of all the covenants and conditions of this Indenture with respect to each series or established with respect to such series pursuant to Section 2.01 to be kept or performed by the Company shall be expressly assumed, by supplemental indenture (which shall conform to the provisions of the Trust Indenture Act, as then in effect) reasonably satisfactory in form to the Trustee executed and delivered to the Trustee by the entity formed by such consolidation, or into which the Company shall have been merged, or by the entity which shall have acquired such property.

#### **Section 10.02 Successor Entity Substituted.**

(a) In case of any such consolidation, merger, sale, conveyance, transfer or other disposition and upon the assumption by the successor entity by supplemental indenture, executed and delivered to the Trustee and satisfactory in form to the Trustee, of the obligations set forth under Section 10.01 on all of the Securities of all series Outstanding, such successor entity shall succeed to and be substituted for the Company with the same effect as if it had been named as the Company herein, and thereupon the predecessor corporation shall be relieved of all obligations and covenants under this Indenture and the Securities.

(b) In case of any such consolidation, merger, sale, conveyance, transfer or other disposition, such changes in phraseology and form (but not in substance) may be made in the Securities thereafter to be issued as may be appropriate.

(c) Nothing contained in this Article shall require any action by the Company in the case of a consolidation or merger of any Person into the Company where the Company is the survivor of such transaction, or the acquisition by the Company, by purchase or otherwise, of all or any part of the property of any other Person (whether or not affiliated with the Company).

## ARTICLE 11

### SATISFACTION AND DISCHARGE

#### Section 11.01 Satisfaction and Discharge of Indenture.

If at any time: (a) the Company shall have delivered to the Trustee for cancellation all Securities of a series theretofore authenticated and not delivered to the Trustee for cancellation (other than any Securities that shall have been destroyed, lost or stolen and that shall have been replaced or paid as provided in Section 2.07 and Securities for whose payment money or Governmental Obligations have theretofore been deposited in trust or segregated and held in trust by the Company and thereupon repaid to the Company or discharged from such trust, as provided in Section 11.05); or (b) all such Securities of a particular series not theretofore delivered to the Trustee for cancellation shall have become due and payable, or are by their terms to become due and payable within one year or are to be called for redemption within one year under arrangements satisfactory to the Trustee for the giving of notice of redemption, and the Company shall deposit or cause to be deposited with the Trustee as trust funds the entire amount in moneys or Governmental Obligations or a combination thereof, sufficient in the opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee, to pay at maturity or upon redemption all Securities of that series not theretofore delivered to the Trustee for cancellation, including principal (and premium, if any) and interest due or to become due to such date of maturity or date fixed for redemption, as the case may be, and if the Company shall also pay or cause to be paid all other sums payable hereunder with respect to such series by the Company then this Indenture shall thereupon cease to be of further effect with respect to such series except for the provisions of Sections 2.03, 2.05, 2.07, 4.01, 4.02, 4.03, 7.10, 11.05 and 13.04, that shall survive until the date of maturity or redemption date, as the case may be, and Sections 7.06 and 11.05, that shall survive to such date and thereafter, and the Trustee, on demand of the Company and at the cost and expense of the Company shall execute proper instruments acknowledging satisfaction of and discharging this Indenture with respect to such series.

#### Section 11.02 Discharge of Obligations.

If at any time all such Securities of a particular series not heretofore delivered to the Trustee for cancellation or that have not become due and payable as described in Section 11.01 shall have been paid by the Company by depositing irrevocably with the Trustee as trust funds moneys or an amount of Governmental Obligations sufficient to pay at maturity or upon redemption all such Securities of that series not theretofore delivered to the Trustee for cancellation, including principal (and premium, if any) and interest due or to become due to such date of maturity or date fixed for redemption, as the case may be, and if the Company shall also pay or cause to be paid all other sums payable hereunder by the Company with respect to such series, then after the date such moneys or Governmental Obligations, as the case may be, are deposited with the Trustee the obligations of the Company under this Indenture with respect to such series shall cease to be of further effect except for the provisions of Sections 2.03, 2.05,

2.07, 4.01, 4.02, 4.03, 7.06, 7.10, 11.05 and 13.04 hereof that shall survive until such Securities shall mature and be paid.

Thereafter, Sections 7.06 and 11.05 shall survive.

**Section 11.03 Deposited Moneys to be Held in Trust.**

All moneys or Governmental Obligations deposited with the Trustee pursuant to Sections 11.01 or 11.02 shall be held in trust and shall be available for payment as due, either directly or through any paying agent (including the Company acting as its own paying agent), to the holders of the particular series of Securities for the payment or redemption of which such moneys or Governmental Obligations have been deposited with the Trustee.

**Section 11.04 Payment of Moneys Held by Paying Agents.**

In connection with the satisfaction and discharge of this Indenture all moneys or Governmental Obligations then held by any paying agent under the provisions of this Indenture shall, upon demand of the Company, be paid to the Trustee and thereupon such paying agent shall be released from all further liability with respect to such moneys or Governmental Obligations.

**Section 11.05 Repayment to Company.**

Any moneys or Governmental Obligations deposited with any paying agent or the Trustee, or then held by the Company, in trust for payment of principal of or premium, if any, or interest on the Securities of a particular series that are not applied but remain unclaimed by the holders of such Securities for at least two years after the date upon which the principal of (and premium, if any) or interest on such Securities shall have respectively become due and payable, or such other shorter period set forth in applicable escheat or abandoned or unclaimed property law, shall be repaid to the Company on May 31 of each year or upon the Company's request or (if then held by the Company) shall be discharged from such trust; and thereupon the paying agent and the Trustee shall be released from all further liability with respect to such moneys or Governmental Obligations, and the holder of any of the Securities entitled to receive such payment shall thereafter, as a general creditor, look only to the Company for the payment thereof.

**ARTICLE 12**

**IMMUNITY OF INCORPORATORS, STOCKHOLDERS, OFFICERS AND DIRECTORS**

**Section 12.01 No Recourse.**

No recourse under or upon any obligation, covenant or agreement of this Indenture, or of any Security, or for any claim based thereon or otherwise in respect thereof, shall be had against any incorporator, stockholder, officer or director, past, present or future as such, of the Company or of any predecessor or successor corporation, either directly or through the Company or any such predecessor or successor corporation, whether by virtue of any constitution, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise; it being expressly understood that this Indenture and the obligations issued hereunder are solely corporate obligations, and that no such personal liability whatever shall attach to, or is or shall be incurred by, the incorporators, stockholders, officers or directors as such, of the Company or of any predecessor or successor corporation, or any of them, because of the creation of the indebtedness hereby authorized, or under or by reason of the obligations, covenants or agreements contained

in this Indenture or in any of the Securities or implied therefrom; and that any and all such personal liability of every name and nature, either at common law or in equity or by constitution or statute, of, and any and all such rights and claims against, every such incorporator, stockholder, officer or director as such, because of the creation of the indebtedness hereby authorized, or under or by reason of the obligations, covenants or agreements contained in this Indenture or in any of the Securities or implied therefrom, are hereby expressly waived and released as a condition of, and as a consideration for, the execution of this Indenture and the issuance of such Securities.

## **ARTICLE 13**

### **MISCELLANEOUS PROVISIONS**

#### **Section 13.01 Effect on Successors and Assigns.**

All the covenants, stipulations, promises and agreements in this Indenture made by or on behalf of the Company shall bind its successors and assigns, whether so expressed or not.

#### **Section 13.02 Actions by Successor.**

Any act or proceeding by any provision of this Indenture authorized or required to be done or performed by any board, committee or officer of the Company shall and may be done and performed with like force and effect by the corresponding board, committee or officer of any corporation that shall at the time be the lawful successor of the Company.

#### **Section 13.03 Surrender of Company Powers.**

The Company by instrument in writing executed by authority of its Board of Directors and delivered to the Trustee may surrender any of the powers reserved to the Company, and thereupon such power so surrendered shall terminate both as to the Company and as to any successor corporation.

#### **Section 13.04 Notices.**

Except as otherwise expressly provided herein, any notice, request or demand that by any provision of this Indenture is required or permitted to be given, made or served by the Trustee, the Security Registrar, any paying or other agent under this Indenture or by the holders of Securities or by any other Person pursuant to this Indenture to or on the Company may be given or served by being deposited in first class mail, postage prepaid, addressed (until another address is filed in writing by the Company with the Trustee), as follows: \_\_\_\_\_. Any notice, election, request or demand by the Company or any Securityholder or by any other Person pursuant to this Indenture to or upon the Trustee shall be deemed to have been sufficiently given or made, for all purposes, if given or made in writing at the Corporate Trust Office of the Trustee.

#### **Section 13.05 Governing Law; Jury Trial Waiver.**

This Indenture and each Security shall be governed by, and construed in accordance with, the internal laws of the State of New York, except to the extent that the Trust Indenture Act is applicable.

EACH PARTY HERETO, AND EACH HOLDER OF A SECURITY BY ACCEPTANCE THEREOF, HEREBY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT

OF ANY LITIGATION DIRECTLY OR INDIRECTLY ARISING OUT OF, UNDER OR IN CONNECTION WITH THIS INDENTURE.

**Section 13.06 Treatment of Securities as Debt.**

It is intended that the Securities will be treated as indebtedness and not as equity for federal income tax purposes. The provisions of this Indenture shall be interpreted to further this intention.

**Section 13.07 Certificates and Opinions as to Conditions Precedent.**

(a) Upon any application or demand by the Company to the Trustee to take any action under any of the provisions of this Indenture, the Company shall furnish to the Trustee an Officer's Certificate stating that all conditions precedent provided for in this Indenture (other than the certificate to be delivered pursuant to Section 13.12) relating to the proposed action have been complied with and, if requested, an Opinion of Counsel stating that in the opinion of such counsel all such conditions precedent have been complied with, except that in the case of any such application or demand as to which the furnishing of such documents is specifically required by any provision of this Indenture relating to such particular application or demand, no additional certificate or opinion need be furnished.

(b) Each certificate or opinion provided for in this Indenture and delivered to the Trustee with respect to compliance with a condition or covenant in this Indenture (other than the certificate to be delivered pursuant to Section 13.12 of this Indenture or Section 314(a)(1) of the Trust Indenture Act) shall include (i) a statement that the Person making such certificate or opinion has read such covenant or condition; (ii) 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; (iii) a statement that, in the opinion of such Person, he has made such examination or investigation as is reasonably necessary to enable him to express an informed opinion as to whether or not such covenant or condition has been complied with; and (iv) a statement as to whether or not, in the opinion of such Person, such condition or covenant has been complied with.

**Section 13.08 Payments on Business Days.**

Except as provided pursuant to Section 2.01 pursuant to a Board Resolution, and set forth in an Officer's Certificate, or established in one or more indentures supplemental to this Indenture, in any case where the date of maturity of interest or principal of any Security or the date of redemption of any Security shall not be a Business Day, then payment of interest or principal (and premium, if any) may be made on the next succeeding Business Day with the same force and effect as if made on the nominal date of maturity or redemption, and no interest shall accrue for the period after such nominal date.

**Section 13.09 Conflict with Trust Indenture Act.**

If and to the extent that any provision of this Indenture limits, qualifies or conflicts with the duties imposed by Section 318(c) of the Trust Indenture Act, such imposed duties shall control.

**Section 13.10 Counterparts.**

This Indenture may be executed in any number of counterparts, each of which shall be an original, but such counterparts shall together constitute but one and the same instrument. 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 13.11 Separability.**

In case any one or more of the provisions contained in this Indenture or in the Securities of any series shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions of this Indenture or of such Securities, but this Indenture and such Securities shall be construed as if such invalid or illegal or unenforceable provision had never been contained herein or therein.

### **Section 13.12 Compliance Certificates.**

The Company shall deliver to the Trustee, within 120 days after the end of each fiscal year during which any Securities of any series were outstanding, an officer's certificate stating whether or not the signers know of any Event of Default that occurred during such fiscal year. Such certificate shall contain a certification from the principal executive officer, principal financial officer or principal accounting officer of the Company that a review has been conducted of the activities of the Company and the Company's performance under this Indenture and that the Company has complied with all conditions and covenants under this Indenture. For purposes of this Section 13.12, such compliance shall be determined without regard to any period of grace or requirement of notice provided under this Indenture. If the officer of the Company signing such certificate has knowledge of such an Event of Default, the certificate shall describe any such Event of Default and its status.

### **Section 13.13 U.S.A Patriot Act.**

The parties hereto acknowledge that in accordance with Section 326 of the U.S.A. Patriot Act, the Trustee, like all financial institutions and in order to help fight the funding of terrorism and money laundering, 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.

### **Section 13.14 Force Majeure.**

In no event shall the Trustee, the Security Registrar, any paying agent or any other agent under this Indenture 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 or utilities, communications or computer (software and hardware) services; it being understood that the Trustee, the Security Registrar, any paying agent or any other agent under this Indenture shall use reasonable efforts which are consistent with accepted practices in the banking industry to resume performance as soon as practicable under the circumstances.

### **Section 13.15 Headings.**

The headings of the articles and sections of this Indenture have been inserted for convenience of reference only, are not intended to be considered a part hereof, and will not modify or restrict any of the terms or provisions hereof.

**In Witness Whereof**, the parties hereto have caused this Indenture to be duly executed all as of the day and year first above written.

**TOURMALINE BIO, INC.**

By: \_\_

Name: \_\_

Title: \_\_

**[Trustee]**, as Trustee

By: \_\_

Name: \_\_

Title: \_\_



**CROSS-REFERENCE TABLE (1)**

<b>Section of Trust Indenture Act of 1939, as Amended</b>	<b>Section of Indenture</b>
310(a)	7.09
310(b)	7.08
	7.10
310(c)	Inapplicable
311(a)	7.13
311(b)	7.13
311(c)	Inapplicable
312(a)	5.01
	5.02(a)
312(b)	5.02(c)
312(c)	5.02(c)
313(a)	5.04(a)
313(b)	5.04(b)
313(c)	5.04(a)
	5.04(b)
313(d)	5.04(c)
314(a)	5.03
	13.12
314(b)	Inapplicable
314(c)	13.07(a)
314(d)	Inapplicable
314(e)	13.07(b)
314(f)	Inapplicable
315(a)	7.01(a)
	7.01(b)
315(b)	7.14
315(c)	7.01
315(d)	7.01(b)
315(e)	6.07
316(a)	6.06
	8.04
316(b)	6.04
316(c)	8.01
317(a)	6.02
317(b)	4.03
318(a)	13.09

(1) This Cross-Reference Table does not constitute part of the Indenture and shall not have any bearing on the interpretation of any of its terms or provisions.

**Tourmaline Bio, Inc.**

**and**

\_\_\_\_\_, **As Warrant Agent**

**Form of Common Stock  
Warrant Agreement**

**Dated As Of \_\_\_\_\_**

## Tourmaline Bio, Inc. Form of Common Stock Warrant Agreement

This Common Stock Warrant Agreement (this “*Agreement*”), dated as of [●], between **Tourmaline Bio, Inc.**, a Delaware corporation (the “*Company*”), and [●], a [corporation] [national banking association] organized and existing under the laws of [●] and having a corporate trust office in [●], as warrant agent (the “*Warrant Agent*”).

Whereas, the Company proposes to sell [If Warrants are sold with other securities —[title of such other securities being offered] (the “*Other Securities*”) with] warrant certificates evidencing one or more warrants (the “*Warrants*” or, individually, a “*Warrant*”) representing the right to purchase Common Stock of the Company, par value \$0.0001 per share (the “*Warrant Securities*”), such warrant certificates and other warrant certificates issued pursuant to this Agreement being herein called the “*Warrant Certificates*”; and

Whereas, the Company desires the Warrant Agent to act on behalf of the Company, and the Warrant Agent is willing so to act, in connection with the issuance, registration, transfer, exchange, exercise and replacement of the Warrant Certificates, and in this Agreement wishes to set forth, among other things, the form and provisions of the Warrant Certificates and the terms and conditions on which they may be issued, registered, transferred, exchanged, exercised and replaced.

Now Therefore, in consideration of the premises and of the mutual agreements herein contained, the parties hereto agree as follows:

### Article 1

#### ISSUANCE OF WARRANTS AND EXECUTION AND DELIVERY OF WARRANT CERTIFICATES

**1.1 Issuance of Warrants.** [*If Warrants alone* —Upon issuance, each Warrant Certificate shall evidence one or more Warrants.] [*If Other Securities and Warrants* —Warrant Certificates will be issued in connection with the issuance of the Other Securities but shall be separately transferable and each Warrant Certificate shall evidence one or more Warrants.] Each Warrant evidenced thereby shall represent the right, subject to the provisions contained herein and therein, to purchase one Warrant Security. [*If Other Securities and Warrants* — Warrant Certificates will be issued with the Other Securities and each Warrant Certificate will evidence [●] Warrants for each [\$[●] principal amount] [[●] shares] of Other Securities issued.]

**1.2 Execution and Delivery of Warrant Certificates.** Each Warrant Certificate, whenever issued, shall be in registered form substantially in the form set forth in **Exhibit A** hereto, shall be dated the date of its countersignature by the Warrant Agent and may have such letters, numbers, or other marks of identification or designation and such legends or endorsements printed, lithographed or engraved thereon as the officers of the Company executing the same may approve (execution thereof to be conclusive evidence of such approval) and as are not inconsistent with the provisions of this Agreement, or as may be required to comply with any law or with any rule or regulation made pursuant thereto or with any rule or regulation of any securities exchange on which the Warrants may be listed, or to conform to usage. The Warrant Certificates shall be signed on behalf of the Company by any of its present or future chief executive officers, presidents, senior vice presidents, vice presidents, chief financial officers, chief legal officers, treasurers, assistant treasurers, controllers, assistant controllers, secretaries or assistant secretaries under its corporate seal reproduced thereon. Such signatures may be manual or facsimile

signatures of such authorized officers and may be imprinted or otherwise reproduced on the Warrant Certificates. The seal of the Company may be in the form of a facsimile thereof and may be impressed, affixed, imprinted or otherwise reproduced on the Warrant Certificates.

No Warrant Certificate shall be valid for any purpose, and no Warrant evidenced thereby shall be exercisable, until such Warrant Certificate has been countersigned by the manual signature of the Warrant Agent. Such signature by the Warrant Agent upon any Warrant Certificate executed by the Company shall be conclusive evidence that the Warrant Certificate so countersigned has been duly issued hereunder.

In case any officer of the Company who shall have signed any of the Warrant Certificates either manually or by facsimile signature shall cease to be such officer before the Warrant Certificates so signed shall have been countersigned and delivered by the Warrant Agent, such Warrant Certificates may be countersigned and delivered notwithstanding that the person who signed such Warrant Certificates ceased to be such officer of the Company; and any Warrant Certificate may be signed on behalf of the Company by such persons as, at the actual date of the execution of such Warrant Certificate, shall be the proper officers of the Company, although at the date of the execution of this Agreement any such person was not such officer.

The term “*holder*” or “*holder of a Warrant Certificate*” as used herein shall mean any person in whose name at the time any Warrant Certificate shall be registered upon the books to be maintained by the Warrant Agent for that purpose.

**1.3 Issuance of Warrant Certificates.** Warrant Certificates evidencing the right to purchase Warrant Securities may be executed by the Company and delivered to the Warrant Agent upon the execution of this Agreement or from time to time thereafter. The Warrant Agent shall, upon receipt of Warrant Certificates duly executed on behalf of the Company, countersign such Warrant Certificates and shall deliver such Warrant Certificates to or upon the order of the Company.

## Article 2

### WARRANT PRICE, DURATION AND EXERCISE OF WARRANTS

**2.1 Warrant Price.** During the period specified in Section 2.2, each Warrant shall, subject to the terms of this Agreement and the applicable Warrant Certificate, entitle the holder thereof to purchase the number of Warrant Securities specified in the applicable Warrant Certificate at an exercise price of \$[●] per Warrant Security, subject to adjustment upon the occurrence of certain events, as hereinafter provided. Such purchase price per Warrant Security is referred to in this Agreement as the “*Warrant Price*.”

