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

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

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**Windtree Therapeutics, Inc.**  
(Exact name of Registrant as specified in its charter)

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Delaware  
(State or other jurisdiction of  
incorporation or organization)

94-3171943  
(I.R.S. Employer  
Identification No.)

2600 Kelly Road, Suite 100  
Warrington, Pennsylvania 18976  
(215) 488-9300  
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

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Craig E. Fraser  
President & Chief Executive Officer  
Windtree Therapeutics, Inc.  
2600 Kelly Road, Suite 100  
Warrington, Pennsylvania 18976  
(215) 488-9300  
(Name, address, including zip code, and telephone number, including area code, of agent for service)

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*Copies to:*  
Rachael M. Bushey, Esq.  
Jennifer L. Porter, Esq.  
Troutman Pepper Hamilton Sanders LLP  
3000 Two Logan Square  
Eighteenth and Arch Streets  
Philadelphia, PA 19103  
(215) 981-4331

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**Approximate date of commencement of proposed sale to the public:** From time to time after the effective date of this Registration Statement.

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

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If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

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

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, 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, 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	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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

### CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be registered/proposed maximum offering price per unit/proposed maximum aggregate offering price	Amount of registration fee
Common Stock, par value \$0.001 par value per share	(1)	
Preferred Stock, par value \$0.001 par value per share	(1)	
Debt Securities	(1)	
Warrants	(1)	
Units	(1)	
Subscription Rights	(1)	
Total	75,000,000 (2)	9,735 (3)

- (1) An unspecified number of securities or aggregate principal amount, as applicable, is being registered as may from time to time be offered at unspecified prices and, in addition, an unspecified number of additional shares of Common Stock or Preferred Stock and amount of Debt Securities is being registered as may be issued from time to time upon conversion of or exchange for any Debt Securities or Preferred Stock registered hereunder that provide for conversion or exchange, upon exercise of Warrants or Subscription Rights or pursuant to any anti-dilution adjustments with respect to any such securities.
- (2) Estimated solely for the purpose of calculating the registration fee. No separate consideration will be received for shares of Common Stock or Preferred Stock or amount of Debt Securities that are issued upon conversion of or exchange for any Debt Securities or Preferred Stock or upon exercise of Warrants or Subscription Rights registered hereunder. The aggregate maximum offering price of all securities issued pursuant to this registration statement will not exceed \$75,000,000.
- (3) The registration fee has been calculated in accordance with Rule 457(o) under the Securities Act of 1933, as amended.

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

## EXPLANATORY NOTE

This registration statement contains two prospectuses:

- a base prospectus which covers the offering, issuance and sale by the registrant of up to a maximum aggregate offering price of \$75,000,000 of the registrant's common stock, preferred stock, debt securities, warrants, units and/or subscription rights; and
- a prospectus relating to an At The Market Offering Agreement, or the sales agreement, with Ladenburg Thalmann & Co. Inc., covering the offering, issuance and sale by the registrant of up to a maximum aggregate offering price of \$10,000,000 of the registrant's common stock that may be issued and sold from time to time under the sales agreement.

**The base prospectus immediately follows this explanatory note. The specific terms of any other securities to be offered pursuant to the base prospectus will be specified in one or more prospectus supplements to the base prospectus.**

**The prospectus relating to the sales agreement immediately follows the base prospectus. The \$10,000,000 of common stock that may be offered, issued and sold by the registrant under the sales agreement prospectus is included in the \$75,000,000 of securities that may be offered, issued and sold by the registrant under the base prospectus. Upon any termination of the sales agreement or suspension of termination of the sales agreement prospectus, any portion of the \$10,000,000 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 \$10,000,000 of securities may be sold in other offerings pursuant to the base prospectus and a corresponding prospectus supplement.**

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**The information in this prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.**

**Subject to Completion, dated September 17, 2020.**

**PROSPECTUS**

**\$75,000,000**



**Common Stock  
Preferred Stock  
Debt Securities  
Warrants  
Units  
Subscription Rights**

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We may offer and sell up to \$75,000,000 in the aggregate of the securities identified above from time to time in one or more offerings. This prospectus provides you with a general description of the securities.

Each time we offer and sell securities, we will provide a supplement to this prospectus that contains specific information about the offering and the amounts, prices and terms of the securities. The supplement may also add, update or change information contained in this prospectus with respect to that offering. You should carefully read this prospectus, any applicable prospectus supplement, the documents incorporated by reference herein or therein, and any free writing prospectus before you invest in any of our securities.

We may offer and sell the securities described in this prospectus and any prospectus supplement to or through one or more underwriters, dealers and agents, or directly to purchasers, or through a combination of these methods. If any underwriters, dealers or agents are involved in the sale of any of the securities, their names and any applicable purchase price, fee, commission or discount arrangement between or among them will be set forth, or will be calculable from the information set forth, in the applicable prospectus supplement. See the sections of this prospectus entitled "About this Prospectus" and "Plan of Distribution" for more information. No securities may be sold without delivery of this prospectus and the applicable prospectus supplement describing the method and terms of the offering of such securities.

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**INVESTING IN OUR SECURITIES INVOLVES RISKS. YOU SHOULD REVIEW CAREFULLY THE RISKS DESCRIBED UNDER THE HEADING "RISK FACTORS" ON PAGE 6 OF THIS PROSPECTUS AND ANY SIMILAR SECTION CONTAINED IN THE APPLICABLE PROSPECTUS SUPPLEMENT CONCERNING FACTORS YOU SHOULD CONSIDER BEFORE INVESTING IN OUR SECURITIES.**

Our common stock is listed on the Nasdaq Capital Market under the symbol "WINT." On September 16, 2020, the last reported sale price of our common stock on the Nasdaq Capital Market was \$6.79 per share.

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

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**The date of this prospectus is                      , 2020.**

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## ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the U.S. Securities and Exchange Commission, or the SEC, using a “shelf” registration process. By using a shelf registration statement, we may sell securities from time to time and in one or more offerings up to a total dollar amount of \$75,000,000 as described in this prospectus. Each time that we offer and sell securities, we will provide a prospectus supplement to this prospectus that contains specific information about the securities being offered and sold and the specific terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. The prospectus supplement or free writing prospectus may also add, update or change information contained in this prospectus with respect to that offering. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement or free writing prospectus, you should rely on the prospectus supplement or free writing prospectus, as applicable. Before purchasing any securities, you should carefully read both this prospectus and the applicable prospectus supplement (and any applicable free writing prospectuses), together with the additional information described under the headings “Where You Can Find More Information” and “Incorporation by Reference.”

We have not authorized anyone to provide you with any information or to make any representations other than those contained in, or incorporated by reference in, this prospectus, any applicable prospectus supplement or any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We will not make 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 and the applicable prospectus supplement to this prospectus is accurate only as of the date on its respective cover, that the information appearing in any applicable free writing prospectus is accurate only as of the date of that free writing prospectus, and that any information incorporated by reference is accurate only as of the date of the document incorporated by reference, unless we indicate otherwise. Our business, financial condition, results of operations and prospects may have changed since those dates. This prospectus incorporates by reference, and any prospectus supplement or free writing prospectus may contain and incorporate by reference, market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe these sources are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. In addition, the market and industry data and forecasts that may be included or incorporated by reference in this prospectus, any prospectus supplement or any applicable free writing prospectus may involve estimates, assumptions and other risks and uncertainties and are subject to change based on various factors, including those discussed under the heading “Risk Factors” contained in this prospectus, the applicable prospectus supplement and any applicable free writing prospectus, and under similar headings in other documents that are incorporated by reference into this prospectus. Accordingly, investors should not place undue reliance on this information.

Unless the context otherwise requires, references in this prospectus to “Windtree,” “Windtree Therapeutics,” “the Company,” “we,” “our,” and “us” refer to Windtree Therapeutics, Inc., a Delaware corporation, and our consolidated subsidiaries.

We use “Windtree Therapeutics,” as our trademark, and we have been granted a trademark or have a trademark application on file with the United States Patent and Trademark Office. All trademarks or trade names referred to in this prospectus are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus are referred to without the ® and ™ symbols, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto. We do not intend the use or display of other companies’ trademarks and trade names to imply a relationship with, or endorsement or sponsorship of us, by any other companies.

## WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains a website that contains reports, proxy and information statements and other information about issuers, such as us, who file electronically with the SEC. The address of that website is <http://www.sec.gov>.