**2.2 Duration of Warrants.** Each Warrant may be exercised in whole or in part at any time, as specified herein, on or after [the date thereof] [●] and at or before [●] p.m., [City] time, on [●] or such later date as the Company may designate by notice to the Warrant Agent and the holders of Warrant Certificates mailed to their addresses as set forth in the record books of the Warrant Agent (the “*Expiration Date*”). Each Warrant not exercised at or before [●] p.m., [City] time, on the Expiration Date shall become void, and all rights of the holder of the Warrant Certificate evidencing such Warrant under this Agreement shall cease.

**2.3 Exercise of Warrants.**

**(a)** During the period specified in Section 2.2, the Warrants may be exercised to purchase a whole number of Warrant Securities in registered form by providing certain information as set forth on the reverse side of the Warrant Certificate and by paying in full, in lawful money of the United States of America, [in cash or by certified check or official bank check in New York Clearing House funds] [by bank wire transfer in immediately available funds] the Warrant Price for each Warrant Security with respect to which a Warrant is being exercised to the Warrant Agent at its corporate trust office, provided that such exercise is subject to receipt within five business days of such payment by the Warrant Agent of the Warrant Certificate with the form of election to purchase Warrant Securities set forth on the reverse side of the Warrant Certificate properly completed and duly executed. The date on which payment in full of the Warrant Price is received by the Warrant Agent shall, subject to receipt of the Warrant Certificate as aforesaid, be deemed to be the date on which the Warrant is exercised; provided, however, that if, at the date of receipt of such Warrant Certificates and payment in full of the Warrant Price, the transfer books for the Warrant Securities purchasable upon the exercise of such Warrants shall be closed, no such receipt of such Warrant Certificates and no such payment of such Warrant Price shall be effective to constitute the person so designated to be named as the holder of record of such Warrant Securities on such date, but shall be effective to constitute such person as the holder of record of such Warrant Securities for all purposes at the opening of business on the next succeeding day on which the transfer books for the Warrant Securities purchasable upon the exercise of such Warrants shall be opened, and the certificates for the Warrant Securities in respect of which such Warrants are then exercised shall be issuable as of the date on such next succeeding day on which the transfer books shall next be opened, and until such date the Company shall be under no duty to deliver any certificate for such Warrant Securities. The Warrant Agent shall deposit all funds received by it in payment of the Warrant Price in an account of the Company maintained with it and shall advise the Company by telephone at the end of each day on which a payment for the exercise of Warrants is received of the amount so deposited to its account. The Warrant Agent shall promptly confirm such telephone advice to the Company in writing.

**(b)** The Warrant Agent shall, from time to time, as promptly as practicable, advise the Company of (i) the number of Warrant Securities with respect to which Warrants were exercised, (ii) the instructions of each holder of the Warrant Certificates evidencing such Warrants with respect to delivery of the Warrant Securities to which such holder is entitled upon such exercise, (iii) delivery of Warrant Certificates evidencing the balance, if any, of the Warrants for the remaining Warrant Securities after such exercise, and (iv) such other information as the Company shall reasonably require.

**(c)** As soon as practicable after the exercise of any Warrant, the Company shall issue to or upon the order of the holder of the Warrant Certificate evidencing such Warrant the Warrant Securities to which such holder is entitled, in fully registered form, registered in such name or names as may be directed by such holder. If fewer than all of the Warrants evidenced by such Warrant Certificate are exercised, the Company shall execute, and an authorized officer of the Warrant Agent shall manually countersign and deliver, a new Warrant Certificate evidencing Warrants for the number of Warrant Securities remaining unexercised.

**(d)** The Company shall not be required to pay any stamp or other tax or other governmental charge required to be paid in connection with any transfer involved in the issue of the Warrant Securities, and in the event that any such transfer is involved, the Company shall not be required to issue or deliver any Warrant Security until such tax or other charge shall have been paid or it has been established to the Company's satisfaction that no such tax or other charge is due.

(e) Prior to the issuance of any Warrants there shall have been reserved, and the Company shall at all times through the Expiration Date keep reserved, out of its authorized but unissued Warrant Securities, a number of shares sufficient to provide for the exercise of the Warrants.

### Article 3

#### OTHER PROVISIONS RELATING TO RIGHTS OF HOLDERS OF WARRANT CERTIFICATES

**3.1 No Rights as Warrant Securityholder Conferred by Warrants or Warrant Certificates.** No Warrant Certificate or Warrant evidenced thereby shall entitle the holder thereof to any of the rights of a holder of Warrant Securities, including, without limitation, the right to receive the payment of dividends or distributions, if any, on the Warrant Securities or to exercise any voting rights, except to the extent expressly set forth in this Agreement or the applicable Warrant Certificate.

**3.2 Lost, Stolen, Mutilated or Destroyed Warrant Certificates.** Upon receipt by the Warrant Agent of evidence reasonably satisfactory to it and the Company of the ownership of and the loss, theft, destruction or mutilation of any Warrant Certificate and/or indemnity reasonably satisfactory to the Warrant Agent and the Company and, in the case of mutilation, upon surrender of the mutilated Warrant Certificate to the Warrant Agent for cancellation, then, in the absence of notice to the Company or the Warrant Agent that such Warrant Certificate has been acquired by a bona fide purchaser, the Company shall execute, and an authorized officer of the Warrant Agent shall manually countersign and deliver, in exchange for or in lieu of the lost, stolen, destroyed or mutilated Warrant Certificate, a new Warrant Certificate of the same tenor and evidencing Warrants for a like number of Warrant Securities. Upon the issuance of any new Warrant Certificate under this Section 3.2, 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 Warrant Agent) in connection therewith. Every substitute Warrant Certificate executed and delivered pursuant to this Section 3.2 in lieu of any lost, stolen or destroyed Warrant Certificate shall represent an additional contractual obligation of the Company, whether or not the lost, stolen or destroyed Warrant Certificate shall be at any time enforceable by anyone, and shall be entitled to the benefits of this Agreement equally and proportionately with any and all other Warrant Certificates duly executed and delivered hereunder. The provisions of this Section 3.2 are exclusive and shall preclude (to the extent lawful) all other rights and remedies with respect to the replacement of mutilated, lost, stolen or destroyed Warrant Certificates.

**3.3 Holder of Warrant Certificate May Enforce Rights.** Notwithstanding any of the provisions of this Agreement, any holder of a Warrant Certificate, without the consent of the Warrant Agent, the holder of any Warrant Securities or the holder of any other Warrant Certificate, may, in such holder's own behalf and for such holder's own benefit, enforce, and may institute and maintain any suit, action or proceeding against the Company suitable to enforce, or otherwise in respect of, such holder's right to exercise the Warrants evidenced by such holder's Warrant Certificate in the manner provided in such holder's Warrant Certificate and in this Agreement.

#### **3.4 Adjustments.**

(a) In case the Company shall at any time subdivide its outstanding shares of Common Stock into a greater number of shares, the Warrant Price in effect immediately prior to such subdivision shall be proportionately reduced and the number of Warrant Securities purchasable under the Warrants shall be proportionately increased. Conversely, in case the outstanding shares of Common

Stock of the Company shall be combined into a smaller number of shares, the Warrant Price in effect immediately prior to such combination shall be proportionately increased and the number of Warrant Securities purchasable under the Warrants shall be proportionately decreased.

(b) If at any time or from time to time the holders of Common Stock (or any shares of stock or other securities at the time receivable upon the exercise of the Warrants) shall have received or become entitled to receive, without payment therefor,

(i) Common Stock or any shares of stock or other securities which are at any time directly or indirectly convertible into or exchangeable for Common Stock, or any rights or options to subscribe for, purchase or otherwise acquire any of the foregoing by way of dividend or other distribution;

(i) any cash paid or payable otherwise than as a cash dividend paid or payable out of the Company's current or retained earnings;

(ii) any evidence of the Company's indebtedness or rights to subscribe for or purchase the Company's indebtedness; or

(iii) Common Stock or additional stock or other securities or property (including cash) by way of spinoff, split-up, reclassification, combination of shares or similar corporate rearrangement (other than shares of Common Stock issued as a stock split or adjustments in respect of which shall be covered by the terms of Section 3.4(a) above), then and in each such case, the holder of each Warrant shall, upon the exercise of the Warrant, be entitled to receive, in addition to the number of Warrant Securities receivable thereupon, and without payment of any additional consideration therefore, the amount of stock and other securities and property (including cash and indebtedness or rights to subscribe for or purchase indebtedness) which such holder would hold on the date of such exercise had such holder been the holder of record of such Warrant Securities as of the date on which holders of Common Stock received or became entitled to receive such shares or all other additional stock and other securities and property.

(a) In case of (i) any reclassification, capital reorganization, or change in the Common Stock of the Company (other than as a result of a subdivision, combination, or stock dividend provided for in Section 3.4(a) or Section 3.4(b) above), (ii) share exchange, merger or similar transaction of the Company with or into another person or entity (other than a share exchange, merger or similar transaction in which the Company is the acquiring or surviving corporation and which does not result in any change in the Common Stock other than the issuance of additional shares of Common Stock) or (iii) the sale, exchange, lease, transfer or other disposition of all or substantially all of the properties and assets of the Company as an entirety (in any such case, a "**Reorganization Event**"), then, as a condition of such Reorganization Event, lawful provisions shall be made, and duly executed documents evidencing the same from the Company or its successor shall be delivered to the holders of the Warrants, so that the holders of the Warrants shall have the right at any time prior to the expiration of the Warrants to purchase, at a total price equal to that payable upon the exercise of the Warrants, the kind and amount of shares of stock and other securities and property receivable in connection with such Reorganization Event by a holder of the same number of Warrant Securities as were purchasable by the holders of the Warrants immediately prior to such Reorganization Event. In any such case appropriate provisions shall be made with respect to the rights and interests of the holders of the Warrants so that the provisions hereof shall thereafter be applicable with respect to any shares of stock or other securities and property deliverable upon exercise the Warrants, and appropriate adjustments shall be made to the Warrant Price payable



hereunder provided the aggregate purchase price shall remain the same. In the case of any transaction described in clauses (ii) and (iii) above, the Company shall thereupon be relieved of any further obligation hereunder or under the Warrants, and the Company as the predecessor corporation may thereupon or at any time thereafter be dissolved, wound up or liquidated. Such successor or assuming entity thereupon may cause to be signed, and may issue either in its own name or in the name of the Company, any or all of the Warrants issuable hereunder which heretofore shall not have been signed by the Company, and may execute and deliver securities in its own name, in fulfillment of its obligations to deliver Warrant Securities upon exercise of the Warrants. All the Warrants so issued shall in all respects have the same legal rank and benefit under this Agreement as the Warrants theretofore or thereafter issued in accordance with the terms of this Agreement as though all of such Warrants had been issued at the date of the execution hereof. In any case of any such Reorganization Event, such changes in phraseology and form (but not in substance) may be made in the Warrants thereafter to be issued as may be appropriate. The Warrant Agent may receive a written opinion of legal counsel as conclusive evidence that any such Reorganization Event complies with the provisions of this Section 3.4.

(c) The Company may, at its option, at any time until the Expiration Date, reduce the then current Warrant Price to any amount deemed appropriate by the Board of Directors of the Company for any period not exceeding twenty consecutive days (as evidenced in a resolution adopted by such Board of Directors), but only upon giving the notices required by Section 3.5 at least ten days prior to taking such action.

(d) Except as herein otherwise expressly provided, no adjustment in the Warrant Price shall be made by reason of the issuance of shares of Common Stock, or securities convertible into or exchangeable for shares of Common Stock, or securities carrying the right to purchase any of the foregoing or for any other reason whatsoever.

(e) No fractional Warrant Securities shall be issued upon the exercise of Warrants. If more than one Warrant shall be exercised at one time by the same holder, the number of full Warrant Securities which shall be issuable upon such exercise shall be computed on the basis of the aggregate number of Warrant Securities purchased pursuant to the Warrants so exercised. Instead of any fractional Warrant Security which would otherwise be issuable upon exercise of any Warrant, the Company shall pay a cash adjustment in respect of such fraction in an amount equal to the same fraction of the last reported sale price (or bid price if there were no sales) per Warrant Security, in either case as reported on the principal registered national securities exchange on which the Warrant Securities are listed or admitted to trading on the business day that next precedes the day of exercise or, if the Warrant Securities are not then listed or admitted to trading on any registered national securities exchange, the average of the closing high bid and low asked prices as reported on the OTC Bulletin Board Service (the "*OTC Bulletin Board*") operated by the Financial Industry Regulatory Authority, Inc. ("*FINRA*") or, if not available on the OTC Bulletin Board, then the average of the closing high bid and low asked prices as reported on any other U.S. quotation medium or inter-dealer quotation system on such date, or if on any such date the Warrant Securities are not listed or admitted to trading on a registered national securities exchange, are not included in the OTC Bulletin Board, and are not quoted on any other U.S. quotation medium or inter-dealer quotation system, an amount equal to the same fraction of the average of the closing bid and asked prices as furnished by any FINRA member firm selected from time to time by the Company for that purpose at the close of business on the business day that next precedes the day of exercise.

(f) Whenever the Warrant Price then in effect is adjusted as herein provided, the Company shall mail to each holder of the Warrants at such holder's address as it shall appear on the books of the Company a statement setting forth the adjusted Warrant Price then and thereafter effective

under the provisions hereof, together with the facts, in reasonable detail, upon which such adjustment is based.

(g) Notwithstanding anything to the contrary herein, in no event shall the Warrant Price, as adjusted in accordance with the terms hereof, be less than the par value per share of Common Stock.

**3.5 Notice to Warrantholders.** In case the Company shall (a) effect any dividend or distribution described in Section 3.4(b), (b) effect any Reorganization Event, (c) make any distribution on or in respect of the Common Stock in connection with the dissolution, liquidation or winding up of the Company, or (d) reduce the then current Warrant Price pursuant to Section 3.4(d), then the Company shall mail to each holder of Warrants at such holder's address as it shall appear on the books of the Warrant Agent, at least ten days prior to the applicable date hereinafter specified, a notice stating (x) the record date for such dividend or distribution, or, if a record is not to be taken, the date as of which the holders of record of Common Stock that will be entitled to such dividend or distribution are to be determined, (y) the date on which such Reorganization Event, dissolution, liquidation or winding up is expected to become effective, and the date as of which it is expected that holders of Common Stock of record shall be entitled to exchange their shares of Common Stock for securities or other property deliverable upon such Reorganization Event, dissolution, liquidation or winding up, or (z) the first date on which the then current Warrant Price shall be reduced pursuant to Section 3.4(d). No failure to mail such notice nor any defect therein or in the mailing thereof shall affect any such transaction or any adjustment in the Warrant Price required by Section 3.4.

**3.6** [If the Warrants are Subject to Acceleration by the Company, Insert — Acceleration of Warrants by the Company.

(a) At any time on or after [●], the Company shall have the right to accelerate any or all Warrants at any time by causing them to expire at the close of business on the day next preceding a specified date (the "**Acceleration Date**"), if the Market Price (as hereinafter defined) of the Common Stock equals or exceeds [●] percent ([●]%) of the then effective Warrant Price on any twenty Trading Days (as hereinafter defined) within a period of thirty consecutive Trading Days ending no more than five Trading Days prior to the date on which the Company gives notice to the Warrant Agent of its election to accelerate the Warrants.

(b) (b) "**Market Price**" for each Trading Day shall be, if the Common Stock is listed or admitted to trading on any registered national securities exchange, the last reported sale price, regular way (or, if no such price is reported, the average of the reported closing bid and asked prices, regular way) of Common Stock, in either case as reported on the principal registered national securities exchange on which the Common Stock is listed or admitted to trading or, if not listed or admitted to trading on any registered national securities exchange, the average of the closing high bid and low asked prices as reported on the OTC Bulletin Board operated by FINRA, or if not available on the OTC Bulletin Board, then the average of the closing high bid and low asked prices as reported on any other U.S. quotation medium or inter-dealer quotation system, or if on any such date the shares of Common Stock are not listed or admitted to trading on a registered national securities exchange, are not included in the OTC Bulletin Board, and are not quoted on any other U.S. quotation medium or inter-dealer quotation system, the average of the closing bid and asked prices as furnished by any FINRA member firm selected from time to time by the Company for that purpose. "Trading Day" shall be each Monday through Friday, other than any day on which securities are not traded in the system or on the exchange that is the principal market for the Common Stock, as determined by the Board of Directors of the Company. In the event of

an acceleration of less than all of the Warrants, the Warrant Agent shall select the Warrants to be accelerated by lot, pro rata or in such other manner as it deems, in its discretion, to be fair and appropriate.

(c) Notice of an acceleration specifying the Acceleration Date shall be sent by mail first class, postage prepaid, to each registered holder of a Warrant Certificate representing a Warrant accelerated at such holder's address appearing on the books of the Warrant Agent not more than sixty days nor less than thirty days before the Acceleration Date. Such notice of an acceleration also shall be given no more than twenty days, and no less than ten days, prior to the mailing of notice to registered holders of Warrants pursuant to this Section 3.6, by publication at least once in a newspaper of general circulation in the City of New York.

(d) Any Warrant accelerated may be exercised until [●] p.m., [City] time, on the business day next preceding the Acceleration Date. The Warrant Price shall be payable as provided in Section 2.]

#### **Article 4**

#### **EXCHANGE AND TRANSFER OF WARRANT CERTIFICATES**

**4.1** Exchange and Transfer of Warrant Certificates. Upon surrender at the corporate trust office of the Warrant Agent, Warrant Certificates evidencing Warrants may be exchanged for Warrant Certificates in other denominations evidencing such Warrants or the transfer thereof may be registered in whole or in part; provided that such other Warrant Certificates evidence Warrants for the same aggregate number of Warrant Securities as the Warrant Certificates so surrendered. The Warrant Agent shall keep, at its corporate trust office, books in which, subject to such reasonable regulations as it may prescribe, it shall register Warrant Certificates and exchanges and transfers of outstanding Warrant Certificates, upon surrender of the Warrant Certificates to the Warrant Agent at its corporate trust office for exchange or registration of transfer, properly endorsed or accompanied by appropriate instruments of registration of transfer and written instructions for transfer, all in form satisfactory to the Company and the Warrant Agent. No service charge shall be made for any exchange or registration of transfer of Warrant Certificates, but the Company may require payment of a sum sufficient to cover any stamp or other tax or other governmental charge that may be imposed in connection with any such exchange or registration of transfer. Whenever any Warrant Certificates are so surrendered for exchange or registration of transfer, an authorized officer of the Warrant Agent shall manually countersign and deliver to the person or persons entitled thereto a Warrant Certificate or Warrant Certificates duly authorized and executed by the Company, as so requested. The Warrant Agent shall not be required to effect any exchange or registration of transfer which will result in the issuance of a Warrant Certificate evidencing a Warrant for a fraction of a Warrant Security or a number of Warrants for a whole number of Warrant Securities and a fraction of a Warrant Security. All Warrant Certificates issued upon any exchange or registration of transfer of Warrant Certificates shall be the valid obligations of the Company, evidencing the same obligations and entitled to the same benefits under this Agreement as the Warrant Certificate surrendered for such exchange or registration of transfer.

**4.2** **Treatment of Holders of Warrant Certificates.** The Company, the Warrant Agent and all other persons may treat the registered holder of a Warrant Certificate as the absolute owner thereof for any purpose and as the person entitled to exercise the rights represented by the Warrants evidenced thereby, any notice to the contrary notwithstanding.

**4.3 Cancellation of Warrant Certificates.** Any Warrant Certificate surrendered for exchange, registration of transfer or exercise of the Warrants evidenced thereby shall, if surrendered to the Company, be delivered to the Warrant Agent and all Warrant Certificates surrendered or so delivered to the Warrant Agent shall be promptly canceled by the Warrant Agent and shall not be reissued and, except as expressly permitted by this Agreement, no Warrant Certificate shall be issued hereunder in exchange therefor or in lieu thereof. The Warrant Agent shall deliver to the Company from time to time or otherwise dispose of canceled Warrant Certificates in a manner satisfactory to the Company.