Our website address is [www.windreetx.com](http://www.windreetx.com). The information on, or that can be accessed through, our website is not part of this prospectus and is not incorporated by reference herein and you should not consider it part of this prospectus. We have included our website address as an inactive textual reference only.

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

## INCORPORATION BY REFERENCE

The SEC's rules allow us to "incorporate by reference" information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus, and subsequent information that we file with the SEC will automatically update and supersede that information. Any statement contained in this prospectus or a previously filed document incorporated by reference will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or a subsequently filed document incorporated by reference modifies or replaces that statement.

We incorporate by reference our documents listed below and any future filings made by us with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, which we refer to as the "Exchange Act" in this prospectus, between the date of this prospectus and the termination of the offering of the securities described in this prospectus. We are not, however, incorporating by reference any documents or portions thereof, whether specifically listed below or filed in the future, that are not deemed "filed" with the SEC, including any information furnished pursuant to Items 2.02 or 7.01 of Form 8-K or related exhibits furnished pursuant to Item 9.01 of Form 8-K.

This prospectus and any accompanying prospectus supplement incorporate by reference the documents set forth below that have previously been filed with the SEC:

- Our Annual Report on [Form 10-K](#) for the year ended December 31, 2019 filed with the SEC on April 3, 2020;
- Our Quarterly Report on Form 10-Q for the quarter ended [March 31, 2020](#) and [June 30, 2020](#), filed with the SEC on May 13, 2020 and August 14, 2020;
- Our Current Reports on Form 8-K filed with the SEC on [March 13, 2020](#), [March 23, 2020](#), [April 24, 2020](#), [April 29, 2020](#), [April 30, 2020](#), [May 7, 2020](#), [May 22, 2020](#), [July 15, 2020](#) and [July 23, 2020](#); and
- The description of our common stock included in our [Form 8-A](#) filed with the SEC on May 15, 2020, including any amendments or reports filed for the purpose of updating such description.

All reports and other documents we subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the termination of this offering, including all such documents we may file with the SEC after the date of the initial registration statement and prior to the effectiveness of the registration statement, but excluding any information furnished to, rather than filed with, the SEC, will also be incorporated by reference into this prospectus and deemed to be part of this prospectus from the date of the filing of such reports and documents.

You may request a copy, without charge, of any of the documents incorporated by reference in this prospectus (other than exhibits, unless they are specifically incorporated by reference in the documents) by writing or telephoning us at the following address:

Windtree Therapeutics, Inc.  
2600 Kelly Road, Suite 100  
Warrington, Pennsylvania 18976  
(215) 488-9300  
Attention: Chief Financial Officer

Exhibits to the filings will not be sent, however, unless those exhibits have specifically been incorporated by reference in this prospectus and any accompanying prospectus supplement.



## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the documents that we incorporate by reference, contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, Section 21E of the Exchange Act and the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical facts contained in this prospectus are forward-looking statements. In some cases, you can identify forward-looking statements by terms such as “may,” “will,” “should,” “expect,” “plan,” “anticipate,” “could,” “intend,” “target,” “project,” “contemplate,” “believe,” “estimate,” “predict,” “potential” or “continue” or the negative of these terms or other similar expressions, although not all forward-looking statements contain these words. These forward-looking statements include, but are not limited to, statements about:

- our estimates regarding future results of operations, financial position, research and development costs, capital requirements and our needs for additional financing;
- how long we can continue to fund our operations with our existing cash and cash equivalents;
- delays in our anticipated clinical timelines and milestones associated with COVID-19;
- the results, cost and timing of our preclinical studies and clinical trials, as well as the number of required trials for regulatory approval and the criteria for success in such trials;
- legal and regulatory developments in the U.S. and foreign countries, including any actions or advice that may affect the design, initiation, timing, continuation, progress or outcome of clinical trials or result in the need for additional clinical trials;
- the difficulties and expenses associated with obtaining and maintaining regulatory approval of our product candidates, and the indication and labeling under any such approval;
- our plans and ability to successfully execute development activities and commercialize our product candidates;
- risks related to manufacturing active pharmaceutical ingredients, drug product, medical devices and other materials we need;
- the size and growth of the potential markets for our product candidates, the rate and degree of market acceptance of our product candidates and our ability to serve those markets;
- the success of competing therapies and products that are or become available;
- our ability to limit our exposure under product liability lawsuits;
- our ability to obtain and maintain intellectual property protection for our product candidates;
- recently enacted and future legislation regarding the healthcare system, including changes to the Patient Protection and Affordable Care Act;
- delays, interruptions or failures in the manufacture and supply of our product candidates;
- the performance of third parties upon which we depend, including third-party contract research organizations, contract manufacturing organizations, contractor laboratories and independent contractors;
- our ability to recruit or retain key scientific, commercial or management personnel or to retain our executive officers; and
- our ability to maintain proper functionality and security of our internal computer and information systems and prevent or avoid cyber-attacks, malicious intrusion, breakdown, destruction, loss of data privacy or other significant disruption.

These forward-looking statements are based on management’s current expectations, estimates, forecasts and projections about our business and the industry in which we operate and management’s beliefs and assumptions and are not guarantees of future performance or development and involve known and unknown risks, uncertainties and other factors that are in some cases beyond our control. As a result, any or all of our forward-looking statements in, or incorporated by reference in, this prospectus may turn out to be inaccurate. Factors that may cause actual results to differ materially from current expectations include, among other things, those factors discussed under “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” or otherwise discussed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, our Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2020 and June 30, 2020, and in our other filings made from time to time with the SEC after the date of this prospectus. Potential investors are urged to consider these factors carefully in evaluating the forward-looking statements. These forward-looking statements speak only as of the date of this prospectus and the documents incorporated by reference herein, and any free writing prospectus, as applicable. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future. You should, however, review the factors and risks we describe in the reports we will file from time to time with the SEC after the date of this prospectus. See “Where You Can Find More Information.”

## ABOUT WINDTREE THERAPEUTICS, INC.

### Company Overview

We are a clinical-stage, biopharmaceutical and medical device company focused on the development of novel therapeutics intended to address significant unmet medical needs in important acute care markets. Our development programs are primarily focused in the treatment of acute cardiovascular and pulmonary diseases. Our lead cardiovascular product candidate istaroxime, a first-in-class, dual-acting agent is being developed to improve cardiac function in patients with acute heart failure, or AHF, and cardiogenic shock with a potentially differentiated safety profile from existing treatments. Istaroxime demonstrated significant improvement in diastolic and systolic function in phase 2 clinical trials and has been granted Fast Track designation for the treatment of AHF by the U.S. Food and Drug Administration, or FDA. Our lead pulmonary product candidate is AEROSURF (lucinactant for inhalation), a novel drug/medical device combination for non-invasive delivery of our proprietary aerosolized KL4 surfactant, using our proprietary aerosol delivery system, or ADS, technology for the treatment of respiratory distress syndrome, or RDS, in premature infants. AEROSURF has been granted Fast Track designation by the FDA for the treatment of RDS. We are also developing plans to conduct a small pilot study of our proprietary KL4 surfactant for the treatment of lung injury resulting from severe novel coronavirus, or COVID-19, infections, if we are able to secure the required regulatory approvals to initiate the study. Our other drug product candidates include rostafuroxin, a novel medicine for the treatment of hypertension in patients with a specific genetic profile. We also have a number of pipeline preclinical product candidates that we are evaluating for progression into clinical development. We are evaluating and pursuing a number of early exploratory research programs to identify potential product candidates, including oral and intravenous SERCA-2a heart failure compounds and other product candidates utilizing our KL4 surfactant and ADS technologies.

### Corporate History and Information

We were incorporated in Delaware on November 6, 1992. Our principal executive offices are located at 2600 Kelly Road, Suite 100, Warrington, Pennsylvania 18976, and our telephone number is (215) 488-9300. Our website address is [www.windreetx.com](http://www.windreetx.com). The information on, or that can be accessed through, our website is not part of this prospectus and is not incorporated by reference herein and you should not consider it part of this prospectus. We have included our website address as an inactive textual reference only. Unless the context otherwise requires, references in this prospectus to “Windtree,” “Windtree Therapeutics,” “the Company,” “we,” “our,” and “us” refer to Windtree Therapeutics, Inc., a Delaware corporation, and our consolidated subsidiaries.