## Article 5

### CONCERNING THE WARRANT AGENT

**5.1 Warrant Agent.** The Company hereby appoints [●] as Warrant Agent of the Company in respect of the Warrants and the Warrant Certificates upon the terms and subject to the conditions herein set forth, and [●] hereby accepts such appointment. The Warrant Agent shall have the powers and authority granted to and conferred upon it in the Warrant Certificates and hereby and such further powers and authority to act on behalf of the Company as the Company may hereafter grant to or confer upon it. All of the terms and provisions with respect to such powers and authority contained in the Warrant Certificates are subject to and governed by the terms and provisions hereof.

**5.2 Conditions of Warrant Agent's Obligations.** The Warrant Agent accepts its obligations herein set forth upon the terms and conditions hereof, including the following to all of which the Company agrees and to all of which the rights hereunder of the holders from time to time of the Warrant Certificates shall be subject:

**(a) Compensation and Indemnification.** The Company agrees promptly to pay the Warrant Agent the compensation to be agreed upon with the Company for all services rendered by the Warrant Agent and to reimburse the Warrant Agent for reasonable out-of-pocket expenses (including reasonable counsel fees) incurred without negligence, bad faith or willful misconduct by the Warrant Agent in connection with the services rendered hereunder by the Warrant Agent. The Company also agrees to indemnify the Warrant Agent for, and to hold it harmless against, any loss, liability or expense incurred without negligence, bad faith or willful misconduct on the part of the Warrant Agent, arising out of or in connection with its acting as Warrant Agent hereunder, including the reasonable costs and expenses of defending against any claim of such liability.

**(b) Agent for the Company.** In acting under this Agreement and in connection with the Warrant Certificates, the Warrant Agent is acting solely as agent of the Company and does not assume any obligations or relationship of agency or trust for or with any of the holders of Warrant Certificates or beneficial owners of Warrants.

**(c) Counsel.** The Warrant Agent may consult with counsel satisfactory to it, which may include counsel for the Company, and the written advice of such counsel shall be full and complete authorization and protection in respect of any action taken, suffered or omitted by it hereunder in good faith and in accordance with the advice of such counsel.

**(d) Documents.** The Warrant Agent shall be protected and shall incur no liability for or in respect of any action taken or omitted by it in reliance upon any Warrant Certificate, notice, direction, consent, certificate, affidavit, statement or other paper or document reasonably believed by it to be genuine and to have been presented or signed by the proper parties.

(e) **Certain Transactions.** The Warrant Agent, and its officers, directors and employees, may become the owner of, or acquire any interest in, Warrants, with the same rights that it or they would have if it were not the Warrant Agent hereunder, and, to the extent permitted by applicable law, it or they may engage or be interested in any financial or other transaction with the Company and may act on, or as depository, trustee or agent for, any committee or body of holders of Warrant Securities or other obligations of the Company as freely as if it were not the Warrant Agent hereunder. Nothing in this Agreement shall be deemed to prevent the Warrant Agent from acting as trustee under any indenture to which the Company is a party.

(f) **No Liability for Interest.** Unless otherwise agreed with the Company, the Warrant Agent shall have no liability for interest on any monies at any time received by it pursuant to any of the provisions of this Agreement or of the Warrant Certificates.

(g) **No Liability for Invalidity.** The Warrant Agent shall have no liability with respect to any invalidity of this Agreement or any of the Warrant Certificates (except as to the Warrant Agent's countersignature thereon).

(h) **No Responsibility for Representations.** The Warrant Agent shall not be responsible for any of the recitals or representations herein or in the Warrant Certificates (except as to the Warrant Agent's countersignature thereon), all of which are made solely by the Company.

(i) **No Implied Obligations.** The Warrant Agent shall be obligated to perform only such duties as are herein and in the Warrant Certificates specifically set forth and no implied duties or obligations shall be read into this Agreement or the Warrant Certificates against the Warrant Agent. The Warrant Agent shall not be under any obligation to take any action hereunder which may tend to involve it in any expense or liability, the payment of which within a reasonable time is not, in its reasonable opinion, assured to it. The Warrant Agent shall not be accountable or under any duty or responsibility for the use by the Company of any of the Warrant Certificates authenticated by the Warrant Agent and delivered by it to the Company pursuant to this Agreement or for the application by the Company of the proceeds of the Warrant Certificates. The Warrant Agent shall have no duty or responsibility in case of any default by the Company in the performance of its covenants or agreements contained herein or in the Warrant Certificates or in the case of the receipt of any written demand from a holder of a Warrant Certificate with respect to such default, including, without limiting the generality of the foregoing, any duty or responsibility to initiate or attempt to initiate any proceedings at law or otherwise or, except as provided in Section 6.2 hereof, to make any demand upon the Company.

### **5.3 Resignation, Removal and Appointment of Successors.**

(a) The Company agrees, for the benefit of the holders from time to time of the Warrant Certificates, that there shall at all times be a Warrant Agent hereunder until all the Warrants have been exercised or are no longer exercisable.

(b) The Warrant Agent may at any time resign as agent by giving written notice to the Company of such intention on its part, specifying the date on which its desired resignation shall become effective; provided that such date shall not be less than three months after the date on which such notice is given unless the Company otherwise agrees. The Warrant Agent hereunder may be removed at any time by the filing with it of an instrument in writing signed by or on behalf of the Company and specifying such removal and the intended date when it shall become effective. Such resignation or removal shall take effect upon the appointment by the Company, as hereinafter provided, of a successor

Warrant Agent (which shall be a bank or trust company authorized under the laws of the jurisdiction of its organization to exercise corporate trust powers) and the acceptance of such appointment by such successor Warrant Agent. The obligation of the Company under Section 5.2(a) shall continue to the extent set forth therein notwithstanding the resignation or removal of the Warrant Agent.

(c) In case at any time the Warrant Agent shall resign, or shall be removed, or shall become incapable of acting, or shall be adjudged a bankrupt or insolvent, or shall commence a voluntary case under the Federal bankruptcy laws, as now or hereafter constituted, or under any other applicable Federal or state bankruptcy, insolvency or similar law or shall consent to the appointment of or taking possession by a receiver, custodian, liquidator, assignee, trustee, sequestrator (or other similar official) of the Warrant Agent or its property or affairs, or shall make an assignment for the benefit of creditors, or shall admit in writing its inability to pay its debts generally as they become due, or shall take corporate action in furtherance of any such action, or a decree or order for relief by a court having jurisdiction in the premises shall have been entered in respect of the Warrant Agent in an involuntary case under the Federal bankruptcy laws, as now or hereafter constituted, or any other applicable Federal or state bankruptcy, insolvency or similar law, or a decree or order by a court having jurisdiction in the premises shall have been entered for the appointment of a receiver, custodian, liquidator, assignee, trustee, sequestrator (or similar official) of the Warrant Agent or of its property or affairs, or any public officer shall take charge or control of the Warrant Agent or of its property or affairs for the purpose of rehabilitation, conservation, winding up or liquidation, a successor Warrant Agent, qualified as aforesaid, shall be appointed by the Company by an instrument in writing, filed with the successor Warrant Agent. Upon the appointment as aforesaid of a successor Warrant Agent and acceptance by the successor Warrant Agent of such appointment, the Warrant Agent shall cease to be Warrant Agent hereunder.

(d) Any successor Warrant Agent appointed hereunder shall execute, acknowledge and deliver to its predecessor and to the Company an instrument accepting such appointment hereunder, and thereupon such successor Warrant Agent, without any further act, deed or conveyance, shall become vested with all the authority, rights, powers, trusts, immunities, duties and obligations of such predecessor with like effect as if originally named as Warrant Agent hereunder, and such predecessor, upon payment of its charges and disbursements then unpaid, shall thereupon become obligated to transfer, deliver and pay over, and such successor Warrant Agent shall be entitled to receive, all monies, securities and other property on deposit with or held by such predecessor, as Warrant Agent hereunder.

(e) Any corporation into which the Warrant Agent hereunder may be merged or converted or any corporation with which the Warrant Agent may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which the Warrant Agent shall be a party, or any corporation to which the Warrant Agent shall sell or otherwise transfer all or substantially all the assets and business of the Warrant Agent, provided that it shall be qualified as aforesaid, shall be the successor Warrant Agent under this Agreement without the execution or filing of any paper or any further act on the part of any of the parties hereto.

## **Article 6**

### **MISCELLANEOUS**

**6.1 Amendment.** This Agreement may be amended by the parties hereto, without the consent of the holder of any Warrant Certificate, for the purpose of curing any ambiguity, or of curing, correcting or supplementing any defective provision contained herein, or making any other provisions with respect to matters or questions arising under this Agreement as the Company and the Warrant Agent

may deem necessary or desirable; provided that such action shall not materially adversely affect the interests of the holders of the Warrant Certificates.

**6.2 Notices and Demands to the Company and Warrant Agent.** If the Warrant Agent shall receive any notice or demand addressed to the Company by the holder of a Warrant Certificate pursuant to the provisions of the Warrant Certificates, the Warrant Agent shall promptly forward such notice or demand to the Company.

**6.3 Addresses.** Any communication from the Company to the Warrant Agent with respect to this Agreement shall be addressed to [●], Attention: [●] and any communication from the Warrant Agent to the Company with respect to this Agreement shall be addressed to Tourmaline Bio, Inc., 27 West 24th Street, Suite 702, New York, New York 10010, Attention: [●] (or such other address as shall be specified in writing by the Warrant Agent or by the Company).

**1.1 Governing Law.** This Agreement and each Warrant Certificate issued hereunder shall be governed by and construed in accordance with the laws of the State of New York.

**6.4 Delivery of Prospectus.** The Company shall furnish to the Warrant Agent sufficient copies of a prospectus meeting the requirements of the Securities Act of 1933, as amended, relating to the Warrant Securities deliverable upon exercise of the Warrants (the “*Prospectus*”), and the Warrant Agent agrees that upon the exercise of any Warrant, the Warrant Agent will deliver to the holder of the Warrant Certificate evidencing such Warrant, prior to or concurrently with the delivery of the Warrant Securities issued upon such exercise, a Prospectus. The Warrant Agent shall not, by reason of any such delivery, assume any responsibility for the accuracy or adequacy of such Prospectus.

**6.5 Obtaining of Governmental Approvals.** The Company will from time to time take all action which may be necessary to obtain and keep effective any and all permits, consents and approvals of governmental agencies and authorities and securities act filings under United States Federal and state laws (including without limitation a registration statement in respect of the Warrants and Warrant Securities under the Securities Act of 1933, as amended), which may be or become requisite in connection with the issuance, sale, transfer, and delivery of the Warrant Securities issued upon exercise of the Warrants, the issuance, sale, transfer and delivery of the Warrants or upon the expiration of the period during which the Warrants are exercisable.

**6.6 Persons Having Rights Under the Agreement.** Nothing in this Agreement shall give to any person other than the Company, the Warrant Agent and the holders of the Warrant Certificates any right, remedy or claim under or by reason of this Agreement.

**6.7 Headings.** The descriptive headings of the several Articles and Sections of this Agreement are inserted for convenience only and shall not control or affect the meaning or construction of any of the provisions hereof.

**6.8 Counterparts.** This Agreement may be executed in any number of counterparts, each of which as so executed shall be deemed to be an original, but such counterparts shall together constitute but one and the same instrument.

**6.9 Inspection of Agreement.** A copy of this Agreement shall be available at all reasonable times at the principal corporate trust office of the Warrant Agent for inspection by the holder of any Warrant Certificate. The Warrant Agent may require such holder to submit such holder’s Warrant Certificate for inspection by it.

**In Witness Whereof**, the parties hereto have caused this Agreement to be duly executed as of the day and year first above written.

**TOURMALINE BIO, INC.**, as Company

By: \_\_\_  
Name: \_\_\_  
Title: \_\_\_

**Attest:** \_\_\_  
\_\_\_

**Countersigned**

[•], as Warrant Agent

By: \_\_\_  
Name: \_\_\_  
Title: \_\_\_

**Attest:** \_\_\_  
\_\_\_



**Exhibit A**

**FORM OF WARRANT CERTIFICATE  
[FACE OF WARRANT CERTIFICATE]**

*[Form of Legend if Warrants are not immediately exercisable.]*

[Prior to [●], Warrants evidenced by this Warrant Certificate cannot be exercised.]

EXERCISABLE ONLY IF COUNTERSIGNED BY THE WARRANT AGENT AS PROVIDED HEREIN

VOID AFTER [●] P.M., [City] time, ON [●].

**TOURMALINE BIO, INC.**  
**WARRANT CERTIFICATE REPRESENTING**  
**WARRANTS TO PURCHASE**  
**COMMON STOCK, PAR VALUE \$0.0001 PER SHARE**

No. [●] [●] Warrants

This certifies that [●] or registered assigns is the registered owner of the above indicated number of Warrants, each Warrant entitling such owner to purchase, at any time [after [●] p.m., [City] time, [on [●] and] on or before [●] p.m., [City] time, on [●], [●] shares of Common Stock, par value \$0.0001 per share (the “*Warrant Securities*”), of Tourmaline Bio, Inc. (the “*Company*”) on the following basis: during the period from [●], through and including [●], the exercise price per Warrant Security will be \$[●], subject to adjustment as provided in the Warrant Agreement (as hereinafter defined) (the “*Warrant Price*”). The Holder may exercise the Warrants evidenced hereby by providing certain information set forth on the back hereof and by paying in full, in lawful money of the United States of America, [in cash or by certified check or official bank check in New York Clearing House funds] [by bank wire transfer in immediately available funds], the Warrant Price for each Warrant Security with respect to which this Warrant is exercised to the Warrant Agent (as hereinafter defined) and by surrendering this Warrant Certificate, with the purchase form on the back hereof duly executed, at the corporate trust office of [name of Warrant Agent], or its successor as warrant agent (the “*Warrant Agent*”), which is, on the date hereof, at the address specified on the reverse hereof, and upon compliance with and subject to the conditions set forth herein and in the Warrant Agreement (as hereinafter defined).

The term “*Holder*” as used herein shall mean the person in whose name at the time this Warrant Certificate shall be registered upon the books to be maintained by the Warrant Agent for that purpose pursuant to Section 4 of the Warrant Agreement.

The Warrants evidenced by this Warrant Certificate may be exercised to purchase a whole number of Warrant Securities in registered form. Upon any exercise of fewer than all of the Warrants evidenced by this Warrant Certificate, there shall be issued to the Holder hereof a new Warrant Certificate evidencing Warrants for the number of Warrant Securities remaining unexercised.

This Warrant Certificate is issued under and in accordance with the Warrant Agreement dated as of [●] (the “*Warrant Agreement*”), between the Company and the Warrant Agent and is subject to the terms and provisions contained in the Warrant Agreement, to all of which terms and provisions the Holder of this Warrant Certificate consents by acceptance hereof. Copies of the Warrant Agreement are on file at the above-mentioned office of the Warrant Agent.

Transfer of this Warrant Certificate may be registered when this Warrant Certificate is surrendered at the corporate trust office of the Warrant Agent by the registered owner or such owner’s assigns, in the manner and subject to the limitations provided in the Warrant Agreement.

After countersignature by the Warrant Agent and prior to the expiration of this Warrant Certificate, this Warrant Certificate may be exchanged at the corporate trust office of the Warrant Agent for Warrant Certificates representing Warrants for the same aggregate number of Warrant Securities.

This Warrant Certificate shall not entitle the Holder hereof to any of the rights of a holder of the Warrant Securities, including, without limitation, the right to receive payments of dividends or distributions, if any, on the Warrant Securities (except to the extent set forth in the Warrant Agreement) or to exercise any voting rights.

Reference is hereby made to the further provisions of this Warrant Certificate set forth on the reverse hereof, which further provisions shall for all purposes have the same effect as if set forth at this place.

This Warrant Certificate shall not be valid or obligatory for any purpose until countersigned by the Warrant Agent.

**In Witness Whereof**, the Company has caused this Warrant to be executed in its name and on its behalf by the facsimile signatures of its duly authorized officers.

Dated: \_\_\_\_\_

**TOURMALINE BIO, INC.**, as Company

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

**ATTEST:** \_\_\_\_\_  
\_\_\_\_\_

**COUNTERSIGNED**

**[●]**, as Warrant Agent

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

**ATTEST:** \_\_\_\_\_  
\_\_\_\_\_

[REVERSE OF WARRANT CERTIFICATE]

(Instructions for Exercise of Warrant)

To exercise any Warrants evidenced hereby for Warrant Securities (as hereinafter defined), the Holder must pay, in lawful money of the United States of America, [in cash or by certified check or official bank check in New York Clearing House funds] [by bank wire transfer in immediately available funds], the Warrant Price in full for Warrants exercised, to [●] [address of Warrant Agent], Attention: [●], which payment must specify the name of the Holder and the number of Warrants exercised by such Holder. In addition, the Holder must complete the information required below and present this Warrant Certificate in person or by mail (certified or registered mail is recommended) to the Warrant Agent at the appropriate address set forth above. This Warrant Certificate, completed and duly executed, must be received by the Warrant Agent within five business days of the payment.

(To be executed upon exercise of Warrants)

The undersigned hereby irrevocably elects to exercise \_\_\_\_\_ Warrants, evidenced by this Warrant Certificate, to purchase \_\_\_\_\_ shares of the Common Stock, par value \$0.0001 per share (the "*Warrant Securities*"), of Tourmaline Bio, Inc. and represents that the undersigned has tendered payment for such Warrant Securities, in lawful money of the United States of America, [in cash or by certified check or official bank check in New York Clearing House funds] [by bank wire transfer in immediately available funds], to the order of Tourmaline Bio, Inc., c/o [insert name and address of Warrant Agent], in the amount of \$\_\_\_\_\_ in accordance with the terms hereof. The undersigned requests that said Warrant Securities be in fully registered form in the authorized denominations, registered in such names and delivered all as specified in accordance with the instructions set forth below.

If the number of Warrants exercised is less than all of the Warrants evidenced hereby, the undersigned requests that a new Warrant Certificate evidencing the Warrants for the number of Warrant Securities remaining unexercised be issued and delivered to the undersigned unless otherwise specified in the instructions below.

Dated: \_\_\_ Name: \_\_\_

Please Print

Address:

\_\_\_\_\_  
(Insert Social Security or Other Identifying Number  
of Holder)

Signature Guaranteed: \_\_\_  
Signature

(Signature must conform in all respects to name of holder as specified on the face of this Warrant Certificate and must bear a signature guarantee by a FINRA member firm).

This Warrant may be exercised at the following addresses: By hand at:

[●]

By mail at:

[Instructions as to form and delivery of Warrant Securities and, if applicable, Warrant Certificates evidencing Warrants for the number of Warrant Securities remaining unexercised—complete as appropriate.]

**ASSIGNMENT**

[Form of assignment to be executed if Warrant Holder desires to transfer Warrant]

**For Value Received,** \_\_\_\_\_ hereby sells, assigns and transfers unto:

\_\_\_\_\_  
(Please print name and address including zip code) Please print Social Security or other identifying number

the right represented by the within Warrant to purchase \_\_\_\_\_ shares of [Title of Warrant Securities] of Tourmaline Bio, Inc. to which the within Warrant relates and appoints \_\_\_\_\_ attorney to transfer such right on the books of the Warrant Agent with full power of substitution in the premises.

Dated: \_\_\_\_ Name: \_\_\_\_

Signature

(Signature must conform in all respects to name of holder as specified on the face of the Warrant)

Signature Guaranteed

—

**TOURMALINE BIO, INC.**

**and**

\_\_\_\_\_, **As Warrant Agent**

**Form of Preferred Stock  
Warrant Agreement**

**Dated As Of \_\_\_\_\_**

## Tourmaline Bio, Inc. Form of Preferred Stock Warrant Agreement

This Preferred Stock Warrant Agreement (this “*Agreement*”), dated as of [●], between **Tourmaline Bio, Inc.**, a Delaware corporation (the “*Company*”), and [●], a [corporation] [national banking association] organized and existing under the laws of [●] and having a corporate trust office in [●], as warrant agent (the “*Warrant Agent*”).