## **RISK FACTORS**

Investment in any securities offered pursuant to this prospectus and the applicable prospectus supplement involves risks. You should carefully consider the risk factors included in our Annual Report on Form 10-K filed with the SEC for the most recent year, our Quarterly Reports on Form 10-Q and our Current Reports on Form 8-K, together with all of the other information included in this prospectus, any applicable prospectus supplement, any applicable free writing prospectus and the other information incorporated by reference herein and therein. These risks are not the only ones facing us. Additional risks not currently known to us or that we currently deem immaterial also may impair or harm our business, financial condition, results of operations and prospects. Statements in or portions of a future document incorporated by reference in this prospectus, including, without limitation, those relating to risk factors, may update and supersede statements in and portions of this prospectus or such incorporated documents. Please also refer to the section entitled “Special Note Regarding Forward-Looking Statements.”

**USE OF PROCEEDS**

Except as set forth in any accompanying prospectus supplement, we intend to use the net proceeds from the sale of any securities offered under this prospectus for working capital and/or general corporate purposes. Additional information on the use of net proceeds from the sale of securities that we may offer from time to time by this prospectus will be set forth in the applicable prospectus supplement relating to a particular offering.

## DESCRIPTION OF CAPITAL STOCK

*The following description of our common stock and preferred stock, together with the additional information we include in any applicable prospectus supplements, summarizes the material terms and provisions of the common stock and preferred stock that we may offer under this prospectus. The following description of our capital stock does not purport to be complete and is subject to, and qualified in its entirety by, our Amended and Restated Certificate of Incorporation, as amended, or the Certificate of Incorporation, and Amended and Restated By-Laws, or the By-Laws, which have been publicly filed with the SEC. See "Where You Can Find More Information." For a complete description, you should refer to our Certificate of Incorporation and By-Laws, copies of which are incorporated by reference as exhibits to the registration statement of which this prospectus is a part. The terms of our common stock and preferred stock may also be affected by Delaware law.*

### General

Our Certificate of Incorporation authorizes 120,000,000 shares of common stock, \$0.001 par value per share, and 5,000,000 shares of preferred stock, \$0.001 par value per share.

### Common Stock

As of September 17, 2020, there were 16,886,482 shares of our common stock issued and outstanding. Subject to any preferential rights of any preferred stock created by our board of directors, or the Board, holders of our common stock are entitled to such dividends, if any, as our Board may declare from time to time out of funds that we can legally use to pay dividends.

Holders of our common stock are entitled to one vote for each share of common stock and do not have any right to cumulate votes in the election of directors. Upon our liquidation, dissolution or winding-up, holders of our common stock will be entitled to receive on a proportionate basis any assets remaining after provision for payment of creditors and after payment of any liquidation preferences to holders of preferred stock. Holders of our common stock have no preemptive rights and no conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to our common stock. All the outstanding shares of common stock are, and the shares offered by this prospectus, when issued and paid for, will be, validly issued, fully paid and nonassessable. The rights and privileges of the holders of our common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of preferred stock that we may issue.

### Preferred Stock

Our Board may divide the preferred stock into any number of series, fix the designation and number of shares of each such series, and determine or change the designation, relative rights, preferences and limitations of any series of preferred 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 and may adversely affect the market price of the common stock and the voting and other rights of the holders of our common stock.

### Common Stock Warrants

#### *May 2020 Warrants*

On May 22, 2020, we completed a registered public offering for the purchase of an aggregate of 3,172,413 units consisting of: (i) one share of our common stock and (ii) a warrant to purchase one share of our common stock at an exercise price per share of common stock equal to \$7.975, or the May 2020 warrants. As of September 17, 2020, there are 3,154,663 May 2020 warrants currently outstanding. The May 2020 warrants were immediately exercisable upon issuance, in whole or in part, and expire on May 22, 2025. The May 2020 warrants may not be exercised to the extent that, following such exercise, the holder would beneficially own more than 4.99% (or, at the election of the purchaser prior to the date of issuance, 9.99%) of our outstanding shares of common stock, except that upon at least sixty-one (61) days' prior notice from the holder to us, the holder may increase the amount of ownership of outstanding stock after exercising the holder's May 2020 warrants up to 9.99% (or up to 19.99% upon prior written approval of the Company) of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the May 2020 warrants. The May 2020 warrants contain customary provisions that adjust the exercise price and the number of shares in the event of a corporate transaction.

*December 2019 Private Placement Warrants*

On December 6, 2019, we completed a private placement offering with select institutional investors for the purchase of an aggregate of 2,916,666 shares of common stock and we issued Series I Warrants to purchase up to 1,458,333 shares of our common stock, at an exercise price equal to \$12.09 per share, or the Series I Warrant Shares. The Series I Warrants may be exercised on the six-month anniversary of the date of issuance and through the 5-year anniversary of the date of issuance. The Series I Warrants may be exercised for cash or on a cashless basis if there is no effective registration statement registering the resale of the Series I Warrant Shares and may not be exercised to the extent that the holder thereof would, following such exercise or conversion, beneficially own more than 4.99% (or such other percent as designated by each holder not to exceed 19.99%) of our outstanding shares of common stock. The Series I Warrants contain customary provisions that adjust the exercise price and the number of Series I Warrant Shares in the event of a corporate transaction. On May 6, 2020, we entered into an amendment with certain holders of our Series I Warrants pursuant to which the exercise price of the Series I Warrant was amended from \$12.09 to \$9.67 if the Series I Warrant is exercised, in whole or in part, prior to December 5, 2021.

*December 2018 Private Placement Warrants*

On December 21, 2018, we completed a private placement offering with select institutional investors for the purchase of an aggregate of 3,928,513 shares of our common stock. In connection with this financing, we issued (i) Series F Warrants to purchase an aggregate of 667,847 shares of common stock, at an exercise price equal to \$11.04 per share, which are exercisable through the 18-month anniversary of the date of issuance, or the Series F Warrants, and (ii) Series G Warrants to purchase an aggregate of 1,296,410 shares of common stock, at an exercise price equal to \$12.15 per share, which are exercisable through the 5-year anniversary of the date of issuance, or the Series G Warrants and, together with the Series F Warrants, the December 2018 Warrants. The December 2018 Warrants (i) may not be exercised to the extent that, following such exercise, the holder would beneficially own more than 9.99% (or other percent as designated by each holder) of our outstanding shares of common stock, and (ii) otherwise contain customary provisions that adjust the exercise price and the number of shares of common stock into which they may be exercised in the event of a corporate transaction. On April 24, 2020, we entered into an amendment with the holders of our Series F Warrants whereby the expiration date of the Series F Warrant was extended from June 24, 2020 to December 24, 2020.

*AEROSURF Warrants (December 2018)*

In connection with our acquisition of CVie Investments Limited, an exempted company with limited liability incorporated under the laws of the Cayman Islands, our Board declared a dividend to the holders of record of our outstanding shares of common stock, and holders of certain warrants to purchase common stock, that were outstanding on December 20, 2018 of 0.6148 Series H (AEROSURF) Warrant, for each share of common stock held by a shareholder or each warrant held by a warrant holder, as applicable, on the record date, or the AEROSURF Warrants. The Company expects to distribute AEROSURF Warrants that are exercisable for an aggregate of 987,722 shares of common stock. Each AEROSURF Warrant has a term of five years and provides for automatic exercise into one share of common stock, without any exercise price, upon the Company's public announcement of the dosing of the first human subject enrolled in the Company's phase 3 clinical trial for AEROSURF.

*Battelle Collaboration Agreement Warrants (October 2014 and December 2018)*

We entered into the Battelle Collaboration Agreement with Battelle Memorial Institute, or Battelle, in October 2014, which was amended in August 2015 and March 2016, for the development of a new version of our ADS. In connection with the Battelle Collaboration Agreement, on October 10, 2014, we issued to Battelle warrants to purchase 1,190 shares of common stock, exercisable at a price of \$4,200.00 per share, which expire on October 10, 2024. In December 2018, we and Battelle entered into the Battelle Payment Restructuring, which reflected the terms of an October 2017 nonbinding memorandum of understanding, in which we outlined terms to restructure approximately \$4.3 million then due to Battelle, under a Research and Development Services Agreement dated as of June 22, 2012 and the Battelle Collaboration Agreement. In connection with the Battelle Payment Restructuring, on December 11, 2018, we issued to Battelle warrants to purchase 25,000 shares of common stock, exercisable at a price of \$19.50 per share, which expire on December 7, 2023.

*Panacea Venture Management Company Ltd. Warrants (July 2018)*

On July 2, 2018, we issued to Panacea Venture Management Company Ltd., or Panacea, a Secured Convertible Promissory Note, or the Panacea Note, with respect to a loan facility in the aggregate amount of up to \$1.5 million, which was funded in two loans of \$1.0 million on the date of the Panacea Note and \$0.5 million on July 23, 2018. In connection with the Panacea Note, we issued to Panacea warrants, or the Series D Warrants, to purchase 62,500 shares, or the Series D Warrant Shares, at an exercise price of \$12.00 per Series D Warrant Share, or the Exercise Price. The Series D Warrants may be exercised at any time beginning six months after the date of issuance and through the fifth anniversary of the date of issuance. The Series D Warrants may not be exercised to the extent that the holder thereof would, following such exercise, beneficially own more than 9.99% (or such other percent as designated by each holder) of the Company's outstanding shares of common stock, which percentage may be increased, decreased or waived by such holder upon sixty-one (61) days' notice to us. The Series D Warrants also contain customary provisions that adjust the Exercise Price and the number of Series D Warrant Shares in the event of a corporate transaction.

*LPH II Warrants (April 2018)*

On March 30, 2018, LPH II Investments Ltd. invested \$2.6 million in us and acquired 180,555 shares of common stock and 45,139 Series C Warrants to purchase 45,139 shares of common stock, at an exercise price of \$16.56 per Series C Warrant Share. The Series C Warrants may be exercised at any time beginning six months after the date of issuance and through the seventh anniversary of the date of issuance. The Series C Warrants may be exercised for cash or on a cashless basis if there is no effective registration statement registering the resale of the Series C Warrant Shares and may not be exercised to the extent that the holder thereof would, following such exercise, beneficially own more than 9.99% (or such other percent as designated by each holder) of the Company's outstanding shares of common stock, which percentage may be increased, decreased or waived by such holder upon sixty-one (61) days' notice to us. The Series C Warrants also contain customary provisions that adjust the exercise price and the number of Series C Warrant Shares in the event of a corporate transaction.

*February 2017 Private Placement Warrants*

On February 15, 2017, we completed a private placement offering of 2,349 Series A Convertible Preferred Stock units. Each unit consisted of: (i) one share of Series A Convertible Preferred Stock, par value \$0.001 per share; and (ii) 16 Series A-1 Warrants to purchase one share of common stock at an exercise price equal to \$82.20 per share. As of September 17, 2020, there are 117,485 Series A-1 Warrants currently outstanding. The Series A-1 Warrants may be exercised at any time beginning six months after the date of issuance and through the seventh anniversary of the date of issuance. The Series A-1 Warrants may not be converted or exercised to the extent that the holder would, following such exercise or conversion, beneficially own more than 9.99% (or other lesser percent as designated by each holder) of our outstanding shares of common stock.

*July 2015 Warrants*

On July 22, 2015, we completed a registered public offering of 29,861 Series A units and 50,000 Series B units. Each Series A unit consisted of one share of common stock and a Series A warrant to purchase one share of common stock at an exercise price of \$588.00 per share. Each Series B unit consisted of a fully paid pre-funded Series B warrant to purchase one share of common stock at an exercise price of \$504.00 per share, and a Series B warrant to purchase one share of common stock at an exercise price of \$588.00 per share. As of December 31, 2017, all pre-funded Series B warrants were exercised. The Series A and Series B warrants, collectively the July 2015 Warrants, are exercisable immediately through the seventh anniversary of the date of issuance. The July 2015 Warrants may not be exercised to the extent that the holder would, following such exercise, beneficially own more than 9.99% (or 4.99% as may be elected by each holder) of our outstanding shares of common stock.

## **Anti-Takeover Effects of Provisions of the General Corporation Law of the State of Delaware, our Certificate of Incorporation and our By-Laws**

### *Certificate of Incorporation and By-Laws*

Because our stockholders do not have cumulative voting rights, our stockholders holding a majority of the voting power of our shares of common stock outstanding will be able to elect all of our directors. According to Section 242 of the General Corporation Law of the State of Delaware, or the DGCL, and our By-Laws, the affirmative vote of holders of at least a majority of the voting power of all of the then outstanding shares of voting stock, voting as a single class, is required to amend certain provisions of our Certificate of Incorporation. Further, our By-Laws provide that stockholder actions may be effected at a duly called meeting of stockholders or by written consent.

Our By-Laws further provide the Board with the exclusive right to increase or decrease the size of the Board (not less than three), and with the right to elect directors to fill a vacancy created by the expansion of the Board or the resignation, death or removal of a director.

### *Section 203 of the DGCL*

As a corporation organized under the laws of the State of Delaware, we are subject to Section 203 of the DGCL, which restricts our ability to enter into business combinations with an interested stockholder, the owner of 15% or more of the corporation's voting stock, or an interested stockholder's affiliates or associates, for a period of three years after such person became an interested stockholder. These restrictions do not apply if:

- before becoming an interested stockholder, our Board approves either the business combination or the transaction in which the stockholder becomes an interested stockholder;
- upon consummation of the transaction in which the stockholder becomes an interested stockholder, the interested stockholder owns at least 85% of our voting stock outstanding at the time the transaction commenced, subject to exceptions; or
- on or after the date a stockholder becomes an interested stockholder, the business combination is both approved by our Board and authorized at an annual or special meeting of our stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock not owned by the interested stockholder.

### *Choice of Forum*

Our Certificate of Incorporation provides that, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for: (i) any derivative action or proceeding brought on behalf of us; (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers to us or our stockholders; (iii) any action asserting a claim against us arising pursuant to any provision of the DGCL or Certificate of Incorporation or By-Laws; or (iv) any action asserting a claim against us governed by the internal affairs doctrine. The exclusive forum provision in our Certificate of Incorporation shall not apply to any actions or proceedings brought against us under the Securities Act or Exchange Act, whereby the U.S. District Court for the District of Delaware shall be the sole and exclusive forum.

### **Limitations of Liability and Indemnification Matters**

Pursuant to our By-Laws, we indemnify our directors to the maximum extent permissible under the DGCL. In addition, we have entered into indemnity agreements with our officers and directors that provide, among other things, that we will indemnify them, under the circumstances and to the extent provided for therein, for expenses, damages, judgments, fines and settlements he or she may be required to pay in actions or proceedings to which he or she is or may be made a party by reason of his or her position as a director, officer, or other agent of ours, and otherwise to the fullest extent permitted under the DGCL and our By-Laws. These provisions may be held not to be enforceable for violations of the federal securities laws of the U.S.

### **Listing**

Our common stock is listed on the Nasdaq Capital Market under the symbol "WINT."

### **Transfer Agent and Registrar**

The transfer agent and registrar for our common stock is Continental Stock Transfer & Trust Company. The transfer agent and registrar's address is 1 State Street, 30<sup>th</sup> Floor, New York, New York 10004.



## DESCRIPTION OF DEBT SECURITIES

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

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

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

As used in this section only, “Windtree,” “Windtree Therapeutics,” “the Company,” “we,” “our” or “us” refer to Windtree Therapeutics, Inc., a Delaware corporation excluding our consolidated subsidiaries, unless expressly stated or the context otherwise requires.

### General

The terms of each series of debt securities will be established by or pursuant to a resolution of our Board and set forth or determined in the manner provided in a resolution of our Board, in an officer’s certificate or by a supplemental indenture. (Section 2.2) The particular terms of each series of debt securities will be described in a prospectus supplement relating to such series (including any pricing supplement or term sheet).