Whereas, the Company proposes to sell [*If Warrants are sold with other securities* — [title of such other securities being offered] (the “*Other Securities*”) with] warrant certificates evidencing one or more warrants (the “*Warrants*” or, individually, a “*Warrant*”) representing the right to purchase [title of Preferred Stock purchasable through exercise of Warrants] of the Company, par value \$0.0001 per share (the “*Warrant Securities*”), such warrant certificates and other warrant certificates issued pursuant to this Agreement being herein called the “*Warrant Certificates*”; and

Whereas, the Company desires the Warrant Agent to act on behalf of the Company, and the Warrant Agent is willing so to act, in connection with the issuance, registration, transfer, exchange, exercise and replacement of the Warrant Certificates, and in this Agreement wishes to set forth, among other things, the form and provisions of the Warrant Certificates and the terms and conditions on which they may be issued, registered, transferred, exchanged, exercised and replaced.

Now Therefore, in consideration of the premises and of the mutual agreements herein contained, the parties hereto agree as follows:

### Article 1

#### ISSUANCE OF WARRANTS AND EXECUTION AND DELIVERY OF WARRANT CERTIFICATES

**1.1 Issuance of Warrants.** [*If Warrants alone* —Upon issuance, each Warrant Certificate shall evidence one or more Warrants.] [*If Other Securities and Warrants* —Warrant Certificates will be issued in connection with the issuance of the Other Securities but shall be separately transferable and each Warrant Certificate shall evidence one or more Warrants.] Each Warrant evidenced thereby shall represent the right, subject to the provisions contained herein and therein, to purchase one Warrant Security. [*If Other Securities and Warrants* — Warrant Certificates will be issued with the Other Securities and each Warrant Certificate will evidence [●] Warrants for each [\$(●) principal amount] [[●] shares] of Other Securities issued.]

**1.2 Execution and Delivery of Warrant Certificates.** Each Warrant Certificate, whenever issued, shall be in registered form substantially in the form set forth in **Exhibit A** hereto, shall be dated the date of its countersignature by the Warrant Agent and may have such letters, numbers, or other marks of identification or designation and such legends or endorsements printed, lithographed or engraved thereon as the officers of the Company executing the same may approve (execution thereof to be conclusive evidence of such approval) and as are not inconsistent with the provisions of this Agreement, or as may be required to comply with any law or with any rule or regulation made pursuant thereto or with any rule or regulation of any securities exchange on which the Warrants may be listed, or to conform to usage. The Warrant Certificates shall be signed on behalf of the Company by any of its present or future chief executive officers, presidents, senior vice presidents, vice presidents, chief financial officers, chief legal officers, treasurers, assistant treasurers, controllers, assistant controllers, secretaries or assistant secretaries under its corporate seal reproduced thereon. Such signatures may be manual or facsimile



signatures of such authorized officers and may be imprinted or otherwise reproduced on the Warrant Certificates. The seal of the Company may be in the form of a facsimile thereof and may be impressed, affixed, imprinted or otherwise reproduced on the Warrant Certificates.

No Warrant Certificate shall be valid for any purpose, and no Warrant evidenced thereby shall be exercisable, until such Warrant Certificate has been countersigned by the manual signature of the Warrant Agent. Such signature by the Warrant Agent upon any Warrant Certificate executed by the Company shall be conclusive evidence that the Warrant Certificate so countersigned has been duly issued hereunder.

In case any officer of the Company who shall have signed any of the Warrant Certificates either manually or by facsimile signature shall cease to be such officer before the Warrant Certificates so signed shall have been countersigned and delivered by the Warrant Agent, such Warrant Certificates may be countersigned and delivered notwithstanding that the person who signed such Warrant Certificates ceased to be such officer of the Company; and any Warrant Certificate may be signed on behalf of the Company by such persons as, at the actual date of the execution of such Warrant Certificate, shall be the proper officers of the Company, although at the date of the execution of this Agreement any such person was not such officer.

The term “*holder*” or “*holder of a Warrant Certificate*” as used herein shall mean any person in whose name at the time any Warrant Certificate shall be registered upon the books to be maintained by the Warrant Agent for that purpose.

**1.3 Issuance of Warrant Certificates.** Warrant Certificates evidencing the right to purchase Warrant Securities may be executed by the Company and delivered to the Warrant Agent upon the execution of this Agreement or from time to time thereafter. The Warrant Agent shall, upon receipt of Warrant Certificates duly executed on behalf of the Company, countersign such Warrant Certificates and shall deliver such Warrant Certificates to or upon the order of the Company.

## Article 2

### WARRANT PRICE, DURATION AND EXERCISE OF WARRANTS

**2.1 Warrant Price.** During the period specified in Section 2.2, each Warrant shall, subject to the terms of this Agreement and the applicable Warrant Certificate, entitle the holder thereof to purchase the number of Warrant Securities specified in the applicable Warrant Certificate at an exercise price of \$[●] per Warrant Security, subject to adjustment upon the occurrence of certain events, as hereinafter provided. Such purchase price per Warrant Security is referred to in this Agreement as the “*Warrant Price*.”

**2.2 Duration of Warrants.** Each Warrant may be exercised in whole or in part at any time, as specified herein, on or after [the date thereof] [●] and at or before [●] p.m., [City] time, on [●] or such later date as the Company may designate by notice to the Warrant Agent and the holders of Warrant Certificates mailed to their addresses as set forth in the record books of the Warrant Agent (the “*Expiration Date*”). Each Warrant not exercised at or before [●] p.m., [City] time, on the Expiration Date shall become void, and all rights of the holder of the Warrant Certificate evidencing such Warrant under this Agreement shall cease.

**2.3 Exercise of Warrants.**

**(a)** During the period specified in Section 2.2, the Warrants may be exercised to purchase a whole number of Warrant Securities in registered form by providing certain information as set forth on the reverse side of the Warrant Certificate and by paying in full, in lawful money of the United States of America, [in cash or by certified check or official bank check in New York Clearing House funds] [by bank wire transfer in immediately available funds] the Warrant Price for each Warrant Security with respect to which a Warrant is being exercised to the Warrant Agent at its corporate trust office, provided that such exercise is subject to receipt within five business days of such payment by the Warrant Agent of the Warrant Certificate with the form of election to purchase Warrant Securities set forth on the reverse side of the Warrant Certificate properly completed and duly executed. The date on which payment in full of the Warrant Price is received by the Warrant Agent shall, subject to receipt of the Warrant Certificate as aforesaid, be deemed to be the date on which the Warrant is exercised; provided, however, that if, at the date of receipt of such Warrant Certificates and payment in full of the Warrant Price, the transfer books for the Warrant Securities purchasable upon the exercise of such Warrants shall be closed, no such receipt of such Warrant Certificates and no such payment of such Warrant Price shall be effective to constitute the person so designated to be named as the holder of record of such Warrant Securities on such date, but shall be effective to constitute such person as the holder of record of such Warrant Securities for all purposes at the opening of business on the next succeeding day on which the transfer books for the Warrant Securities purchasable upon the exercise of such Warrants shall be opened, and the certificates for the Warrant Securities in respect of which such Warrants are then exercised shall be issuable as of the date on such next succeeding day on which the transfer books shall next be opened, and until such date the Company shall be under no duty to deliver any certificate for such Warrant Securities. The Warrant Agent shall deposit all funds received by it in payment of the Warrant Price in an account of the Company maintained with it and shall advise the Company by telephone at the end of each day on which a payment for the exercise of Warrants is received of the amount so deposited to its account. The Warrant Agent shall promptly confirm such telephone advice to the Company in writing.

**(b)** The Warrant Agent shall, from time to time, as promptly as practicable, advise the Company of (i) the number of Warrant Securities with respect to which Warrants were exercised, (ii) the instructions of each holder of the Warrant Certificates evidencing such Warrants with respect to delivery of the Warrant Securities to which such holder is entitled upon such exercise, (iii) delivery of Warrant Certificates evidencing the balance, if any, of the Warrants for the remaining Warrant Securities after such exercise, and (iv) such other information as the Company shall reasonably require.

**(c)** As soon as practicable after the exercise of any Warrant, the Company shall issue to or upon the order of the holder of the Warrant Certificate evidencing such Warrant the Warrant Securities to which such holder is entitled, in fully registered form, registered in such name or names as may be directed by such holder. If fewer than all of the Warrants evidenced by such Warrant Certificate are exercised, the Company shall execute, and an authorized officer of the Warrant Agent shall manually countersign and deliver, a new Warrant Certificate evidencing Warrants for the number of Warrant Securities remaining unexercised.

**(d)** The Company shall not be required to pay any stamp or other tax or other governmental charge required to be paid in connection with any transfer involved in the issue of the Warrant Securities, and in the event that any such transfer is involved, the Company shall not be required to issue or deliver any Warrant Security until such tax or other charge shall have been paid or it has been established to the Company's satisfaction that no such tax or other charge is due.

(e) Prior to the issuance of any Warrants there shall have been reserved, and the Company shall at all times through the Expiration Date keep reserved, out of its authorized but unissued Warrant Securities, a number of shares sufficient to provide for the exercise of the Warrants.

### Article 3

#### OTHER PROVISIONS RELATING TO RIGHTS OF HOLDERS OF WARRANT CERTIFICATES

**3.1 No Rights as Warrant Securityholder Conferred by Warrants or Warrant Certificates.** No Warrant Certificate or Warrant evidenced thereby shall entitle the holder thereof to any of the rights of a holder of Warrant Securities, including, without limitation, the right to receive the payment of dividends or distributions, if any, on the Warrant Securities or to exercise any voting rights, except to the extent expressly set forth in this Agreement or the applicable Warrant Certificate.

**3.2 Lost, Stolen, Mutilated or Destroyed Warrant Certificates.** Upon receipt by the Warrant Agent of evidence reasonably satisfactory to it and the Company of the ownership of and the loss, theft, destruction or mutilation of any Warrant Certificate and/or indemnity reasonably satisfactory to the Warrant Agent and the Company and, in the case of mutilation, upon surrender of the mutilated Warrant Certificate to the Warrant Agent for cancellation, then, in the absence of notice to the Company or the Warrant Agent that such Warrant Certificate has been acquired by a bona fide purchaser, the Company shall execute, and an authorized officer of the Warrant Agent shall manually countersign and deliver, in exchange for or in lieu of the lost, stolen, destroyed or mutilated Warrant Certificate, a new Warrant Certificate of the same tenor and evidencing Warrants for a like number of Warrant Securities. Upon the issuance of any new Warrant Certificate under this Section 3.2, 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 Warrant Agent) in connection therewith. Every substitute Warrant Certificate executed and delivered pursuant to this Section 3.2 in lieu of any lost, stolen or destroyed Warrant Certificate shall represent an additional contractual obligation of the Company, whether or not the lost, stolen or destroyed Warrant Certificate shall be at any time enforceable by anyone, and shall be entitled to the benefits of this Agreement equally and proportionately with any and all other Warrant Certificates duly executed and delivered hereunder. The provisions of this Section 3.2 are exclusive and shall preclude (to the extent lawful) all other rights and remedies with respect to the replacement of mutilated, lost, stolen or destroyed Warrant Certificates.

**3.3 Holder of Warrant Certificate May Enforce Rights.** Notwithstanding any of the provisions of this Agreement, any holder of a Warrant Certificate, without the consent of the Warrant Agent, the holder of any Warrant Securities or the holder of any other Warrant Certificate, may, in such holder's own behalf and for such holder's own benefit, enforce, and may institute and maintain any suit, action or proceeding against the Company suitable to enforce, or otherwise in respect of, such holder's right to exercise the Warrants evidenced by such holder's Warrant Certificate in the manner provided in such holder's Warrant Certificate and in this Agreement.

#### **3.4 Adjustments.**

(a) In case the Company shall at any time subdivide its outstanding shares of [title of Preferred Stock purchasable through exercise of Warrants] into a greater number of shares, the Warrant Price in effect immediately prior to such subdivision shall be proportionately reduced and the number of Warrant Securities purchasable under the Warrants shall be proportionately increased. Conversely, in

case the outstanding shares of [title of Preferred Stock purchasable through exercise of Warrants] shall be combined into a smaller number of shares, the Warrant Price in effect immediately prior to such combination shall be proportionately increased and the number of Warrant Securities purchasable under the Warrants shall be proportionately decreased.

(b) If at any time or from time to time the holders of [title of Preferred Stock purchasable through exercise of Warrants] (or any shares of stock or other securities at the time receivable upon the exercise of the Warrants) shall have received or become entitled to receive, without payment therefore,

(i) [title of Preferred Stock purchasable through exercise of Warrants] or any shares of stock or other securities which are at any time directly or indirectly convertible into or exchangeable for [title of Preferred Stock purchasable through exercise of Warrants], or any rights or options to subscribe for, purchase or otherwise acquire any of the foregoing by way of dividend or other distribution;

(i) any cash paid or payable otherwise than in accordance with the terms of [title of Preferred Stock purchasable through exercise of Warrants] or as a cash dividend paid or payable out of the Company's current or retained earnings;

(ii) any evidence of the Company's indebtedness or rights to subscribe for or purchase the Company's indebtedness; or

(iii) [title of Preferred Stock purchasable through exercise of Warrants] or additional stock or other securities or property (including cash) by way of spinoff, split-up, reclassification, combination of shares or similar corporate rearrangement (other than shares of [title of Preferred Stock purchasable through exercise of Warrants] issued as a stock split or adjustments in respect of which shall be covered by the terms of Section 3.4(a) above), then and in each such case, the holder of each Warrant shall, upon the exercise of the Warrant, be entitled to receive, in addition to the number of Warrant Securities receivable thereupon, and without payment of any additional consideration therefore, the amount of stock and other securities and property (including cash and indebtedness or rights to subscribe for or purchase indebtedness) which such holder would hold on the date of such exercise had such holder been the holder of record of such Warrant Securities as of the date on which holders of [title of Preferred Stock purchasable through exercise of Warrants] received or became entitled to receive such shares or all other additional stock and other securities and property.

(a) In case of (i) any reclassification, capital reorganization, or change in the [title of Preferred Stock purchasable through exercise of Warrants] of the Company (other than as a result of a subdivision, combination, or stock dividend provided for in Section 3.4(a) or Section 3.4(b) above), (ii) share exchange, merger or similar transaction of the Company with or into another person or entity (other than a share exchange, merger or similar transaction in which the Company is the acquiring or surviving corporation and which does not result in any change in the [title of Preferred Stock purchasable through exercise of Warrants] other than the issuance of additional shares of [title of Preferred Stock purchasable through exercise of Warrants]) or (iii) the sale, exchange, lease, transfer or other disposition of all or substantially all of the properties and assets of the Company as an entirety (in any such case, a "*Reorganization Event*"), then, as a condition of such Reorganization Event, lawful provisions shall be made, and duly executed documents evidencing the same from the Company or its successor shall be delivered to the holders of the Warrants, so that the holders of the Warrants shall have the right at any time prior to the expiration of the Warrants to purchase, at a total price equal to that payable upon the

exercise of the Warrants, the kind and amount of shares of stock and other securities and property receivable in connection with such Reorganization Event by a holder of the same number of shares of [title of Preferred Stock purchasable through exercise of Warrants] as were purchasable by the holders of the Warrants immediately prior to such Reorganization Event. In any such case appropriate provisions shall be made with respect to the rights and interests of the holders of the Warrants so that the provisions hereof shall thereafter be applicable with respect to any shares of stock or other securities and property deliverable upon exercise the Warrants, and appropriate adjustments shall be made to the Warrant Price payable hereunder provided the aggregate purchase price shall remain the same. In the case of any transaction described in clauses (ii) and (iii) above, the Company shall thereupon be relieved of any further obligation hereunder or under the Warrants, and the Company as the predecessor corporation may thereupon or at any time thereafter be dissolved, wound up or liquidated. Such successor or assuming entity thereupon may cause to be signed, and may issue either in its own name or in the name of the Company, any or all of the Warrants issuable hereunder which heretofore shall not have been signed by the Company, and may execute and deliver securities in its own name, in fulfillment of its obligations to deliver Warrant Securities upon exercise of the Warrants. All the Warrants so issued shall in all respects have the same legal rank and benefit under this Agreement as the Warrants theretofore or thereafter issued in accordance with the terms of this Agreement as though all of such Warrants had been issued at the date of the execution hereof. In any case of any such Reorganization Event, such changes in phraseology and form (but not in substance) may be made in the Warrants thereafter to be issued as may be appropriate. The Warrant Agent may receive a written opinion of legal counsel as conclusive evidence that any such Reorganization Event complies with the provisions of this Section 3.4.

(c) The Company may, at its option, at any time until the Expiration Date, reduce the then current Warrant Price to any amount deemed appropriate by the Board of Directors of the Company for any period not exceeding twenty consecutive days (as evidenced in a resolution adopted by such Board of Directors), but only upon giving the notices required by Section 3.5 at least ten days prior to taking such action.

(d) Except as herein otherwise expressly provided, no adjustment in the Warrant Price shall be made by reason of the issuance of any securities of the Company or for any other reason whatsoever.

(e) No fractional Warrant Securities shall be issued upon the exercise of Warrants. If more than one Warrant shall be exercised at one time by the same holder, the number of full Warrant Securities which shall be issuable upon such exercise shall be computed on the basis of the aggregate number of Warrant Securities purchased pursuant to the Warrants so exercised. Instead of any fractional Warrant Security which would otherwise be issuable upon exercise of any Warrant, the Company shall pay a cash adjustment in respect of such fraction in an amount equal to the same fraction of the last reported sale price (or bid price if there were no sales) per Warrant Security, in either case as reported on the principal registered national securities exchange on which the Warrant Securities are listed or admitted to trading on the business day that next precedes the day of exercise or, if the Warrant Securities are not then listed or admitted to trading on any registered national securities exchange, the average of the closing high bid and low asked prices as reported on the OTC Bulletin Board Service (the "**OTC Bulletin Board**") operated by the Financial Industry Regulatory Authority, Inc. ("**FINRA**") or, if not available on the OTC Bulletin Board, then the average of the closing high bid and low asked prices as reported on any other U.S. quotation medium or inter-dealer quotation system on such date, or if on any such date the Warrant Securities are not listed or admitted to trading on a registered national securities exchange, are not included in the OTC Bulletin Board, and are not quoted on any other U.S. quotation medium or inter-dealer quotation system, an amount equal to the same fraction of the average of the closing bid and asked

prices as furnished by any FINRA member firm selected from time to time by the Company for that purpose at the close of business on the business day that next precedes the day of exercise.

(f) Whenever the Warrant Price then in effect is adjusted as herein provided, the Company shall mail to each holder of the Warrants at such holder's address as it shall appear on the books of the Company a statement setting forth the adjusted Warrant Price then and thereafter effective under the provisions hereof, together with the facts, in reasonable detail, upon which such adjustment is based.

(g) Notwithstanding anything to the contrary herein, in no event shall the Warrant Price, as adjusted in accordance with the terms hereof, be less than the par value per share of [title of Preferred Stock purchasable through exercise of Warrants].

**3.5 Notice to Warrantholders.** In case the Company shall (a) effect any dividend or distribution described in Section 3.4(b), (b) effect any Reorganization Event, (c) make any distribution on or in respect of the [title of Preferred Stock purchasable through exercise of Warrants] in connection with the dissolution, liquidation or winding up of the Company, or (d) reduce the then current Warrant Price pursuant to Section 3.4(d), then the Company shall mail to each holder of Warrants at such holder's address as it shall appear on the books of the Warrant Agent, at least ten days prior to the applicable date hereinafter specified, a notice stating (x) the record date for such dividend or distribution, or, if a record is not to be taken, the date as of which the holders of record of [title of Preferred Stock purchasable through exercise of Warrants] that will be entitled to such dividend or distribution are to be determined, (y) the date on which such Reorganization Event, dissolution, liquidation or winding up is expected to become effective, and the date as of which it is expected that holders of [title of Preferred Stock purchasable through exercise of Warrants] of record shall be entitled to exchange their shares of [title of Preferred Stock purchasable through exercise of Warrants] for securities or other property deliverable upon such Reorganization Event, dissolution, liquidation or winding up, or (z) the first date on which the then current Warrant Price shall be reduced pursuant to Section 3.4(d). No failure to mail such notice nor any defect therein or in the mailing thereof shall affect any such transaction or any adjustment in the Warrant Price required by Section 3.4.

**3.6** [If the Warrants are Subject to Acceleration by the Company, Insert — Acceleration of Warrants by the Company.

(a) At any time on or after [●], the Company shall have the right to accelerate any or all Warrants at any time by causing them to expire at the close of business on the day next preceding a specified date (the "**Acceleration Date**"), if the Market Price (as hereinafter defined) of the [title of Preferred Stock purchasable through exercise of Warrants] equals or exceeds [●] percent ([●]%) of the then effective Warrant Price on any twenty Trading Days (as hereinafter defined) within a period of thirty consecutive Trading Days ending no more than five Trading Days prior to the date on which the Company gives notice to the Warrant Agent of its election to accelerate the Warrants.

(b) (b) "**Market Price**" for each Trading Day shall be, if the [title of Preferred Stock purchasable through exercise of Warrants] is listed or admitted to trading on any registered national securities exchange, the last reported sale price, regular way (or, if no such price is reported, the average of the reported closing bid and asked prices, regular way) of [title of Preferred Stock purchasable through exercise of Warrants], in either case as reported on the principal registered national securities exchange on which the [title of Preferred Stock purchasable through exercise of Warrants] is listed or admitted to trading or, if not listed or admitted to trading on any registered national securities exchange, the average

of the closing high bid and low asked prices as reported on the OTC Bulletin Board operated by FINRA, or if not available on the OTC Bulletin Board, then the average of the closing high bid and low asked prices as reported on any other U.S. quotation medium or inter-dealer quotation system, or if on any such date the shares of [title of Preferred Stock purchasable through exercise of Warrants] are not listed or admitted to trading on a registered national securities exchange, are not included in the OTC Bulletin Board, and are not quoted on any other U.S. quotation medium or inter-dealer quotation system, the average of the closing bid and asked prices as furnished by any FINRA member firm selected from time to time by the Company for that purpose. "Trading Day" shall be each Monday through Friday, other than any day on which securities are not traded in the system or on the exchange that is the principal market for the [title of Preferred Stock purchasable through exercise of Warrants], as determined by the Board of Directors of the Company. In the event of an acceleration of less than all of the Warrants, the Warrant Agent shall select the Warrants to be accelerated by lot, pro rata or in such other manner as it deems, in its discretion, to be fair and appropriate.

(c) Notice of an acceleration specifying the Acceleration Date shall be sent by mail first class, postage prepaid, to each registered holder of a Warrant Certificate representing a Warrant accelerated at such holder's address appearing on the books of the Warrant Agent not more than sixty days nor less than thirty days before the Acceleration Date. Such notice of an acceleration also shall be given no more than twenty days, and no less than ten days, prior to the mailing of notice to registered holders of Warrants pursuant to this Section 3.6, by publication at least once in a newspaper of general circulation in the City of New York.

(d) Any Warrant accelerated may be exercised until [ • ] p.m., [City] time, on the business day next preceding the Acceleration Date. The Warrant Price shall be payable as provided in Section 2.]

#### **Article 4**

#### **EXCHANGE AND TRANSFER OF WARRANT CERTIFICATES**

**4.1** Exchange and Transfer of Warrant Certificates. Upon surrender at the corporate trust office of the Warrant Agent, Warrant Certificates evidencing Warrants may be exchanged for Warrant Certificates in other denominations evidencing such Warrants or the transfer thereof may be registered in whole or in part; provided that such other Warrant Certificates evidence Warrants for the same aggregate number of Warrant Securities as the Warrant Certificates so surrendered. The Warrant Agent shall keep, at its corporate trust office, books in which, subject to such reasonable regulations as it may prescribe, it shall register Warrant Certificates and exchanges and transfers of outstanding Warrant Certificates, upon surrender of the Warrant Certificates to the Warrant Agent at its corporate trust office for exchange or registration of transfer, properly endorsed or accompanied by appropriate instruments of registration of transfer and written instructions for transfer, all in form satisfactory to the Company and the Warrant Agent. No service charge shall be made for any exchange or registration of transfer of Warrant Certificates, but the Company may require payment of a sum sufficient to cover any stamp or other tax or other governmental charge that may be imposed in connection with any such exchange or registration of transfer. Whenever any Warrant Certificates are so surrendered for exchange or registration of transfer, an authorized officer of the Warrant Agent shall manually countersign and deliver to the person or persons entitled thereto a Warrant Certificate or Warrant Certificates duly authorized and executed by the Company, as so requested. The Warrant Agent shall not be required to effect any exchange or registration of transfer which will result in the issuance of a Warrant Certificate evidencing a Warrant for a fraction of a Warrant Security or a number of Warrants for a whole number of Warrant Securities and a

fraction of a Warrant Security. All Warrant Certificates issued upon any exchange or registration of transfer of Warrant Certificates shall be the valid obligations of the Company, evidencing the same obligations and entitled to the same benefits under this Agreement as the Warrant Certificate surrendered for such exchange or registration of transfer.

**4.2 Treatment of Holders of Warrant Certificates.** The Company, the Warrant Agent and all other persons may treat the registered holder of a Warrant Certificate as the absolute owner thereof for any purpose and as the person entitled to exercise the rights represented by the Warrants evidenced thereby, any notice to the contrary notwithstanding.

**4.3 Cancellation of Warrant Certificates.** Any Warrant Certificate surrendered for exchange, registration of transfer or exercise of the Warrants evidenced thereby shall, if surrendered to the Company, be delivered to the Warrant Agent and all Warrant Certificates surrendered or so delivered to the Warrant Agent shall be promptly canceled by the Warrant Agent and shall not be reissued and, except as expressly permitted by this Agreement, no Warrant Certificate shall be issued hereunder in exchange therefor or in lieu thereof. The Warrant Agent shall deliver to the Company from time to time or otherwise dispose of canceled Warrant Certificates in a manner satisfactory to the Company.

## Article 5

### CONCERNING THE WARRANT AGENT

**5.1 Warrant Agent.** The Company hereby appoints [●] as Warrant Agent of the Company in respect of the Warrants and the Warrant Certificates upon the terms and subject to the conditions herein set forth, and [●] hereby accepts such appointment. The Warrant Agent shall have the powers and authority granted to and conferred upon it in the Warrant Certificates and hereby and such further powers and authority to act on behalf of the Company as the Company may hereafter grant to or confer upon it. All of the terms and provisions with respect to such powers and authority contained in the Warrant Certificates are subject to and governed by the terms and provisions hereof.

**5.2 Conditions of Warrant Agent's Obligations.** The Warrant Agent accepts its obligations herein set forth upon the terms and conditions hereof, including the following to all of which the Company agrees and to all of which the rights hereunder of the holders from time to time of the Warrant Certificates shall be subject:

**(a) Compensation and Indemnification.** The Company agrees promptly to pay the Warrant Agent the compensation to be agreed upon with the Company for all services rendered by the Warrant Agent and to reimburse the Warrant Agent for reasonable out-of-pocket expenses (including reasonable counsel fees) incurred without negligence, bad faith or willful misconduct by the Warrant Agent in connection with the services rendered hereunder by the Warrant Agent. The Company also agrees to indemnify the Warrant Agent for, and to hold it harmless against, any loss, liability or expense incurred without negligence, bad faith or willful misconduct on the part of the Warrant Agent, arising out of or in connection with its acting as Warrant Agent hereunder, including the reasonable costs and expenses of defending against any claim of such liability.

**(b) Agent for the Company.** In acting under this Agreement and in connection with the Warrant Certificates, the Warrant Agent is acting solely as agent of the Company and does not assume any obligations or relationship of agency or trust for or with any of the holders of Warrant Certificates or beneficial owners of Warrants.



(c) **Counsel.** The Warrant Agent may consult with counsel satisfactory to it, which may include counsel for the Company, and the written advice of such counsel shall be full and complete authorization and protection in respect of any action taken, suffered or omitted by it hereunder in good faith and in accordance with the advice of such counsel.

(d) **Documents.** The Warrant Agent shall be protected and shall incur no liability for or in respect of any action taken or omitted by it in reliance upon any Warrant Certificate, notice, direction, consent, certificate, affidavit, statement or other paper or document reasonably believed by it to be genuine and to have been presented or signed by the proper parties.

(e) **Certain Transactions.** The Warrant Agent, and its officers, directors and employees, may become the owner of, or acquire any interest in, Warrants, with the same rights that it or they would have if it were not the Warrant Agent hereunder, and, to the extent permitted by applicable law, it or they may engage or be interested in any financial or other transaction with the Company and may act on, or as depository, trustee or agent for, any committee or body of holders of Warrant Securities or other obligations of the Company as freely as if it were not the Warrant Agent hereunder. Nothing in this Agreement shall be deemed to prevent the Warrant Agent from acting as trustee under any indenture to which the Company is a party.

(f) **No Liability for Interest.** Unless otherwise agreed with the Company, the Warrant Agent shall have no liability for interest on any monies at any time received by it pursuant to any of the provisions of this Agreement or of the Warrant Certificates.

(g) **No Liability for Invalidity.** The Warrant Agent shall have no liability with respect to any invalidity of this Agreement or any of the Warrant Certificates (except as to the Warrant Agent's countersignature thereon).

(h) **No Responsibility for Representations.** The Warrant Agent shall not be responsible for any of the recitals or representations herein or in the Warrant Certificates (except as to the Warrant Agent's countersignature thereon), all of which are made solely by the Company.

(i) **No Implied Obligations.** The Warrant Agent shall be obligated to perform only such duties as are herein and in the Warrant Certificates specifically set forth and no implied duties or obligations shall be read into this Agreement or the Warrant Certificates against the Warrant Agent. The Warrant Agent shall not be under any obligation to take any action hereunder which may tend to involve it in any expense or liability, the payment of which within a reasonable time is not, in its reasonable opinion, assured to it. The Warrant Agent shall not be accountable or under any duty or responsibility for the use by the Company of any of the Warrant Certificates authenticated by the Warrant Agent and delivered by it to the Company pursuant to this Agreement or for the application by the Company of the proceeds of the Warrant Certificates. The Warrant Agent shall have no duty or responsibility in case of any default by the Company in the performance of its covenants or agreements contained herein or in the Warrant Certificates or in the case of the receipt of any written demand from a holder of a Warrant Certificate with respect to such default, including, without limiting the generality of the foregoing, any duty or responsibility to initiate or attempt to initiate any proceedings at law or otherwise or, except as provided in Section 6.2 hereof, to make any demand upon the Company.

### 5.3 Resignation, Removal and Appointment of Successors.

**(a)** The Company agrees, for the benefit of the holders from time to time of the Warrant Certificates, that there shall at all times be a Warrant Agent hereunder until all the Warrants have been exercised or are no longer exercisable.

**(b)** The Warrant Agent may at any time resign as agent by giving written notice to the Company of such intention on its part, specifying the date on which its desired resignation shall become effective; provided that such date shall not be less than three months after the date on which such notice is given unless the Company otherwise agrees. The Warrant Agent hereunder may be removed at any time by the filing with it of an instrument in writing signed by or on behalf of the Company and specifying such removal and the intended date when it shall become effective. Such resignation or removal shall take effect upon the appointment by the Company, as hereinafter provided, of a successor Warrant Agent (which shall be a bank or trust company authorized under the laws of the jurisdiction of its organization to exercise corporate trust powers) and the acceptance of such appointment by such successor Warrant Agent. The obligation of the Company under Section 5.2(a) shall continue to the extent set forth therein notwithstanding the resignation or removal of the Warrant Agent.

**(c)** In case at any time the Warrant Agent shall resign, or shall be removed, or shall become incapable of acting, or shall be adjudged a bankrupt or insolvent, or shall commence a voluntary case under the Federal bankruptcy laws, as now or hereafter constituted, or under any other applicable Federal or state bankruptcy, insolvency or similar law or shall consent to the appointment of or taking possession by a receiver, custodian, liquidator, assignee, trustee, sequestrator (or other similar official) of the Warrant Agent or its property or affairs, or shall make an assignment for the benefit of creditors, or shall admit in writing its inability to pay its debts generally as they become due, or shall take corporate action in furtherance of any such action, or a decree or order for relief by a court having jurisdiction in the premises shall have been entered in respect of the Warrant Agent in an involuntary case under the Federal bankruptcy laws, as now or hereafter constituted, or any other applicable Federal or state bankruptcy, insolvency or similar law, or a decree or order by a court having jurisdiction in the premises shall have been entered for the appointment of a receiver, custodian, liquidator, assignee, trustee, sequestrator (or similar official) of the Warrant Agent or of its property or affairs, or any public officer shall take charge or control of the Warrant Agent or of its property or affairs for the purpose of rehabilitation, conservation, winding up or liquidation, a successor Warrant Agent, qualified as aforesaid, shall be appointed by the Company by an instrument in writing, filed with the successor Warrant Agent. Upon the appointment as aforesaid of a successor Warrant Agent and acceptance by the successor Warrant Agent of such appointment, the Warrant Agent shall cease to be Warrant Agent hereunder.

**(d)** Any successor Warrant Agent appointed hereunder shall execute, acknowledge and deliver to its predecessor and to the Company an instrument accepting such appointment hereunder, and thereupon such successor Warrant Agent, without any further act, deed or conveyance, shall become vested with all the authority, rights, powers, trusts, immunities, duties and obligations of such predecessor with like effect as if originally named as Warrant Agent hereunder, and such predecessor, upon payment of its charges and disbursements then unpaid, shall thereupon become obligated to transfer, deliver and pay over, and such successor Warrant Agent shall be entitled to receive, all monies, securities and other property on deposit with or held by such predecessor, as Warrant Agent hereunder.

**(e)** Any corporation into which the Warrant Agent hereunder may be merged or converted or any corporation with which the Warrant Agent may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which the Warrant Agent shall be a party, or any corporation to which the Warrant Agent shall sell or otherwise transfer all or substantially all the assets and business of the Warrant Agent, provided that it shall be qualified as aforesaid, shall be the

successor Warrant Agent under this Agreement without the execution or filing of any paper or any further act on the part of any of the parties hereto.

## Article 6

### MISCELLANEOUS

**6.1 Amendment.** This Agreement may be amended by the parties hereto, without the consent of the holder of any Warrant Certificate, for the purpose of curing any ambiguity, or of curing, correcting or supplementing any defective provision contained herein, or making any other provisions with respect to matters or questions arising under this Agreement as the Company and the Warrant Agent may deem necessary or desirable; provided that such action shall not materially adversely affect the interests of the holders of the Warrant Certificates.

**6.2 Notices and Demands to the Company and Warrant Agent.** If the Warrant Agent shall receive any notice or demand addressed to the Company by the holder of a Warrant Certificate pursuant to the provisions of the Warrant Certificates, the Warrant Agent shall promptly forward such notice or demand to the Company.

**6.3 Addresses.** Any communication from the Company to the Warrant Agent with respect to this Agreement shall be addressed to [●], Attention: [●] and any communication from the Warrant Agent to the Company with respect to this Agreement shall be addressed to Tourmaline Bio, Inc., 27 West 24th Street, Suite 702, New York, New York 10010, Attention: [●] (or such other address as shall be specified in writing by the Warrant Agent or by the Company).

**1.1 Governing Law.** This Agreement and each Warrant Certificate issued hereunder shall be governed by and construed in accordance with the laws of the State of New York.

**6.4 Delivery of Prospectus.** The Company shall furnish to the Warrant Agent sufficient copies of a prospectus meeting the requirements of the Securities Act of 1933, as amended, relating to the Warrant Securities deliverable upon exercise of the Warrants (the "**Prospectus**"), and the Warrant Agent agrees that upon the exercise of any Warrant, the Warrant Agent will deliver to the holder of the Warrant Certificate evidencing such Warrant, prior to or concurrently with the delivery of the Warrant Securities issued upon such exercise, a Prospectus. The Warrant Agent shall not, by reason of any such delivery, assume any responsibility for the accuracy or adequacy of such Prospectus.

**6.5 Obtaining of Governmental Approvals.** The Company will from time to time take all action which may be necessary to obtain and keep effective any and all permits, consents and approvals of governmental agencies and authorities and securities act filings under United States Federal and state laws (including without limitation a registration statement in respect of the Warrants and Warrant Securities under the Securities Act of 1933, as amended), which may be or become requisite in connection with the issuance, sale, transfer, and delivery of the Warrant Securities issued upon exercise of the Warrants, the issuance, sale, transfer and delivery of the Warrants or upon the expiration of the period during which the Warrants are exercisable.

**6.6 Persons Having Rights Under the Agreement.** Nothing in this Agreement shall give to any person other than the Company, the Warrant Agent and the holders of the Warrant Certificates any right, remedy or claim under or by reason of this Agreement.

**6.7 Headings.** The descriptive headings of the several Articles and Sections of this Agreement are inserted for convenience only and shall not control or affect the meaning or construction of any of the provisions hereof.

**6.8 Counterparts.** This Agreement may be executed in any number of counterparts, each of which as so executed shall be deemed to be an original, but such counterparts shall together constitute but one and the same instrument.

**6.9 Inspection of Agreement.** A copy of this Agreement shall be available at all reasonable times at the principal corporate trust office of the Warrant Agent for inspection by the holder of any Warrant Certificate. The Warrant Agent may require such holder to submit such holder's Warrant Certificate for inspection by it.

**In Witness Whereof**, the parties hereto have caused this Agreement to be duly executed as of the day and year first above written.

**TOURMALINE BIO, INC.**, as Company

By: \_\_\_  
Name: \_\_\_  
Title: \_\_\_

**Attest:** \_\_\_  
\_\_\_

**Countersigned**

**[•]**, as Warrant Agent

By: \_\_\_  
Name: \_\_\_  
Title: \_\_\_

**Attest:** \_\_\_  
\_\_\_

**Exhibit A**

**FORM OF WARRANT CERTIFICATE  
[FACE OF WARRANT CERTIFICATE]**

*[Form of Legend if Warrants are not immediately exercisable.]*

[Prior to [●], Warrants evidenced by this Warrant Certificate cannot be exercised.]

EXERCISABLE ONLY IF COUNTERSIGNED BY THE WARRANT AGENT AS PROVIDED HEREIN

VOID AFTER [●] P.M., [City] time, ON [●].

**TOURMALINE BIO, INC.**  
**WARRANT CERTIFICATE REPRESENTING**  
**WARRANTS TO PURCHASE**  
**[TITLE OF WARRANT SECURITIES]**

No. [●] [●] Warrants

This certifies that [●] or registered assigns is the registered owner of the above indicated number of Warrants, each Warrant entitling such owner to purchase, at any time [after [●] p.m., [City] time, [on [●] and] on or before [●] p.m., [City] time, on [●], [●] shares of [TITLE OF WARRANT SECURITIES], par value \$0.0001 per share (the “*Warrant Securities*”), of Tourmaline Bio, Inc. (the “*Company*”) on the following basis: during the period from [●], through and including [●], the exercise price per Warrant Security will be \$[●], subject to adjustment as provided in the Warrant Agreement (as hereinafter defined) (the “*Warrant Price*”). The Holder may exercise the Warrants evidenced hereby by providing certain information set forth on the back hereof and by paying in full, in lawful money of the United States of America, [in cash or by certified check or official bank check in New York Clearing House funds] [by bank wire transfer in immediately available funds], the Warrant Price for each Warrant Security with respect to which this Warrant is exercised to the Warrant Agent (as hereinafter defined) and by surrendering this Warrant Certificate, with the purchase form on the back hereof duly executed, at the corporate trust office of [name of Warrant Agent], or its successor as warrant agent (the “*Warrant Agent*”), which is, on the date hereof, at the address specified on the reverse hereof, and upon compliance with and subject to the conditions set forth herein and in the Warrant Agreement (as hereinafter defined).