We can issue an unlimited amount of debt securities under the indenture that may be issued in one or more series. Unless otherwise set forth in a resolution of our Board, in an officer’s certificate or by a supplemental indenture detailing the adoption of a series of debt securities, all securities in a series shall be identical. Debt securities may differ between series with respect to any term, provided, that all series of debt securities shall be equally and ratably entitled to the benefits of the indenture. (Section 2.1) We will set forth in a prospectus supplement (including any pricing supplement or term sheet) relating to any series of debt securities being offered, the aggregate principal amount and the following terms of the debt securities, if applicable:

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

- any obligation we have to redeem or purchase the debt securities pursuant to any sinking fund or analogous provisions or at the option of a holder of debt securities and the period or periods within which, the price or prices at which and in the terms and conditions upon which securities of the series shall be redeemed or purchased, in whole or in part, pursuant to such obligation;
- the dates on which and the price or prices at which we will repurchase debt securities at the option of the holders of debt securities and other detailed terms and provisions of these repurchase obligations;
- the denominations in which the debt securities will be issued, if other than denominations of \$1,000 and any integral multiple thereof;
- whether the debt securities will be issued in the form of certificated debt securities or global debt securities;
- the portion of principal amount of the debt securities payable upon declaration of acceleration of the maturity date, if other than the principal amount;
- the currency of denomination of the debt securities, which may be United States Dollars or any foreign currency, and if such currency of denomination is a composite currency, the agency or organization, if any, responsible for overseeing such composite currency;
- the designation of the currency, currencies or currency units in which payment of principal of, premium and interest on the debt securities will be made;
- if payments of principal of, premium, if any, or interest, if any, on the debt securities will be made in one or more currencies or currency units other than that or those in which the debt securities are denominated, the manner in which the exchange rate with respect to these payments will be determined;
- the manner in which the amounts of payment of principal of, premium, if any, or interest, if any, on the debt securities will be determined, if these amounts may be determined by reference to an index based on a currency or currencies or by reference to a commodity, commodity index, stock exchange index or financial index;
- any provisions relating to any security provided for the debt securities;
- any addition to, deletion of or change in the Events of Default described in this prospectus or in the indenture with respect to the debt securities and any change in the acceleration provisions described in this prospectus or in the indenture with respect to the debt securities;
- any addition to, deletion of or change in the covenants described in this prospectus or in the indenture with respect to the debt securities;
- any depositaries, interest rate calculation agents, exchange rate calculation agents or other agents with respect to the debt securities;
- the provisions, if any, relating to conversion or exchange of any debt securities of such series, including if applicable, the conversion or exchange price and period, provisions as to whether conversion or exchange will be mandatory, the events requiring an adjustment of the conversion or exchange price and provisions affecting conversion or exchange;
- any other terms of the debt securities, which may supplement, modify or delete any provision of the indenture as it applies to that series, including any terms that may be required under applicable law or regulations or advisable in connection with the marketing of the securities; and
- whether any of our direct or indirect subsidiaries will guarantee the debt securities of that series, including the terms of subordination, if any, of such guarantees. (Section 2.2)

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

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

## **Transfer and Exchange**

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

*Certificated Debt Securities.* You may transfer or exchange certificated debt securities at any office we maintain for this purpose in accordance with the terms of the indenture. (Section 2.4) No service charge will be made for any transfer or exchange of certificated debt securities, but we may require payment of a sum sufficient to cover any tax or other governmental charge payable in connection with a transfer or exchange. (Section 2.7)

You may effect the transfer of certificated debt securities and the right to receive the principal of, premium and interest on certificated debt securities only by surrendering the certificate representing those certificated debt securities and either reissuance by us or the trustee of the certificate to the new holder or the issuance by us or the trustee of a new certificate to the new holder. (Section 2.7)

*Global Debt Securities and Book-Entry System.* Each global debt security representing book-entry debt securities will be deposited with, or on behalf of, the Depository, and registered in the name of the Depository or a nominee of the Depository. Please see “Global Securities.”

## **Covenants**

Unless otherwise indicated in this prospectus or the applicable prospectus supplement, our debt securities may not have the benefit of any covenant that limits or restricts our business or operations, the pledging of our assets or the incurrence by us of indebtedness. We will describe in the applicable prospectus supplement any restrictive covenants applicable to any issue of debt securities. (Article IV)

## **No Protection in the Event of a Change of Control**

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

## **Consolidation, Merger and Sale of Assets**

We may not consolidate with or merge with or into, or convey, transfer or lease all or substantially all of our properties and assets to any person (a “successor person”) unless:

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

Notwithstanding the above, any of our subsidiaries may consolidate with, merge into or transfer all or part of its properties to us. (Section 5.1)

## Events of Default

Unless otherwise specified in the resolutions of our Board, officer's certificate or supplemental indenture establishing a series of debt securities, "Event of Default" means with respect to any series of debt securities, any of the following:

- default in the payment of any interest upon any debt security of that series when it becomes due and payable, and continuance of such default for a period of thirty (30) days (unless the entire amount of the payment is deposited by us with the trustee or with a paying agent prior to the expiration of the thirty (30)-day period);
- default in the payment of principal of any security of that series at its maturity;
- default in the performance or breach of any other covenant or warranty by us in the indenture (other than a covenant or warranty that has been included in the indenture solely for the benefit of a series of debt securities other than that series), which default continues uncured for a period of sixty (60) days after we receive written notice from the trustee or Windtree and the trustee receive written notice from the holders of not less than 25% in principal amount of the outstanding debt securities of that series as provided in the indenture;
- certain voluntary or involuntary events of bankruptcy, insolvency or reorganization of the Company; and
- any other Event of Default provided with respect to debt securities of that series that is described in the applicable prospectus supplement. (Section 6.1)

No Event of Default with respect to a particular series of debt securities (except as to certain events of bankruptcy, insolvency or reorganization) necessarily constitutes an Event of Default with respect to any other series of debt securities. (Section 6.1) The occurrence of certain Events of Default or an acceleration under the indenture may constitute an event of default under certain indebtedness of ours or our subsidiaries outstanding from time to time.

We will provide the trustee written notice of any Default or Event of Default within thirty (30) days of becoming aware of the occurrence of such Default or Event of Default, which notice will describe in reasonable detail the status of such Default or Event of Default and what action we are taking or propose to take in respect thereof. (Section 6.1)

If an Event of Default with respect to debt securities of any series at the time outstanding occurs and is continuing, then the trustee or the holders of not less than 25% in principal amount of the outstanding debt securities of that series may, by a notice in writing to us (and to the trustee if given by the holders), declare to be due and payable immediately the principal of (or, if the debt securities of that series are discount securities, that portion of the principal amount as may be specified in the terms of that series) and accrued and unpaid interest, if any, on all debt securities of that series. In the case of an Event of Default resulting from certain events of bankruptcy, insolvency or reorganization, the principal (or such specified amount) of and accrued and unpaid interest, if any, on all outstanding debt securities will become and be immediately due and payable without any declaration or other act on the part of the trustee or any holder of outstanding debt securities. At any time after a declaration of acceleration with respect to debt securities of any series has been made, but before a judgment or decree for payment of the money due has been obtained by the trustee, the holders of a majority in principal amount of the outstanding debt securities of that series may rescind and annul the acceleration if all Events of Default, other than the non-payment of accelerated principal and interest, if any, with respect to debt securities of that series, have been cured or waived as provided in the indenture. (Section 6.2) We refer you to the prospectus supplement relating to any series of debt securities that are discount securities for the particular provisions relating to acceleration of a portion of the principal amount of such discount securities upon the occurrence of an Event of Default.

The indenture provides that the trustee may refuse to perform any duty or exercise any of its rights or powers under the indenture unless the trustee receives indemnity satisfactory to it against any cost, liability or expense which might be incurred by it in performing such duty or exercising such right or power. (Section 7.1(e)) Subject to certain rights of the trustee, the holders of a majority in principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee with respect to the debt securities of that series. (Section 6.12)

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

- that holder has previously given to the trustee written notice of a continuing Event of Default with respect to debt securities of that series; and

- the holders of not less than 25% in principal amount of the outstanding debt securities of that series have made written request, and offered indemnity or security satisfactory to the trustee, to the trustee to institute the proceeding as trustee, and the trustee has not received from the holders of not less than a majority in principal amount of the outstanding debt securities of that series a direction inconsistent with that request and has failed to institute the proceeding within sixty (60) days. (Section 6.7)

No holder of debt securities under the indenture may use the indenture to prejudice the rights of another holder or to obtain a preference or priority over another holder of debt securities. (Section 6.7)

Notwithstanding any other provision in the indenture, the holder of any debt security will have an absolute and unconditional right to receive payment of the principal of, premium and any interest on that debt security on or after the due dates expressed in that debt security and to institute suit for the enforcement of payment. (Section 6.8)

The indenture requires us, within one hundred twenty (120) days after the end of our fiscal year, to furnish to the trustee a statement as to compliance with the indenture. (Section 4.3) If a Default or Event of Default occurs and is continuing with respect to the securities of any series and if it is known to a responsible officer of the trustee, the trustee shall mail to each holder of the securities of that series notice of a Default or Event of Default within ninety (90) days after it occurs or, if later, after a responsible officer of the trustee has knowledge of such Default or Event of Default (except if such Default or Event of Default has been validly cured or waived before the trustee gives such notice). The indenture provides that the trustee may withhold notice to the holders of debt securities of any series of any Default or Event of Default (except in payment on any debt securities of that series) with respect to debt securities of that series if the trustee determines in good faith that withholding notice is in the interest of the holders of those debt securities. (Section 7.5)