The term “*Holder*” as used herein shall mean the person in whose name at the time this Warrant Certificate shall be registered upon the books to be maintained by the Warrant Agent for that purpose pursuant to Section 4 of the Warrant Agreement.

The Warrants evidenced by this Warrant Certificate may be exercised to purchase a whole number of Warrant Securities in registered form. Upon any exercise of fewer than all of the Warrants evidenced by this Warrant Certificate, there shall be issued to the Holder hereof a new Warrant Certificate evidencing Warrants for the number of Warrant Securities remaining unexercised.

This Warrant Certificate is issued under and in accordance with the Warrant Agreement dated as of [●] (the “*Warrant Agreement*”), between the Company and the Warrant Agent and is subject to the terms and provisions contained in the Warrant Agreement, to all of which terms and provisions the Holder of this Warrant Certificate consents by acceptance hereof. Copies of the Warrant Agreement are on file at the above-mentioned office of the Warrant Agent.

Transfer of this Warrant Certificate may be registered when this Warrant Certificate is surrendered at the corporate trust office of the Warrant Agent by the registered owner or such owner’s assigns, in the manner and subject to the limitations provided in the Warrant Agreement.

After countersignature by the Warrant Agent and prior to the expiration of this Warrant Certificate, this Warrant Certificate may be exchanged at the corporate trust office of the Warrant Agent for Warrant Certificates representing Warrants for the same aggregate number of Warrant Securities.

This Warrant Certificate shall not entitle the Holder hereof to any of the rights of a holder of the Warrant Securities, including, without limitation, the right to receive payments of dividends or distributions, if any, on the Warrant Securities (except to the extent set forth in the Warrant Agreement) or to exercise any voting rights.

Reference is hereby made to the further provisions of this Warrant Certificate set forth on the reverse hereof, which further provisions shall for all purposes have the same effect as if set forth at this place.

This Warrant Certificate shall not be valid or obligatory for any purpose until countersigned by the Warrant Agent.

**In Witness Whereof**, the Company has caused this Warrant to be executed in its name and on its behalf by the facsimile signatures of its duly authorized officers.

Dated: \_\_\_\_\_

**TOURMALINE BIO, INC.**, as Company

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

**ATTEST:** \_\_\_\_\_  
\_\_\_\_\_

**COUNTERSIGNED**

**[●]**, as Warrant Agent

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

**ATTEST:** \_\_\_\_\_  
\_\_\_\_\_



[REVERSE OF WARRANT CERTIFICATE]

(Instructions for Exercise of Warrant)

To exercise any Warrants evidenced hereby for Warrant Securities (as hereinafter defined), the Holder must pay, in lawful money of the United States of America, [in cash or by certified check or official bank check in New York Clearing House funds] [by bank wire transfer in immediately available funds], the Warrant Price in full for Warrants exercised, to [●] [address of Warrant Agent], Attention: [●], which payment must specify the name of the Holder and the number of Warrants exercised by such Holder. In addition, the Holder must complete the information required below and present this Warrant Certificate in person or by mail (certified or registered mail is recommended) to the Warrant Agent at the appropriate address set forth above. This Warrant Certificate, completed and duly executed, must be received by the Warrant Agent within five business days of the payment.

(To be executed upon exercise of Warrants)

The undersigned hereby irrevocably elects to exercise \_\_\_\_\_ Warrants, evidenced by this Warrant Certificate, to purchase \_\_\_\_\_ shares of the [TITLE OF WARRANT SECURITIES], par value \$0.0001 per share (the "*Warrant Securities*"), of Tourmaline Bio, Inc. and represents that the undersigned has tendered payment for such Warrant Securities, in lawful money of the United States of America, [in cash or by certified check or official bank check in New York Clearing House funds] [by bank wire transfer in immediately available funds], to the order of Tourmaline Bio, Inc., c/o [insert name and address of Warrant Agent], in the amount of \$\_\_\_\_\_ in accordance with the terms hereof. The undersigned requests that said Warrant Securities be in fully registered form in the authorized denominations, registered in such names and delivered all as specified in accordance with the instructions set forth below.

If the number of Warrants exercised is less than all of the Warrants evidenced hereby, the undersigned requests that a new Warrant Certificate evidencing the Warrants for the number of Warrant Securities remaining unexercised be issued and delivered to the undersigned unless otherwise specified in the instructions below.

Dated: \_\_\_ Name: \_\_\_

Please Print

Address:

\_\_\_\_\_  
(Insert Social Security or Other Identifying Number of Holder)

Signature Guaranteed: \_\_\_ Signature

(Signature must conform in all respects to name of holder as specified on the face of this Warrant Certificate and must bear a signature guarantee by a FINRA member firm).

This Warrant may be exercised at the following addresses: By hand at:

[•]

By mail at:

[Instructions as to form and delivery of Warrant Securities and, if applicable, Warrant Certificates evidencing Warrants for the number of Warrant Securities remaining unexercised—complete as appropriate.]

**ASSIGNMENT**

[Form of assignment to be executed if Warrant Holder desires to transfer Warrant]

**For Value Received,** \_\_\_\_\_ hereby sells, assigns and transfers unto:

\_\_\_\_\_  
(Please print name and address including zip code) Please print Social Security or other identifying number

the right represented by the within Warrant to purchase \_\_\_\_\_ shares of [Title of Warrant Securities] of Tourmaline Bio, Inc. to which the within Warrant relates and appoints \_\_\_\_\_ attorney to transfer such right on the books of the Warrant Agent with full power of substitution in the premises.

Dated: \_\_\_\_ Name: \_\_\_\_

Signature

(Signature must conform in all respects to name of holder as specified on the face of the Warrant)

Signature Guaranteed

—

**TOURMALINE BIO, INC.**

**and**

\_\_\_\_\_, **As Warrant Agent**

**Form of Debt Securities  
Warrant Agreement**

**Dated As Of** \_\_\_\_\_

## Tourmaline Bio, Inc. Form of Debt Securities Warrant Agreement

This **Debt Securities Warrant Agreement** (this “*Agreement*”), dated as of [●], between **Tourmaline Bio, Inc.**, a Delaware corporation (the “*Company*”), and [●], a [corporation] [national banking association] organized and existing under the laws of [●] and having a corporate trust office in [●], as warrant agent (the “*Warrant Agent*”).

**WHEREAS**, the Company has entered into an indenture dated as of [●] (the “*Indenture*”), with [●], as trustee (such trustee, and any successors to such trustee, herein called the “*Trustee*”), providing for the issuance from time to time of its debt securities, to be issued in one or more series as provided in the Indenture (the “*Debt Securities*”);

**Whereas**, the Company proposes to sell [*If Warrants are sold with other securities* —[title of such other securities being offered] (the “*Other Securities*”) with] warrant certificates evidencing one or more warrants (the “*Warrants*” or, individually, a “*Warrant*”) representing the right to purchase [title of Debt Securities purchasable through exercise of Warrants] (the “*Warrant Debt Securities*”), such warrant certificates and other warrant certificates issued pursuant to this Agreement being herein called the “*Warrant Certificates*”; and

**Whereas**, the Company desires the Warrant Agent to act on behalf of the Company, and the Warrant Agent is willing so to act, in connection with the issuance, registration, transfer, exchange, exercise and replacement of the Warrant Certificates, and in this Agreement wishes to set forth, among other things, the form and provisions of the Warrant Certificates and the terms and conditions on which they may be issued, registered, transferred, exchanged, exercised and replaced.

**Now Therefore**, in consideration of the premises and of the mutual agreements herein contained, the parties hereto agree as follows:

### Article 1

#### ISSUANCE OF WARRANTS AND EXECUTION AND DELIVERY OF WARRANT CERTIFICATES

**1.1 Issuance of Warrants.** [*If Warrants alone* — Upon issuance, each Warrant Certificate shall evidence one or more Warrants.] [*If Other Securities and Warrants* — Warrant Certificates will be issued in connection with the issuance of the Other Securities but shall be separately transferable and each Warrant Certificate shall evidence one or more Warrants.] Each Warrant evidenced thereby shall represent the right, subject to the provisions contained herein and therein, to purchase one Warrant Debt Security. [*If Other Securities and Warrants* — Warrant Certificates will be issued with the Other Securities and each Warrant Certificate will evidence [●] Warrants for each [\$●] principal amount] [[●] shares] of Other Securities issued.]

**1.2 Execution and Delivery of Warrant Certificates.** Each Warrant Certificate, whenever issued, shall be in registered form substantially in the form set forth in **Exhibit A** hereto, shall be dated the date of its countersignature by the Warrant Agent and may have such letters, numbers, or other marks of identification or designation and such legends or endorsements printed, lithographed or engraved thereon as the officers of the Company executing the same may approve (execution thereof to be conclusive evidence of such approval) and as are not inconsistent with the provisions of this Agreement, or as may be required to comply with any law or with any rule or regulation made pursuant thereto or

with any rule or regulation of any securities exchange on which the Warrants may be listed, or to conform to usage. The Warrant Certificates shall be signed on behalf of the Company by any of its present or future chief executive officers, presidents, senior vice presidents, vice presidents, chief financial officers, chief legal officers, treasurers, assistant treasurers, controllers, assistant controllers, secretaries or assistant secretaries under its corporate seal reproduced thereon. Such signatures may be manual or facsimile signatures of such authorized officers and may be imprinted or otherwise reproduced on the Warrant Certificates. The seal of the Company may be in the form of a facsimile thereof and may be impressed, affixed, imprinted or otherwise reproduced on the Warrant Certificates.

No Warrant Certificate shall be valid for any purpose, and no Warrant evidenced thereby shall be exercisable, until such Warrant Certificate has been countersigned by the manual signature of the Warrant Agent. Such signature by the Warrant Agent upon any Warrant Certificate executed by the Company shall be conclusive evidence that the Warrant Certificate so countersigned has been duly issued hereunder.

In case any officer of the Company who shall have signed any of the Warrant Certificates either manually or by facsimile signature shall cease to be such officer before the Warrant Certificates so signed shall have been countersigned and delivered by the Warrant Agent, such Warrant Certificates may be countersigned and delivered notwithstanding that the person who signed such Warrant Certificates ceased to be such officer of the Company; and any Warrant Certificate may be signed on behalf of the Company by such persons as, at the actual date of the execution of such Warrant Certificate, shall be the proper officers of the Company, although at the date of the execution of this Agreement any such person was not such officer.

The term “*holder*” or “*holder of a Warrant Certificate*” as used herein shall mean any person in whose name at the time any Warrant Certificate shall be registered upon the books to be maintained by the Warrant Agent for that purpose.

**1.3 Issuance of Warrant Certificates.** Warrant Certificates evidencing the right to purchase Warrant Debt Securities may be executed by the Company and delivered to the Warrant Agent upon the execution of this Agreement or from time to time thereafter. The Warrant Agent shall, upon receipt of Warrant Certificates duly executed on behalf of the Company, countersign such Warrant Certificates and shall deliver such Warrant Certificates to or upon the order of the Company.

## Article 2

### WARRANT PRICE, DURATION AND EXERCISE OF WARRANTS

**2.1 Warrant Price.** During the period specified in Section 2.2, each Warrant shall, subject to the terms of this Agreement and the applicable Warrant Certificate, entitle the holder thereof to purchase the principal amount of Warrant Debt Securities specified in the applicable Warrant Certificate at an exercise price of [●]% of the principal amount thereof [plus accrued amortization, if any, of the original issue discount of the Warrant Debt Securities] [plus accrued interest, if any, from the most recent date from which interest shall have been paid on the Warrant Debt Securities or, if no interest shall have been paid on the Warrant Debt Securities, from the date of their initial issuance.] [The original issue discount (\$[●] for each \$1,000 principal amount of Warrant Debt Securities) will be amortized at a [●]% annual rate, computed on a[n] [semi-] annual basis [using a 360-day year consisting of twelve 30-day months].] Such purchase price for the Warrant Debt Securities is referred to in this Agreement as the “*Warrant Price*.”

**2.2 Duration of Warrants.** Each Warrant may be exercised in whole or in part at any time, as specified herein, on or after [the date thereof] [●] and at or before [●] p.m., [City] time, on [●] or such later date as the Company may designate by notice to the Warrant Agent and the holders of Warrant Certificates mailed to their addresses as set forth in the record books of the Warrant Agent (the “*Expiration Date*”). Each Warrant not exercised at or before [●] p.m., [City] time, on the Expiration Date shall become void, and all rights of the holder of the Warrant Certificate evidencing such Warrant under this Agreement shall cease.

**2.3 Exercise of Warrants.**

(a) During the period specified in Section 2.2, the Warrants may be exercised to purchase a whole number of Warrant Debt Securities in registered form by providing certain information as set forth on the reverse side of the Warrant Certificate and by paying in full, in lawful money of the United States of America, [in cash or by certified check or official bank check in New York Clearing House funds] [by bank wire transfer in immediately available funds] the Warrant Price for each Warrant Debt Security with respect to which a Warrant is being exercised to the Warrant Agent at its corporate trust office, provided that such exercise is subject to receipt within five business days of such payment by the Warrant Agent of the Warrant Certificate with the form of election to purchase Warrant Debt Securities set forth on the reverse side of the Warrant Certificate properly completed and duly executed. The date on which payment in full of the Warrant Price is received by the Warrant Agent shall, subject to receipt of the Warrant Certificate as aforesaid, be deemed to be the date on which the Warrant is exercised; provided, however, that if, at the date of receipt of such Warrant Certificates and payment in full of the Warrant Price, the transfer books for the Warrant Debt Securities purchasable upon the exercise of such Warrants shall be closed, no such receipt of such Warrant Certificates and no such payment of such Warrant Price shall be effective to constitute the person so designated to be named as the holder of record of such Warrant Debt Securities on such date, but shall be effective to constitute such person as the holder of record of such Warrant Debt Securities for all purposes at the opening of business on the next succeeding day on which the transfer books for the Warrant Debt Securities purchasable upon the exercise of such Warrants shall be opened, and the certificates for the Warrant Debt Securities in respect of which such Warrants are then exercised shall be issuable as of the date on such next succeeding day on which the transfer books shall next be opened, and until such date the Company shall be under no duty to deliver any certificate for such Warrant Debt Securities. The Warrant Agent shall deposit all funds received by it in payment of the Warrant Price in an account of the Company maintained with it and shall advise the Company by telephone at the end of each day on which a payment for the exercise of Warrants is received of the amount so deposited to its account. The Warrant Agent shall promptly confirm such telephone advice to the Company in writing.

(b) The Warrant Agent shall, from time to time, as promptly as practicable, advise the Company of (i) the number of Warrant Debt Securities with respect to which Warrants were exercised, (ii) the instructions of each holder of the Warrant Certificates evidencing such Warrants with respect to delivery of the Warrant Debt Securities to which such holder is entitled upon such exercise, (iii) delivery of Warrant Certificates evidencing the balance, if any, of the Warrants for the remaining Warrant Debt Securities after such exercise, and (iv) such other information as the Company or the Trustee shall reasonably require.

(c) As soon as practicable after the exercise of any Warrant, the Company shall issue pursuant to the Indenture, in authorized denominations, to or upon the order of the holder of the Warrant Certificate evidencing such Warrant the Warrant Debt Securities to which such holder is entitled, in fully registered form, registered in such name or names as may be directed by such holder. If fewer than all of

the Warrants evidenced by such Warrant Certificate are exercised, the Company shall execute, and an authorized officer of the Warrant Agent shall manually countersign and deliver, a new Warrant Certificate evidencing Warrants for the number of Warrant Debt Securities remaining unexercised.

(d) The Company shall not be required to pay any stamp or other tax or other governmental charge required to be paid in connection with any transfer involved in the issue of the Warrant Debt Securities, and in the event that any such transfer is involved, the Company shall not be required to issue or deliver any Warrant Debt Securities until such tax or other charge shall have been paid or it has been established to the Company's satisfaction that no such tax or other charge is due.

(e) Prior to the issuance of any Warrants there shall have been reserved, and the Company shall at all times through the Expiration Date keep reserved, out of its authorized but unissued Warrant Debt Securities, a number of shares sufficient to provide for the exercise of the Warrants.

### Article 3

#### OTHER PROVISIONS RELATING TO RIGHTS OF HOLDERS OF WARRANT CERTIFICATES

**3.1 No Rights as Holder of Warrant Debt Securities Conferred by Warrants or Warrant Certificates.** No Warrant Certificate or Warrant evidenced thereby shall entitle the holder thereof to any of the rights of a holder of Warrant Debt Securities, including, without limitation, the right to receive the payment of principal of (or premium, if any) or interest, if any, on the Warrant Debt Securities or to enforce any of the covenants in the Indenture.

**3.2 Lost, Stolen, Mutilated or Destroyed Warrant Certificates.** Upon receipt by the Warrant Agent of evidence reasonably satisfactory to it and the Company of the ownership of and the loss, theft, destruction or mutilation of any Warrant Certificate and/or indemnity reasonably satisfactory to the Warrant Agent and the Company and, in the case of mutilation, upon surrender of the mutilated Warrant Certificate to the Warrant Agent for cancellation, then, in the absence of notice to the Company or the Warrant Agent that such Warrant Certificate has been acquired by a bona fide purchaser, the Company shall execute, and an authorized officer of the Warrant Agent shall manually countersign and deliver, in exchange for or in lieu of the lost, stolen, destroyed or mutilated Warrant Certificate, a new Warrant Certificate of the same tenor and evidencing Warrants for a like principal amount of Warrant Debt Securities. Upon the issuance of any new Warrant Certificate under this Section 3.2, 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 Warrant Agent) in connection therewith. Every substitute Warrant Certificate executed and delivered pursuant to this Section 3.2 in lieu of any lost, stolen or destroyed Warrant Certificate shall represent an additional contractual obligation of the Company, whether or not the lost, stolen or destroyed Warrant Certificate shall be at any time enforceable by anyone, and shall be entitled to the benefits of this Agreement equally and proportionately with any and all other Warrant Certificates duly executed and delivered hereunder. The provisions of this Section 3.2 are exclusive and shall preclude (to the extent lawful) all other rights and remedies with respect to the replacement of mutilated, lost, stolen or destroyed Warrant Certificates.

**3.3 Holder of Warrant Certificate May Enforce Rights.** Notwithstanding any of the provisions of this Agreement, any holder of a Warrant Certificate, without the consent of the Warrant Agent, the Trustee, the holder of any Warrant Debt Securities or the holder of any other Warrant Certificate, may, in such holder's own behalf and for such holder's own benefit, enforce, and may



institute and maintain any suit, action or proceeding against the Company suitable to enforce, or otherwise in respect of, such holder's right to exercise the Warrants evidenced by such holder's Warrant Certificate in the manner provided in such holder's Warrant Certificates and in this Agreement.

**3.4 Merger, Sale, Conveyance or Lease.** In case of (a) any share exchange, merger or similar transaction of the Company with or into another person or entity (other than a share exchange, merger or similar transaction in which the Company is the acquiring or surviving corporation) or (b) the sale, exchange, lease, transfer or other disposition of all or substantially all of the properties and assets of the Company as an entirety (in any such case, a "**Reorganization Event**"), then, as a condition of such Reorganization Event, lawful provisions shall be made, and duly executed documents evidencing the same from the Company's successor shall be delivered to the holders of the Warrants, so that such successor shall succeed to and be substituted for the Company, and assume all the Company's obligations under, this Agreement and the Warrants. The Company shall thereupon be relieved of any further obligation hereunder or under the Warrants, and the Company as the predecessor corporation may thereupon or at any time thereafter be dissolved, wound up or liquidated. Such successor or assuming entity thereupon may cause to be signed, and may issue either in its own name or in the name of the Company, any or all of the Warrants issuable hereunder which heretofore shall not have been signed by the Company, and may execute and deliver securities in its own name, in fulfillment of its obligations to deliver Warrant Debt Securities upon exercise of the Warrants. All the Warrants so issued shall in all respects have the same legal rank and benefit under this Agreement as the Warrants theretofore or thereafter issued in accordance with the terms of this Agreement as though all of such Warrants had been issued at the date of the execution hereof. In any case of any such Reorganization Event, such changes in phraseology and form (but not in substance) may be made in the Warrants thereafter to be issued as may be appropriate. The Warrant Agent may receive a written opinion of legal counsel as conclusive evidence that any such Reorganization Event complies with the provisions of this Section 3.4.