#### **Modification and Waiver**

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

- to cure any ambiguity, defect or inconsistency;
- to comply with covenants in the indenture described above under the heading “Consolidation, Merger and Sale of Assets”;
- to provide for uncertificated securities in addition to or in place of certificated securities;
- to add guarantees with respect to debt securities of any series or secure debt securities of any series;
- to surrender any of our rights or powers under the indenture;
- to add covenants or events of default for the benefit of the holders of debt securities of any series;
- to comply with the applicable procedures of the applicable depository;
- to make any change that does not adversely affect the rights of any holder of debt securities;
- to provide for the issuance of and establish the form and terms and conditions of debt securities of any series as permitted by the indenture;
- to effect the appointment of a successor trustee with respect to the debt securities of any series and to add to or change any of the provisions of the indenture to provide for or facilitate administration by more than one trustee; or
- to comply with requirements of the SEC in order to effect or maintain the qualification of the indenture under the Trust Indenture Act. (Section 9.1)

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

- reduce the amount of debt securities whose holders must consent to an amendment, supplement or waiver;
- reduce the rate of or extend the time for payment of interest (including default interest) on any debt security;

- reduce the principal of or premium on or change the fixed maturity of any debt security or reduce the amount of, or postpone the date fixed for, the payment of any sinking fund or analogous obligation with respect to any series of debt securities;
- reduce the principal amount of discount securities payable upon acceleration of maturity;
- waive a default in the payment of the principal of, premium or interest on any debt security (except a rescission of acceleration of the debt securities of any series by the holders of at least a majority in aggregate principal amount of the then outstanding debt securities of that series and a waiver of the payment default that resulted from such acceleration);
- make the principal of or premium or interest on any debt security payable in currency other than that stated in the debt security;
- make any change to certain provisions of the indenture relating to, among other things, the right of holders of debt securities to receive payment of the principal of, premium and interest on those debt securities and to institute suit for the enforcement of any such payment and to waivers or amendments; or
- waive a redemption payment with respect to any debt security. (Section 9.3)

Except for certain specified provisions, the holders of at least a majority in principal amount of the outstanding debt securities of any series may on behalf of the holders of all debt securities of that series waive our compliance with provisions of the indenture. (Section 9.2) The holders of a majority in principal amount of the outstanding debt securities of any series may on behalf of the holders of all the debt securities of such series waive any past default under the indenture with respect to that series and its consequences, except a default in the payment of the principal of, premium or any interest on any debt security of that series; provided, however, that the holders of a majority in principal amount of the outstanding debt securities of any series may rescind an acceleration and its consequences, including any related payment default that resulted from the acceleration. (Section 6.13)

#### **Defeasance of Debt Securities and Certain Covenants in Certain Circumstances**

*Legal Defeasance.* The indenture provides that, unless otherwise provided by the terms of the applicable series of debt securities, we may be discharged from any and all obligations in respect of the debt securities of any series (subject to certain exceptions). We will be so discharged upon the irrevocable deposit with the trustee, in trust, of money and/or U.S. government obligations or, in the case of debt securities denominated in a single currency other than U.S. Dollars, government obligations of the government that issued or caused to be issued such currency, that, through the payment of interest and principal in accordance with their terms, will provide money or U.S. government obligations in an amount sufficient in the opinion of a nationally recognized firm of independent public accountants or investment bank to pay and discharge each installment of principal, premium and interest on and any mandatory sinking fund payments in respect of the debt securities of that series on the stated maturity of those payments in accordance with the terms of the indenture and those debt securities.

This discharge may occur only if, among other things, we have delivered to the trustee an opinion of counsel stating that we have received from, or there has been published by, the United States Internal Revenue Service a ruling or, since the date of execution of the indenture, there has been a change in the applicable United States federal income tax law, in either case to the effect that, and based thereon such opinion shall confirm that, the holders of the debt securities of that series will not recognize income, gain or loss for United States federal income tax purposes as a result of the deposit, defeasance and discharge and will be subject to United States federal income tax on the same amounts and in the same manner and at the same times as would have been the case if the deposit, defeasance and discharge had not occurred. (Section 8.3)

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

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

The conditions include:

- depositing with the trustee money and/or U.S. government obligations or, in the case of debt securities denominated in a single currency other than U.S. Dollars, government obligations of the government that issued or caused to be issued such currency, that, through the payment of interest and principal in accordance with their terms, will provide money in an amount sufficient in the opinion of a nationally recognized firm of independent public accountants or investment bank to pay and discharge each installment of principal of, premium and interest on and any mandatory sinking fund payments in respect of the debt securities of that series on the stated maturity of those payments in accordance with the terms of the indenture and those debt securities; and
- delivering to the trustee an opinion of counsel to the effect that we have received from, or there has been published by, the United States Internal Revenue Service a ruling or, since the date of execution of the indenture, there has been a change in the applicable United States federal income tax law, in either case to the effect that, and based thereon such opinion shall confirm that, the beneficial owners of the debt securities of that series will not recognize income, gain or loss for United States federal income tax purposes as a result of the deposit and related covenant defeasance and will be subject to United States federal income tax on the same amounts and in the same manner and at the same times as would have been the case if the deposit and related covenant defeasance had not occurred. (Section 8.4)

#### **No Personal Liability of Directors, Officers, Employees or Stockholders**

None of our past, present or future directors, officers, employees or stockholders, as such, will have any liability for any of our obligations under the debt securities or the indenture or for any claim based on, or in respect or by reason of, such obligations or their creation. By accepting a debt security, each holder waives and releases all such liability.

This waiver and release is part of the consideration for the issue of the debt securities. However, this waiver and release may not be effective to waive liabilities under U.S. federal securities laws, and it is the view of the SEC that such a waiver is against public policy. (Section 10.8)

#### **Governing Law**

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

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

The indenture will provide that any legal suit, action or proceeding arising out of or based upon the indenture or the transactions contemplated thereby may be instituted in the federal courts of the United States of America located in the City of New York or the courts of the State of New York in each case located in the City of New York, and we, the trustee and the holder of the debt securities (by their acceptance of the debt securities) irrevocably submit to the non-exclusive jurisdiction of such courts in any such suit, action or proceeding. The indenture will further provide that service of any process, summons, notice or document by mail (to the extent allowed under any applicable statute or rule of court) to such party's address set forth in the indenture will be effective service of process for any suit, action or other proceeding brought in any such court. The indenture will further provide that we, the trustee and the holders of the debt securities (by their acceptance of the debt securities) irrevocably and unconditionally waive any objection to the laying of venue of any suit, action or other proceeding in the courts specified above and irrevocably and unconditionally waive and agree not to plead or claim any such suit, action or other proceeding has been brought in an inconvenient forum. (Section 10.10)

## DESCRIPTION OF WARRANTS

We may issue warrants for the purchase of shares of our common stock or preferred stock or of debt securities. We may issue warrants independently or together with other securities, and the warrants may be attached to or separate from any offered securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and the investors or a warrant agent. The following summary of material provisions of the warrants and 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 a particular series of warrants. The terms of any warrants offered under a prospectus supplement may differ from the terms described below. We urge you to read the applicable prospectus supplement and any related free writing prospectus, as well as the complete warrant agreements and warrant certificates that contain the terms of the warrants.

The particular terms of any issue of warrants will be described in the applicable prospectus supplement. Those terms may include:

- the number of shares of common stock or preferred stock purchasable upon the exercise of warrants to purchase such shares and the price at which such number of shares may be purchased upon such exercise;
- the designation, stated value and terms (including, without limitation, liquidation, dividend, conversion and voting rights) of the series of preferred stock purchasable upon exercise of warrants to purchase preferred stock;
- the principal amount of debt securities that may be purchased upon exercise of a debt warrant and the exercise price for the warrants, which may be payable in cash, securities or other property;
- the date, if any, on and after which the warrants and the related debt securities, preferred stock or common stock will be separately transferable;
- the terms of any rights to redeem or call the warrants;
- the date on which the right to exercise the warrants will commence and the date on which the right will expire;
- United States Federal income tax consequences applicable to the warrants; and
- any additional terms of the warrants, including terms, procedures, and limitations relating to the exchange, exercise and settlement of the warrants.

Holders of equity warrants will not be entitled to:

- vote, consent or receive dividends;
- receive notice as stockholders with respect to any meeting of stockholders for the election of our directors or any other matter; or
- exercise any rights as stockholders of Windtree.

Each warrant will entitle its holder to purchase the principal amount of debt securities or the number of shares of preferred stock or common stock at the exercise price set forth in, or calculable as set forth 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.

A holder of warrant certificates may exchange them for new warrant certificates of different denominations, present them for registration of transfer and exercise them at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement. Until any warrants to purchase debt securities are exercised, the holder of the warrants will not have any rights of holders of the debt securities that can be purchased upon exercise, including any rights to receive payments of principal, premium or interest on the underlying debt securities or to enforce covenants in the applicable indenture. Until any warrants to purchase common stock or preferred stock are exercised, the holders of the warrants will not have any rights of holders of the underlying common stock or preferred stock, including any rights to receive dividends or payments upon any liquidation, dissolution or winding up on the common stock or preferred stock, if any.



**Warrant Agent**

The warrant agent for any warrants will be set forth in the applicable prospectus supplement.

**Description of Outstanding Warrants**

See “Description of Our Capital Stock — Common Stock Warrants” for a description of our outstanding warrants.

## DESCRIPTION OF UNITS

We may issue units consisting of any combination of the other types of securities offered under this prospectus in one or more series. We may evidence each series of units by unit certificates that we will issue under a separate agreement. We may enter into unit agreements with a unit agent. Each unit agent will be a bank or trust company that we select. We will indicate the name and address of the unit agent in the applicable prospectus supplement relating to a particular series of units.

The following description, together with the additional information included in any applicable prospectus supplement, summarizes the general features of the units that we may offer under this prospectus. You should read any prospectus supplement and any free writing prospectus that we may authorize to be provided to you related to the series of units being offered, as well as the complete unit agreements that contain the terms of the units. Specific unit agreements will contain additional important terms and provisions and we will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from another report that we file with the SEC, the form of each unit agreement relating to units offered under this prospectus.

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

- the title of the series of units;
- identification and description of the separate constituent securities comprising the units;
- the price or prices at which the units will be issued;
- the date, if any, on and after which the constituent securities comprising the units will be separately transferable;
- a discussion of certain United States federal income tax considerations applicable to the units; and
- any other terms of the units and their constituent securities.

**DESCRIPTION OF OUR SUBSCRIPTION RIGHTS**

As specified in any applicable prospectus supplement, we may issue subscription rights consisting of one or more debt securities, shares of preferred stock, shares of common stock or any combination of such securities.

## GLOBAL SECURITIES

### Book-Entry, Delivery and Form

Unless we indicate differently in any applicable prospectus supplement, the securities initially will be issued in book-entry form and represented by one or more global notes or global securities, or, collectively, global securities. The global securities will be deposited with, or on behalf of, The Depository Trust Company, New York, New York, as depository, or DTC, and registered in the name of Cede & Co., the nominee of DTC. Unless and until it is exchanged for individual certificates evidencing securities under the limited circumstances described below, a global security may not be transferred except as a whole by the depository to its nominee or by the nominee to the depository, or by the depository or its nominee to a successor depository or to a nominee of the successor depository.

DTC has advised us that it is:

- a limited-purpose trust company organized under the New York Banking Law;
- a “banking organization” within the meaning of the New York Banking Law;
- a member of the Federal Reserve System;
- a “clearing corporation” within the meaning of the New York Uniform Commercial Code; and
- a “clearing agency” registered pursuant to the provisions of Section 17A of the Exchange Act.

DTC holds securities that its participants deposit with DTC. DTC also facilitates the settlement among its participants of securities transactions, such as transfers and pledges, in deposited securities through electronic computerized book-entry changes in participants’ accounts, thereby eliminating the need for physical movement of securities certificates. “Direct participants” in DTC include securities brokers and dealers, including underwriters, banks, trust companies, clearing corporations and other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation, or DTCC. DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others, which we sometimes refer to as indirect participants, that clear through or maintain a custodial relationship with a direct participant, either directly or indirectly. The rules applicable to DTC and its participants are on file with the SEC.

Purchases of securities under the DTC system must be made by or through direct participants, which will receive a credit for the securities on DTC’s records. The ownership interest of the actual purchaser of a security, which we sometimes refer to as a beneficial owner, is in turn recorded on the direct and indirect participants’ records. Beneficial owners of securities will not receive written confirmation from DTC of their purchases. However, beneficial owners are expected to receive written confirmations providing details of their transactions, as well as periodic statements of their holdings, from the direct or indirect participants through which they purchased securities. Transfers of ownership interests in global securities are to be accomplished by entries made on the books of participants acting on behalf of beneficial owners. Beneficial owners will not receive certificates representing their ownership interests in the global securities, except under the limited circumstances described below.

To facilitate subsequent transfers, all global securities deposited by direct participants with DTC will be registered in the name of DTC’s partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of securities with DTC and their registration in the name of Cede & Co. or such other nominee will not change the beneficial ownership of the securities. DTC has no knowledge of the actual beneficial owners of the securities. DTC’s records reflect only the identity of the direct participants to whose accounts the securities are credited, which may or may not be the beneficial owners. The participants are responsible for keeping account of their holdings on behalf of their customers.

So long as the securities are in book-entry form, you will receive payments and may transfer securities only through the facilities of the depository and its direct and indirect participants. We will maintain an office or agency in the location specified in the prospectus supplement for the applicable securities, where notices and demands in respect of the securities and the indenture may be delivered to us and where certificated securities may be surrendered for payment, registration of transfer or exchange.

Conveyance of notices and other communications by DTC to direct participants, by direct participants to indirect participants and by direct participants and indirect participants to beneficial owners will be governed by arrangements among them, subject to any legal requirements in effect from time to time.

Redemption notices will be sent to DTC. If less than all of the securities of a particular series are being redeemed, DTC's practice is to determine by lot the amount of the interest of each direct participant in the securities of such series to be redeemed.

Neither DTC nor Cede & Co. (or such other DTC nominee) will consent or vote with respect to the securities. Under its usual procedures, DTC will mail an omnibus proxy to us as soon as possible after the record date. The omnibus proxy assigns the consenting or voting rights of Cede & Co. to those direct participants to whose accounts the securities of such series are credited on the record date, identified in a listing attached to the omnibus proxy.

So long as securities are in book-entry form, we will make payments on those securities to the depository or its nominee, as the registered owner of such securities, by wire transfer of immediately available funds. If securities are issued in definitive certificated form under the limited circumstances described below and unless if otherwise provided in the description of the applicable securities herein or in the applicable prospectus supplement, we will have the option of making payments by check mailed to the addresses of the persons entitled to payment or by wire transfer to bank accounts in the United States designated in writing to the applicable trustee or other designated party at least fifteen (15) days before the applicable payment date by the persons entitled to payment, unless a shorter period is satisfactory to the applicable trustee or other designated party.

Redemption proceeds, distributions and dividend payments on the securities will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit direct participants' accounts upon DTC's receipt of funds and corresponding detail information from us on the payment date in accordance with their respective holdings shown on DTC records. Payments by participants to beneficial owners will be governed by standing instructions and customary practices, as is the case with securities held for the account of customers in bearer form or registered in "street name." Those payments will be the responsibility of participants and not of DTC or us, subject to any statutory or regulatory requirements in effect from time to time. Payment of redemption proceeds, distributions and dividend payments to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC, is our responsibility, disbursement of payments to direct participants is the responsibility of DTC, and disbursement of payments to the beneficial owners is the responsibility of direct and indirect participants.

Except under the limited circumstances described below, purchasers of securities will not be entitled to have securities registered in their names and will not receive physical delivery of securities. Accordingly, each beneficial owner must rely on the procedures of DTC and its participants to exercise any rights under the securities and the indenture.

The laws of some jurisdictions may require that some purchasers of securities take physical delivery of securities in definitive form. Those laws may impair the ability to transfer or pledge beneficial interests in securities.

DTC may discontinue providing its services as securities depository with respect to the securities at any time by giving reasonable notice to us. Under such circumstances, in the event that a successor depository is not obtained, securities certificates are required to be printed and delivered.