**3.5 Notice to Warrantholders.** In case the Company shall (a) effect any Reorganization Event or (b) make any distribution on or in respect of the [title of Warrant Debt Securities] in connection with the dissolution, liquidation or winding up of the Company, then the Company shall mail to each holder of Warrants at such holder's address as it shall appear on the books of the Warrant Agent, at least ten days prior to the applicable date hereinafter specified, a notice stating the date on which such Reorganization Event, dissolution, liquidation or winding up is expected to become effective, and the date as of which it is expected that holders of [title of Warrant Debt Securities] of record shall be entitled to exchange their shares of [title of Warrant Debt Securities] for securities or other property deliverable upon such Reorganization Event, dissolution, liquidation or winding up. No failure to mail such notice nor any defect therein or in the mailing thereof shall affect any such transaction.

#### Article 4

#### EXCHANGE AND TRANSFER OF WARRANT CERTIFICATES

**4.1 Exchange and Transfer of Warrant Certificates.** Upon surrender at the corporate trust office of the Warrant Agent, Warrant Certificates evidencing Warrants may be exchanged for Warrant Certificates in other denominations evidencing such Warrants or the transfer thereof may be registered in whole or in part; provided that such other Warrant Certificates evidence Warrants for the same aggregate principal amount of Warrant Debt Securities as the Warrant Certificates so surrendered. The Warrant Agent shall keep, at its corporate trust office, books in which, subject to such reasonable regulations as it may prescribe, it shall register Warrant Certificates and exchanges and transfers of outstanding Warrant Certificates, upon surrender of the Warrant Certificates to the Warrant Agent at its corporate trust office

for exchange or registration of transfer, properly endorsed or accompanied by appropriate instruments of registration of transfer and written instructions for transfer, all in form satisfactory to the Company and the Warrant Agent. No service charge shall be made for any exchange or registration of transfer of Warrant Certificates, but the Company may require payment of a sum sufficient to cover any stamp or other tax or other governmental charge that may be imposed in connection with any such exchange or registration of transfer. Whenever any Warrant Certificates are so surrendered for exchange or registration of transfer, an authorized officer of the Warrant Agent shall manually countersign and deliver to the person or persons entitled thereto a Warrant Certificate or Warrant Certificates duly authorized and executed by the Company, as so requested. The Warrant Agent shall not be required to effect any exchange or registration of transfer which will result in the issuance of a Warrant Certificate evidencing a Warrant for a fraction of a Warrant Debt Security or a number of Warrants for a whole number of Warrant Debt Securities and a fraction of a Warrant Debt Security. All Warrant Certificates issued upon any exchange or registration of transfer of Warrant Certificates shall be the valid obligations of the Company, evidencing the same obligations and entitled to the same benefits under this Agreement as the Warrant Certificate surrendered for such exchange or registration of transfer.

**4.2 Treatment of Holders of Warrant Certificates.** The Company, the Warrant Agent and all other persons may treat the registered holder of a Warrant Certificate as the absolute owner thereof for any purpose and as the person entitled to exercise the rights represented by the Warrants evidenced thereby, any notice to the contrary notwithstanding.

**4.3 Cancellation of Warrant Certificates.** Any Warrant Certificate surrendered for exchange, registration of transfer or exercise of the Warrants evidenced thereby shall, if surrendered to the Company, be delivered to the Warrant Agent and all Warrant Certificates surrendered or so delivered to the Warrant Agent shall be promptly canceled by the Warrant Agent and shall not be reissued and, except as expressly permitted by this Agreement, no Warrant Certificate shall be issued hereunder in exchange therefor or in lieu thereof. The Warrant Agent shall deliver to the Company from time to time or otherwise dispose of canceled Warrant Certificates in a manner satisfactory to the Company.

## Article 5

### CONCERNING THE WARRANT AGENT

**5.1 Warrant Agent.** The Company hereby appoints [●] as Warrant Agent of the Company in respect of the Warrants and the Warrant Certificates upon the terms and subject to the conditions herein set forth, and [●] hereby accepts such appointment. The Warrant Agent shall have the powers and authority granted to and conferred upon it in the Warrant Certificates and hereby and such further powers and authority to act on behalf of the Company as the Company may hereafter grant to or confer upon it. All of the terms and provisions with respect to such powers and authority contained in the Warrant Certificates are subject to and governed by the terms and provisions hereof.

**5.2 Conditions of Warrant Agent's Obligations.** The Warrant Agent accepts its obligations herein set forth upon the terms and conditions hereof, including the following to all of which the Company agrees and to all of which the rights hereunder of the holders from time to time of the Warrant Certificates shall be subject:

**(a) Compensation and Indemnification.** The Company agrees promptly to pay the Warrant Agent the compensation to be agreed upon with the Company for all services rendered by the Warrant Agent and to reimburse the Warrant Agent for reasonable out-of-pocket expenses (including

reasonable counsel fees) incurred without negligence, bad faith or willful misconduct by the Warrant Agent in connection with the services rendered hereunder by the Warrant Agent. The Company also agrees to indemnify the Warrant Agent for, and to hold it harmless against, any loss, liability or expense incurred without negligence, bad faith or willful misconduct on the part of the Warrant Agent, arising out of or in connection with its acting as Warrant Agent hereunder, including the reasonable costs and expenses of defending against any claim of such liability.

**(b) Agent for the Company.** In acting under this Agreement and in connection with the Warrant Certificates, the Warrant Agent is acting solely as agent of the Company and does not assume any obligations or relationship of agency or trust for or with any of the holders of Warrant Certificates or beneficial owners of Warrants.

**(c) Counsel.** The Warrant Agent may consult with counsel satisfactory to it, which may include counsel for the Company, and the written advice of such counsel shall be full and complete authorization and protection in respect of any action taken, suffered or omitted by it hereunder in good faith and in accordance with the advice of such counsel.

**(d) Documents.** The Warrant Agent shall be protected and shall incur no liability for or in respect of any action taken or omitted by it in reliance upon any Warrant Certificate, notice, direction, consent, certificate, affidavit, statement or other paper or document reasonably believed by it to be genuine and to have been presented or signed by the proper parties.

**(e) Certain Transactions.** The Warrant Agent, and its officers, directors and employees, may become the owner of, or acquire any interest in, Warrants, with the same rights that it or they would have if it were not the Warrant Agent hereunder, and, to the extent permitted by applicable law, it or they may engage or be interested in any financial or other transaction with the Company and may act on, or as depository, trustee or agent for, any committee or body of holders of Warrant Debt Securities or other obligations of the Company as freely as if it were not the Warrant Agent hereunder. Nothing in this Agreement shall be deemed to prevent the Warrant Agent from acting as trustee under any indenture to which the Company is a party, including, without limitation, as Trustee under the Indenture.

**(f) No Liability for Interest.** Unless otherwise agreed with the Company, the Warrant Agent shall have no liability for interest on any monies at any time received by it pursuant to any of the provisions of this Agreement or of the Warrant Certificates.

**(g) No Liability for Invalidity.** The Warrant Agent shall have no liability with respect to any invalidity of this Agreement or any of the Warrant Certificates (except as to the Warrant Agent's countersignature thereon).

**(h) No Responsibility for Representations.** The Warrant Agent shall not be responsible for any of the recitals or representations herein or in the Warrant Certificates (except as to the Warrant Agent's countersignature thereon), all of which are made solely by the Company.

**(i) No Implied Obligations.** The Warrant Agent shall be obligated to perform only such duties as are herein and in the Warrant Certificates specifically set forth and no implied duties or obligations shall be read into this Agreement or the Warrant Certificates against the Warrant Agent. The Warrant Agent shall not be under any obligation to take any action hereunder which may tend to involve it in any expense or liability, the payment of which within a reasonable time is not, in its reasonable opinion, assured to it. The Warrant Agent shall not be accountable or under any duty or responsibility for the use by the Company of any of the Warrant Certificates authenticated by the Warrant Agent and

delivered by it to the Company pursuant to this Agreement or for the application by the Company of the proceeds of the Warrant Certificates. The Warrant Agent shall have no duty or responsibility in case of any default by the Company in the performance of its covenants or agreements contained herein or in the Warrant Certificates or in the case of the receipt of any written demand from a holder of a Warrant Certificate with respect to such default, including, without limiting the generality of the foregoing, any duty or responsibility to initiate or attempt to initiate any proceedings at law or otherwise or, except as provided in Section 6.2 hereof, to make any demand upon the Company.

### **5.3 Resignation, Removal and Appointment of Successors.**

(a) The Company agrees, for the benefit of the holders from time to time of the Warrant Certificates, that there shall at all times be a Warrant Agent hereunder until all the Warrants have been exercised or are no longer exercisable.

(b) The Warrant Agent may at any time resign as agent by giving written notice to the Company of such intention on its part, specifying the date on which its desired resignation shall become effective; provided that such date shall not be less than three months after the date on which such notice is given unless the Company otherwise agrees. The Warrant Agent hereunder may be removed at any time by the filing with it of an instrument in writing signed by or on behalf of the Company and specifying such removal and the intended date when it shall become effective. Such resignation or removal shall take effect upon the appointment by the Company, as hereinafter provided, of a successor Warrant Agent (which shall be a bank or trust company authorized under the laws of the jurisdiction of its organization to exercise corporate trust powers) and the acceptance of such appointment by such successor Warrant Agent. The obligation of the Company under Section 5.2(a) shall continue to the extent set forth therein notwithstanding the resignation or removal of the Warrant Agent.

(c) In case at any time the Warrant Agent shall resign, or shall be removed, or shall become incapable of acting, or shall be adjudged a bankrupt or insolvent, or shall commence a voluntary case under the Federal bankruptcy laws, as now or hereafter constituted, or under any other applicable Federal or state bankruptcy, insolvency or similar law or shall consent to the appointment of or taking possession by a receiver, custodian, liquidator, assignee, trustee, sequestrator (or other similar official) of the Warrant Agent or its property or affairs, or shall make an assignment for the benefit of creditors, or shall admit in writing its inability to pay its debts generally as they become due, or shall take corporate action in furtherance of any such action, or a decree or order for relief by a court having jurisdiction in the premises shall have been entered in respect of the Warrant Agent in an involuntary case under the Federal bankruptcy laws, as now or hereafter constituted, or any other applicable Federal or state bankruptcy, insolvency or similar law, or a decree or order by a court having jurisdiction in the premises shall have been entered for the appointment of a receiver, custodian, liquidator, assignee, trustee, sequestrator (or similar official) of the Warrant Agent or of its property or affairs, or any public officer shall take charge or control of the Warrant Agent or of its property or affairs for the purpose of rehabilitation, conservation, winding up or liquidation, a successor Warrant Agent, qualified as aforesaid, shall be appointed by the Company by an instrument in writing, filed with the successor Warrant Agent. Upon the appointment as aforesaid of a successor Warrant Agent and acceptance by the successor Warrant Agent of such appointment, the Warrant Agent shall cease to be Warrant Agent hereunder.

(d) Any successor Warrant Agent appointed hereunder shall execute, acknowledge and deliver to its predecessor and to the Company an instrument accepting such appointment hereunder, and thereupon such successor Warrant Agent, without any further act, deed or conveyance, shall become vested with all the authority, rights, powers, trusts, immunities, duties and obligations of such predecessor

with like effect as if originally named as Warrant Agent hereunder, and such predecessor, upon payment of its charges and disbursements then unpaid, shall thereupon become obligated to transfer, deliver and pay over, and such successor Warrant Agent shall be entitled to receive, all monies, securities and other property on deposit with or held by such predecessor, as Warrant Agent hereunder.

(e) Any corporation into which the Warrant Agent hereunder may be merged or converted or any corporation with which the Warrant Agent may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which the Warrant Agent shall be a party, or any corporation to which the Warrant Agent shall sell or otherwise transfer all or substantially all the assets and business of the Warrant Agent, provided that it shall be qualified as aforesaid, shall be the successor Warrant Agent under this Agreement without the execution or filing of any paper or any further act on the part of any of the parties hereto.

## Article 6

### MISCELLANEOUS

**6.1 Amendment.** This Agreement may be amended by the parties hereto, without the consent of the holder of any Warrant Certificate, for the purpose of curing any ambiguity, or of curing, correcting or supplementing any defective provision contained herein, or making any other provisions with respect to matters or questions arising under this Agreement as the Company and the Warrant Agent may deem necessary or desirable; provided that such action shall not materially adversely affect the interests of the holders of the Warrant Certificates.

**6.2 Notices and Demands to the Company and Warrant Agent.** If the Warrant Agent shall receive any notice or demand addressed to the Company by the holder of a Warrant Certificate pursuant to the provisions of the Warrant Certificates, the Warrant Agent shall promptly forward such notice or demand to the Company.

**6.3 Addresses.** Any communication from the Company to the Warrant Agent with respect to this Agreement shall be addressed to [●], Attention: [●] and any communication from the Warrant Agent to the Company with respect to this Agreement shall be addressed to Tourmaline Bio, Inc., 27 West 24th Street, Suite 702, New York, New York 10010, Attention: [●] (or such other address as shall be specified in writing by the Warrant Agent or by the Company).

**1.1 Governing Law.** This Agreement and each Warrant Certificate issued hereunder shall be governed by and construed in accordance with the laws of the State of New York.

**6.4 Delivery of Prospectus.** The Company shall furnish to the Warrant Agent sufficient copies of a prospectus meeting the requirements of the Securities Act of 1933, as amended, relating to the Warrant Debt Securities deliverable upon exercise of the Warrants (the “*Prospectus*”), and the Warrant Agent agrees that upon the exercise of any Warrant, the Warrant Agent will deliver to the holder of the Warrant Certificate evidencing such Warrant, prior to or concurrently with the delivery of the Warrant Debt Securities issued upon such exercise, a Prospectus. The Warrant Agent shall not, by reason of any such delivery, assume any responsibility for the accuracy or adequacy of such Prospectus.

**6.5 Obtaining of Governmental Approvals.** The Company will from time to time take all action which may be necessary to obtain and keep effective any and all permits, consents and approvals of governmental agencies and authorities and securities act filings under United States Federal and state laws (including without limitation a registration statement in respect of the Warrants and Warrant Debt

Securities under the Securities Act of 1933, as amended), which may be or become requisite in connection with the issuance, sale, transfer, and delivery of the Warrant Debt Securities issued upon exercise of the Warrants, the issuance, sale, transfer and delivery of the Warrants or upon the expiration of the period during which the Warrants are exercisable.

**6.6 Persons Having Rights Under the Agreement.** Nothing in this Agreement shall give to any person other than the Company, the Warrant Agent and the holders of the Warrant Certificates any right, remedy or claim under or by reason of this Agreement.

**6.7 Headings.** The descriptive headings of the several Articles and Sections of this Agreement are inserted for convenience only and shall not control or affect the meaning or construction of any of the provisions hereof.

**6.8 Counterparts.** This Agreement may be executed in any number of counterparts, each of which as so executed shall be deemed to be an original, but such counterparts shall together constitute but one and the same instrument.

**6.9 Inspection of Agreement.** A copy of this Agreement shall be available at all reasonable times at the principal corporate trust office of the Warrant Agent for inspection by the holder of any Warrant Certificate. The Warrant Agent may require such holder to submit such holder's Warrant Certificate for inspection by it.

**In Witness Whereof**, the parties hereto have caused this Agreement to be duly executed as of the day and year first above written.

**TOURMALINE BIO, INC.**, as Company

By: \_\_\_  
Name: \_\_\_  
Title: \_\_\_

**Attest:** \_\_\_  
\_\_\_

**Countersigned**

**[•]**, as Warrant Agent

By: \_\_\_  
Name: \_\_\_  
Title: \_\_\_

**Attest:** \_\_\_  
\_\_\_

**Exhibit A**

**FORM OF WARRANT CERTIFICATE  
[FACE OF WARRANT CERTIFICATE]**

*[Form of Legend if Warrants are not immediately exercisable.]*

[Prior to [●], Warrants evidenced by this Warrant Certificate cannot be exercised.]

EXERCISABLE ONLY IF COUNTERSIGNED BY THE WARRANT AGENT AS PROVIDED HEREIN

VOID AFTER [●] P.M., [City] time, ON [●].



**TOURMALINE BIO, INC.**  
**WARRANT CERTIFICATE REPRESENTING**  
**WARRANTS TO PURCHASE**  
**[TITLE OF WARRANT DEBT SECURITIES]**

No. [●] [●] Warrants

This certifies that [●] or registered assigns is the registered owner of the above indicated number of Warrants, each Warrant entitling such owner to purchase, at any time [after [●] p.m., [City] time, [on [●] and] on or before [●] p.m., [City] time, on [●], \$[●] principal amount of [TITLE OF WARRANT DEBT SECURITIES] (the “*Warrant Debt Securities*”), of Tourmaline Bio, Inc. (the “*Company*”) issued or to be issued under the Indenture (as hereinafter defined), on the following basis: during the period from [●], through and including [●], each Warrant shall entitle the Holder thereof, subject to the provisions of this Agreement, to purchase the principal amount of Warrant Debt Securities stated in the Warrant Certificate at the warrant price (the “*Warrant Price*”) of [●]% of the principal amount thereof [plus accrued amortization, if any, of the original issue discount of the Warrant Debt Securities] [plus accrued interest, if any, from the most recent date from which interest shall have been paid on the Warrant Debt Securities or, if no interest shall have been paid on the Warrant Debt Securities, from the date of their original issuance]. [The original issue discount (\$[●] for each \$1,000 principal amount of Warrant Debt Securities) will be amortized at a [●]% annual rate, computed on a[n] [semi-]annual basis [using a 360-day year consisting of twelve 30-day months]. The Holder may exercise the Warrants evidenced hereby by providing certain information set forth on the back hereof and by paying in full, in lawful money of the United States of America, [in cash or by certified check or official bank check in New York Clearing House funds] [by bank wire transfer in immediately available funds], the Warrant Price for each Warrant Debt Security with respect to which this Warrant is exercised to the Warrant Agent (as hereinafter defined) and by surrendering this Warrant Certificate, with the purchase form on the back hereof duly executed, at the corporate trust office of [name of Warrant Agent], or its successor as warrant agent (the “*Warrant Agent*”), which is, on the date hereof, at the address specified on the reverse hereof, and upon compliance with and subject to the conditions set forth herein and in the Warrant Agreement (as hereinafter defined).

The term “*Holder*” as used herein shall mean the person in whose name at the time this Warrant Certificate shall be registered upon the books to be maintained by the Warrant Agent for that purpose pursuant to Section 4 of the Warrant Agreement.

The Warrants evidenced by this Warrant Certificate may be exercised to purchase Warrant Debt Securities in the principal amount of \$1,000 or any integral multiple thereof in registered form. Upon any exercise of fewer than all of the Warrants evidenced by this Warrant Certificate, there shall be issued to the Holder hereof a new Warrant Certificate evidencing Warrants for the aggregate principal amount of Warrant Debt Securities remaining unexercised.

This Warrant Certificate is issued under and in accordance with the Warrant Agreement dated as of [●] (the “*Warrant Agreement*”), between the Company and the Warrant Agent and is subject to the terms and provisions contained in the Warrant Agreement, to all of which terms and provisions the Holder of this Warrant Certificate consents by acceptance hereof. Copies of the Warrant Agreement are on file at the above-mentioned office of the Warrant Agent.

The Warrant Debt Securities to be issued and delivered upon the exercise of Warrants evidenced by this Warrant Certificate will be issued under and in accordance with an Indenture, dated as of [●] (the “*Indenture*”), between the Company and [●], as trustee (such trustee, and any successors to such trustee, the “*Trustee*”) and will be subject to the terms and provisions contained in the Warrant Debt Securities and in the Indenture. Copies of the Indenture, including the form of the Warrant Debt Securities, are on file at the corporate trust office of the Trustee.

Transfer of this Warrant Certificate may be registered when this Warrant Certificate is surrendered at the corporate trust office of the Warrant Agent by the registered owner or such owner’s assigns, in the manner and subject to the limitations provided in the Warrant Agreement.

After countersignature by the Warrant Agent and prior to the expiration of this Warrant Certificate, this Warrant Certificate may be exchanged at the corporate trust office of the Warrant Agent for Warrant Certificates representing Warrants for the same aggregate principal amount of Warrant Debt Securities.

This Warrant Certificate shall not entitle the Holder hereof to any of the rights of a holder of the Warrant Debt Securities, including, without limitation, the right to receive payments of principal of (and premium, if any) or interest, if any, on the Warrant Debt Securities or to enforce any of the covenants of the Indenture.

Reference is hereby made to the further provisions of this Warrant Certificate set forth on the reverse hereof, which further provisions shall for all purposes have the same effect as if set forth at this place.

This Warrant Certificate shall not be valid or obligatory for any purpose until countersigned by the Warrant Agent.

**In Witness Whereof**, the Company has caused this Warrant to be executed in its name and on its behalf by the facsimile signatures of its duly authorized officers.

Dated: \_\_\_\_\_

**TOURMALINE BIO, INC.**, as Company

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

**ATTEST:** \_\_\_\_\_  
\_\_\_\_\_

**COUNTERSIGNED**

[●], as Warrant Agent

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

**ATTEST:** \_\_\_\_\_  
\_\_\_\_\_

[REVERSE OF WARRANT CERTIFICATE]

(Instructions for Exercise of Warrant)

To exercise any Warrants evidenced hereby for Warrant Debt Securities (as hereinafter defined), the Holder must pay, in lawful money of the United States of America, [in cash or by certified check or official bank check in New York Clearing House funds] [by bank wire transfer in immediately available funds], the Warrant Price in full for Warrants exercised, to [●] [address of Warrant Agent], Attention: [●], which payment must specify the name of the Holder and the number of Warrants exercised by such Holder. In addition, the Holder must complete the information required below and present this Warrant Certificate in person or by mail (certified or registered mail is recommended) to the Warrant Agent at the appropriate address set forth above. This Warrant Certificate, completed and duly executed, must be received by the Warrant Agent within five business days of the payment.

(To be executed upon exercise of Warrants)

The undersigned hereby irrevocably elects to exercise \_\_\_\_\_ Warrants, evidenced by this Warrant Certificate, to purchase \_\_\_\_\_ \$[●] principal amount of the [TITLE OF WARRANT DEBT SECURITIES] (the "*Warrant Debt Securities*"), of Tourmaline Bio, Inc. and represents that the undersigned has tendered payment for such Warrant Debt Securities, in lawful money of the United States of America, [in cash or by certified check or official bank check in New York Clearing House funds] [by bank wire transfer in immediately available funds], to the order of Tourmaline Bio, Inc., c/o [insert name and address of Warrant Agent], in the amount of \$\_\_\_\_\_ in accordance with the terms hereof. The undersigned requests that said principal amount of Warrant Debt Securities be in fully registered form in the authorized denominations, registered in such names and delivered all as specified in accordance with the instructions set forth below.

If the number of Warrants exercised is less than all of the Warrants evidenced hereby, the undersigned requests that a new Warrant Certificate evidencing the Warrants for the aggregate principal amount of Warrant Debt Securities remaining unexercised be issued and delivered to the undersigned unless otherwise specified in the instructions below.

Dated: \_\_\_ Name: \_\_\_

Please Print

Address:

\_\_\_\_\_  
(Insert Social Security or Other Identifying Number  
of Holder)

Signature Guaranteed: \_\_\_  
Signature

(Signature must conform in all respects to name of holder as specified on the face of this Warrant Certificate and must bear a signature guarantee by a FINRA member firm).

This Warrant may be exercised at the following addresses: By hand at:

[•]

By mail at:

[Instructions as to form and delivery of Warrant Debt Securities and, if applicable, Warrant Certificates evidencing Warrants for the number of Warrant Debt Securities remaining unexercised—complete as appropriate.]

**ASSIGNMENT**

[Form of assignment to be executed if Warrant Holder desires to transfer Warrant]

**For Value Received,** \_\_\_\_\_ hereby sells, assigns and transfers unto:

\_\_\_\_\_  
(Please print name and address including zip code) Please print Social Security or other identifying number

the right represented by the within Warrant to purchase \_\_\_\_\_ aggregate principal amount of [Title of Warrant Debt Securities] of Tourmaline Bio, Inc. to which the within Warrant relates and appoints \_\_\_\_\_ attorney to transfer such right on the books of the Warrant Agent with full power of substitution in the premises.

Dated: \_\_\_\_ Name: \_\_\_\_

Signature

(Signature must conform in all respects to name of holder as specified on the face of the Warrant)

Signature Guaranteed

—



Brandon Fenn  
T: +1 212 479 6626  
bfenn@cooley.com

November 7, 2024

**Tourmaline Bio, Inc.**  
27 West 24th Street, Suite 702  
New York, NY 10010

Ladies and Gentlemen:

We have acted as counsel to Tourmaline Bio, Inc., a Delaware corporation (the “**Company**”), in connection with the filing by the Company with the Securities and Exchange Commission (the “**Commission**”) of a Registration Statement on Form S-3 (the “**Registration Statement**”) under the Securities Act of 1933, as amended (the “**Securities Act**”). The Registration Statement includes two prospectuses (i) a base prospectus (the “**Base Prospectus**”) and (ii) a sales agreement prospectus (the “**Sales Agreement Prospectus**”) covering up to \$100,000,000 of shares of the Company’s common stock, \$0.0001 par value per share (“**Common Stock**”) that may be sold under the Sales Agreement, dated November 7, 2024, between the Company and Leerink Partners LLC (such agreement, the “**Sales Agreement**”, and such shares, the “**Placement Shares**”). The Base Prospectus provides that it will be supplemented in the future by one or more prospectus supplements (each, a “**Prospectus Supplement**”). The Registration Statement, including the Base Prospectus (as supplemented from time to time by one or more Prospectus Supplements) and the Sales Agreement Prospectus will provide for the registration by the Company of the sale of:

- shares of Common Stock (the “**Base Prospectus Shares**”);
- shares of preferred stock, \$0.0001 par value per share, of the Company (the “**Preferred Stock**”);
- debt securities, in one or more series (the “**Debt Securities**”), which may be issued pursuant to an indenture to be dated on or about the date of the first issuance of Debt Securities thereunder, by and between a trustee to be selected by the Company (the “**Trustee**”) and the Company, in the form filed as Exhibit 4.5 to the Registration Statement and one or more indentures supplemental thereto with respect to any particular series of Debt Securities (the “**Indenture**”);
- warrants to purchase Common Stock, Preferred Stock or Debt Securities (the “**Warrants**”), which may be issued under one or more warrant agreements, to be dated on or about the date of the first issuance of the Warrants thereunder, by and between a warrant agent to be selected by the Company (the “**Warrant Agent**”) and the Company, in the forms filed as Exhibits 4.8, 4.9 and 4.10 to the Registration Statement, respectively (each, a “**Warrant Agreement**”); and
- the Placement Shares.

The Base Prospectus Shares, the Preferred Stock, the Debt Securities, the Warrants and the Placement Shares, plus any additional Common Stock, Preferred Stock, Debt Securities and Warrants that may be registered pursuant to any registration statement that the Company may hereafter file with the Commission pursuant to Rule 462(b) under the Securities Act in connection with an offering by the Company pursuant to the Registration Statement, are collectively referred to herein as the “**Securities**.” The Securities are being registered for offer and sale from time to time pursuant to Rule 415 under the Securities Act.



In connection with this opinion, we have examined and relied upon the Company's certificate of incorporation and bylaws, each as currently in effect, and such other records, documents, certificates, opinions, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not independently verified such matters.

In rendering this opinion, we have assumed the genuineness of all signatures; the authenticity of all documents submitted to us as originals; the conformity to originals of all documents submitted to us as copies; the accuracy, completeness and authenticity of certificates of public officials; and the due authorization, execution and delivery of all documents where authorization, execution and delivery are prerequisites to the effectiveness thereof.

With respect to our opinion as to the Base Prospectus Shares, we have assumed that, at the time of issuance and sale, a sufficient number of shares of Common Stock will be authorized and available for issuance and that the consideration for the issuance and sale of the Base Prospectus Shares (or Preferred Stock or Debt Securities convertible into, or Warrants exercisable for, Common Stock) will be in an amount that is not less than the par value of the Common Stock. With respect to our opinion as to the Preferred Stock, we have assumed that, at the time of issuance and sale, a sufficient number of shares of Preferred Stock will be authorized, designated and available for issuance and that the consideration for the issuance and sale of the Preferred Stock (or Debt Securities convertible into, or Warrants exercisable for, Preferred Stock) will be in an amount that is not less than the par value of the Preferred Stock. We have also assumed that any Debt Securities or Warrants offered under the Registration Statement, and the related Indenture and Warrant Agreement will be executed in the forms filed as exhibits to the Registration Statement or incorporated by reference therein. We have also assumed that (a) with respect to Securities issuable upon conversion of any convertible Preferred Stock, such convertible Preferred Stock will be duly authorized, validly issued, fully paid and nonassessable; and (ii) with respect to any Securities issuable upon conversion of any convertible Debt Securities or upon exercise of any Warrants, such convertible Debt Securities or Warrants will constitute valid and legally binding obligations of the Company, enforceable against the Company in accordance with their terms, except as enforcement may be limited by applicable bankruptcy, insolvency, reorganization, arrangement, moratorium or other similar laws affecting creditors' rights, and subject to general equity principles and to limitations on availability of equitable relief, including specific performance.

With respect to the Placement Shares, we have assumed that (i) each sale of the Placement Shares will be duly authorized by the Board of Directors of the Company, a duly authorized committee thereof or a person or body pursuant to an authorization granted in accordance with Section 152 of the General Corporation Law of the State of Delaware (the "**DGCL**") and (ii) no more than 10,000,000 Placement Shares will be sold for a consideration not less than the par value of the Common Stock. With respect to the Placement Shares, we express no opinion to the extent that future issuances of securities of the Company, anti-dilution adjustments to outstanding securities of the Company or other matters cause the number of shares of Common Stock issuable under the Sales Agreement to exceed the number of shares available for issuance by the Company.

Our opinion herein is expressed solely with respect to the DGCL and, as to the Debt Securities and the Warrants constituting binding obligations of the Company, the laws of the State of New York. Our opinion is based on these laws as in effect on the date hereof. We express no opinion to the extent that any other laws are applicable to the subject matter hereof and express no opinion and provide no assurance as to compliance with any federal or state securities law, rule or regulation.



On the basis of the foregoing and in reliance thereon, and subject to the qualifications herein stated, we are of the opinion that:

1. With respect to the Base Prospectus Shares offered under the Registration Statement, provided that (a) the Registration Statement and any required post-effective amendment thereto have become effective under the Securities Act and the Base Prospectus and any and all Prospectus Supplement(s) required by applicable laws have been delivered and filed as required by such laws; (b) the issuance of the Base Prospectus Shares has been duly authorized by all necessary corporate action on the part of the Company; (c) the issuance and sale of the Base Prospectus Shares do not violate any applicable law, are in conformity with the Company's then operative certificate of incorporation (the "**Certificate of Incorporation**") and bylaws (the "**Bylaws**"), do not result in a default under or breach of any agreement or instrument binding upon the Company and comply with any applicable requirement or restriction imposed by any court or governmental body having jurisdiction over the Company; and (d) the certificates, if any, for the Base Prospectus Shares have been duly executed by the Company, countersigned by the transfer agent therefor and duly delivered to the purchasers thereof against payment therefor, then the Base Prospectus Shares, when issued and sold in accordance with a duly authorized, executed and delivered purchase, underwriting or similar agreement, or upon conversion of any convertible Preferred Stock or convertible Debt Securities in accordance with their terms, or upon exercise of any Warrants in accordance with their terms, will be validly issued, fully paid and nonassessable.

2. With respect to the Preferred Stock offered under the Registration Statement, provided that (a) the Registration Statement and any required post-effective amendment thereto have become effective under the Securities Act and the Base Prospectus and any and all Prospectus Supplement(s) required by applicable laws have been delivered and filed as required by such laws; (b) the terms and issuance of the Preferred Stock have been duly authorized by all necessary corporate action on the part of the Company; (c) the terms of the shares of Preferred Stock and their issuance and sale do not violate any applicable law, are in conformity with the Certificate of Incorporation and the Bylaws, do not result in a default under or breach of any agreement or instrument binding upon the Company and comply with any applicable requirement or restriction imposed by any court or governmental body having jurisdiction over the Company; and (d) the certificates, if any, for the Preferred Stock have been duly executed by the Company, countersigned by the transfer agent therefor and duly delivered to the purchasers thereof against payment therefor, then the Preferred Stock, when issued and sold in accordance with a duly authorized, executed and delivered purchase, underwriting or similar agreement, or upon conversion of any convertible Debt Securities in accordance with their terms, or upon exercise of any Warrants in accordance with their terms, will be validly issued, fully paid and nonassessable.

3. With respect to any series of the Debt Securities issued under the Indenture and offered under the Registration Statement, provided that (a) the Registration Statement and any required post-effective amendment thereto have become effective under the Securities Act and the Base Prospectus and any and all Prospectus Supplement(s) required by applicable laws have been delivered and filed as required by such laws; (b) the Indenture has been duly authorized by the Company and the Trustee by all necessary corporate action; (c) the Indenture has been duly executed and delivered by the Company and the Trustee and has been qualified under the Trust Indenture Act of 1939, as amended; (d) the issuance and terms of the Debt Securities have been duly authorized by the Company by all necessary corporate action; (e) the terms of the Debt Securities and of their issuance and sale have been duly established in conformity with the Indenture so as not to violate any applicable law or result in a default under or breach of any agreement or instrument binding upon the Company so as to be in conformity with the Certificate of Incorporation and the Bylaws, and so as to comply with any requirement or restriction imposed by any court or governmental body having jurisdiction over the Company; and (f) the notes representing the Debt

Securities have been duly executed and delivered by the Company and authenticated by the Trustee pursuant to the Indenture and delivered against payment therefor, then the Debt Securities when issued and sold in accordance with the Indenture and a duly authorized, executed and delivered purchase, underwriting or similar agreement, or upon exercise of any Warrants in accordance with their terms, will be binding obligations of the Company, except as may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting creditors' rights generally, and by general equitable principles (regardless of whether considered in a proceeding at law or in equity).

4. With respect to the Warrants issued under the Warrant Agreements and offered under the Registration Statement, provided that (a) the Registration Statement and any required post-effective amendment thereto have become effective under the Securities Act and the Base Prospectus and any and all Prospectus Supplement(s) required by applicable laws have been delivered and filed as required by such laws; (b) the applicable Warrant Agreement has been duly authorized by the Company and the Warrant Agent by all necessary corporate action; (c) the applicable Warrant Agreement has been duly executed and delivered by the Company and the Warrant Agent; (d) the issuance and terms of the Warrants have been duly authorized by the Company by all necessary corporate action; (e) the terms of the Warrants and of their issuance and sale have been duly established in conformity with the applicable Warrant Agreement and as described in the Registration Statement, the Base Prospectus and the related Prospectus Supplement(s), so as not to violate any applicable law or result in a default under or breach of any agreement or instrument binding upon the Company, so as to be in conformity with the Certificate of Incorporation and the Bylaws, and so as to comply with any requirement or restriction imposed by any court or governmental body having jurisdiction over the Company; and (f) the Warrants have been duly executed and delivered by the Company and authenticated by the Warrant Agent pursuant to the applicable Warrant Agreement and delivered against payment therefor, then the Warrants, when issued and sold in accordance with the applicable Warrant Agreement and a duly authorized, executed and delivered purchase, underwriting or similar agreement, will be binding obligations of the Company, except as may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting creditors' rights generally, and by general equitable principles (regardless of whether considered in a proceeding at law or in equity).

5. The Placement Shares, when sold and issued against payment therefor in accordance with the Sales Agreement, the Registration Statement and the Sales Agreement Prospectus, will be validly issued, fully paid and nonassessable.

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Page Five

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to the reference to our firm under the caption "Legal Matters" in the Base Prospectus and the Sales Agreement Prospectus. We further consent to the incorporation by reference of this opinion into any registration statement filed pursuant to Rule 462(b) under the Securities Act with respect to additional Securities. In giving such consents, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission thereunder.

Our opinion set forth above is limited to the matters expressly set forth in this letter, and no opinion has been or should be implied or may be inferred beyond the matters expressly stated. This opinion speaks only as to law and facts in effect or existing as of the date hereof, and we have no obligation or responsibility to update or supplement this opinion to reflect any facts or circumstances that may hereafter come to our attention or any changes in law that may hereafter occur.

Very truly yours,

**Cooley LLP**

By: /s/ Brandon Fenn  
Brandon Fenn

Cooley LLP 55 Hudson Yards New York, NY 10001-2157  
Phone: (212) 479 6000 Fax: (212) 479 6275

**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 19, 2024 relating to the financial statements of Tourmaline Bio, Inc., appearing in the Annual Report on Form 10-K of Tourmaline Bio, Inc. for the year ended December 31, 2023. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ Deloitte & Touche LLP

Morristown, New Jersey  
November 7, 2024

**Calculation of Filing Fee Tables**

**Form S-3**  
(Form Type)

**Tourmaline Bio, Inc.**

(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Fees to Be Paid	Equity	Common Stock, par value \$0.001 per share(1)	—	(2)	(3)	—	—	—
	Equity	Preferred Stock, par value \$0.001 per share(1)	—	(2)	(3)	—	—	—
	Debt	Debt Securities(1)	—	(2)	(3)	—	—	—
	Other	Warrants(1)	—	(2)	(3)	—	—	—
	Unallocated (Universal) Shelf	—	457(o)	(2)	(3)	\$350,000,000	\$0.00015310	\$53,585
Carry Forward Securities	—	—	—	—	—	—	—	
	<b>Total Offering Amounts</b>					\$350,000,000	\$0.00015310	\$53,585
	<b>Total Fees Previously Paid</b>							—
	<b>Total Fee Offsets</b>							—
	<b>Net Fee Due</b>							\$53,585

(1) Separate consideration may or may not be received for securities that are issuable upon the conversion or exercise of, or in exchange for, other securities offered hereby.

(2) There are being registered hereunder such indeterminate number of shares of common stock, such indeterminate number of shares of preferred stock, such indeterminate principal amount of debt securities and such indeterminate number of warrants to purchase common stock, preferred stock or debt securities as shall have an aggregate initial offering price not to exceed \$350,000,000. If any debt securities are issued at an original issue discount, then the principal amount of such debt securities shall be in such greater amount as shall result in an aggregate initial offering price not to exceed \$350,000,000, less the aggregate dollar amount of all securities previously issued hereunder. Any securities registered hereunder may be sold separately or in combination with other securities registered hereunder. The securities registered also include such indeterminate number of shares of common stock, preferred stock and amount of debt securities as may be issued upon conversion of or exchange for preferred stock or debt securities that provide for conversion or exchange, upon exercise of warrants or pursuant to the antidilution provisions of any such securities. In addition, pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), the shares being registered hereunder include such indeterminate number of shares of common stock and preferred stock as may be issuable with respect to the shares being registered hereunder as a result of stock splits, stock dividends or similar transactions.

(3) The 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 Instruction 2.A.iii.b under the heading "Instructions to the Calculation of Filing Fee Tables and Related Disclosure" of Part II, Item 16, of Form S-3 under the Securities Act.