As noted above, beneficial owners of a particular series of securities generally will not receive certificates representing their ownership interests in those securities. However, if:

- DTC notifies us that it is unwilling or unable to continue as a depository for the global security or securities representing such series of securities or if DTC ceases to be a clearing agency registered under the Exchange Act at a time when it is required to be registered and a successor depository is not appointed within ninety (90) days of the notification to us or of our becoming aware of DTC's ceasing to be so registered, as the case may be;
- we determine, in our sole discretion, not to have such securities represented by one or more global securities; or
- an Event of Default has occurred and is continuing with respect to such series of securities, we will prepare and deliver certificates for such securities in exchange for beneficial interests in the global securities.

Any beneficial interest in a global security that is exchangeable under the circumstances described in the preceding sentence will be exchangeable for securities in definitive certificated form registered in the names that the depository directs. It is expected that these directions will be based upon directions received by the depository from its participants with respect to ownership of beneficial interests in the global securities.

We have obtained the information in this section and elsewhere in this prospectus concerning DTC and DTC's book-entry system from sources that are believed to be reliable, but we take no responsibility for the accuracy of this information.

### ***Euroclear and Clearstream***

If so provided in the applicable prospectus supplement, you may hold interests in a global security through Clearstream Banking S.A., which we refer to as "Clearstream," or Euroclear Bank S.A./N.V., as operator of the Euroclear System, which we refer to as "Euroclear," either directly if you are a participant in Clearstream or Euroclear or indirectly through organizations which are participants in Clearstream or Euroclear. Clearstream and Euroclear will hold interests on behalf of their respective participants through customers' securities accounts in the names of Clearstream and Euroclear, respectively, on the books of their respective U.S. depositories, which in turn will hold such interests in customers' securities accounts in such depositories' names on DTC's books.

Clearstream and Euroclear are securities clearance systems in Europe. Clearstream and Euroclear hold securities for their respective participating organizations and facilitate the clearance and settlement of securities transactions between those participants through electronic book-entry changes in their accounts, thereby eliminating the need for physical movement of certificates.

Payments, deliveries, transfers, exchanges, notices and other matters relating to beneficial interests in global securities owned through Euroclear or Clearstream must comply with the rules and procedures of those systems. Transactions between participants in Euroclear or Clearstream, on one hand, and other participants in DTC, on the other hand, are also subject to DTC's rules and procedures.

Investors will be able to make and receive through Euroclear and Clearstream payments, deliveries, transfers and other transactions involving any beneficial interests in global securities held through those systems only on days when those systems are open for business. Those systems may not be open for business on days when banks, brokers and other institutions are open for business in the United States.

Cross-market transfers between participants in DTC, on the one hand, and participants in Euroclear or Clearstream, on the other hand, will be effected through DTC in accordance with the DTC's rules on behalf of Euroclear or Clearstream, as the case may be, by their respective U.S. depositories; however, such cross-market transactions will require delivery of instructions to Euroclear or Clearstream, as the case may be, by the counterparty in such system in accordance with the rules and procedures and within the established deadlines (European time) of such system. Euroclear or Clearstream, as the case may be, will, if the transaction meets its settlement requirements, deliver instructions to its U.S. depository to take DTC, and making or receiving payment in accordance with normal procedures for same-day fund settlement. Participants in Euroclear or Clearstream may not deliver instructions directly to their respective U.S. depositories.

Due to time zone differences, the securities accounts of a participant in Euroclear or Clearstream purchasing an interest in a global security from a direct participant in DTC will be credited, and any such crediting will be reported to the relevant participant in Euroclear or Clearstream, during the securities settlement processing day (which must be a business day for Euroclear or Clearstream) immediately following the settlement date of DTC. Cash received in Euroclear or Clearstream as a result of sales of interests in a global security by or through a participant in Euroclear or Clearstream to a direct participant in DTC will be received with value on the settlement date of DTC but will be available in the relevant Euroclear or Clearstream cash account only as of the business day for Euroclear or Clearstream following DTC's settlement date.

***Other***

The information in this section of this prospectus concerning DTC, Clearstream, Euroclear and their respective book-entry systems has been obtained from sources that we believe to be reliable, but we do not take responsibility for this information. This information has been provided solely as a matter of convenience. The rules and procedures of DTC, Clearstream and Euroclear are solely within the control of those organizations and could change at any time. Neither we nor the trustee nor any agent of ours or of the trustee has any control over those entities and none of us takes any responsibility for their activities. You are urged to contact DTC, Clearstream and Euroclear or their respective participants directly to discuss those matters. In addition, although we expect that DTC, Clearstream and Euroclear will perform the foregoing procedures, none of them is under any obligation to perform or continue to perform such procedures and such procedures may be discontinued at any time. Neither we nor any agent of ours will have any responsibility for the performance or nonperformance by DTC, Clearstream and Euroclear or their respective participants of these or any other rules or procedures governing their respective operations.

## PLAN OF DISTRIBUTION

We may sell the securities from time to time pursuant to underwritten public offerings, “at-the-market offerings,” negotiated transactions, block trades or a combination of these methods or through underwriters or dealers, through agents and/or directly to one or more purchasers. The securities may be distributed 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.

Each time that we sell securities covered by this prospectus, we will provide a prospectus supplement or supplements that will describe the method of distribution and set forth the terms and conditions of the offering of such securities, including the offering price of the securities and the proceeds to us, if applicable.

Offers to purchase the securities being offered by this prospectus may be solicited directly. Agents may also be designated to solicit offers to purchase the securities from time to time. Any agent involved in the offer or sale of our securities will be identified in a prospectus supplement.

If a dealer is utilized in the sale of the securities being offered by this prospectus, the securities will be sold to the dealer, as principal. The dealer may then resell the securities to the public at varying prices to be determined by the dealer at the time of resale.

If an underwriter is utilized in the sale of the securities being offered by this prospectus, an underwriting agreement will be executed with the underwriter at the time of sale and the name of any underwriter will be provided in the prospectus supplement that the underwriter will use to make resales of the securities to the public. In connection with the sale of the securities, we or the purchasers of securities for whom the underwriter may act as agent, may compensate the underwriter in the form of underwriting discounts or commissions. The underwriter may sell the securities to or through dealers, and those dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions from the purchasers for which they may act as agent. Unless otherwise indicated in a prospectus supplement, an agent will be acting on a best efforts basis and a dealer will purchase securities as a principal, and may then resell the securities at varying prices to be determined by the dealer.

Any compensation paid to underwriters, dealers or agents in connection with the offering of the securities, and any discounts, concessions or commissions allowed by underwriters to participating dealers will be provided in the applicable prospectus supplement. Underwriters, dealers and agents participating in the distribution of the securities may be deemed to be underwriters within the meaning of the Securities Act and any discounts and commissions received by them and any profit realized by them on resale of the securities may be deemed to be underwriting discounts and commissions. We may enter into agreements to indemnify underwriters, dealers and agents against civil liabilities, including liabilities under the Securities Act, or to contribute to payments they may be required to make in respect thereof and to reimburse those persons for certain expenses.

The securities issued and sold under this prospectus will have no established trading market, other than our common stock, which is listed on the Nasdaq Capital Market. Any shares of our common stock sold pursuant to this prospectus will be eligible for listing and trading on the Nasdaq Capital Market, subject to official notice of issuance. Any other securities sold pursuant to this prospectus may or may not be listed on a national securities exchange. To facilitate the offering of securities, certain persons participating in the offering may engage in transactions that stabilize, maintain or otherwise affect the price of the securities. This may include over-allotments or short sales of the securities, which involve the sale by persons participating in the offering of more securities than were sold to them. In these circumstances, these persons would cover such over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option, if any. In addition, these persons may stabilize or maintain the price of the securities by bidding for or purchasing securities in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if securities sold by them are repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of the securities at a level above that which might otherwise prevail in the open market. These transactions may be discontinued at any time.



If indicated in the applicable prospectus supplement, underwriters or other persons acting as agents may be authorized to solicit offers by institutions or other suitable purchasers to purchase the securities at the public offering price set forth in the prospectus supplement, pursuant to delayed delivery contracts providing for payment and delivery on the date or dates stated in the prospectus supplement. These purchasers may include, among others, commercial and savings banks, insurance companies, pension funds, investment companies and educational and charitable institutions. Delayed delivery contracts will be subject to the condition that the purchase of the securities covered by the delayed delivery contracts will not at the time of delivery be prohibited under the laws of any jurisdiction in the United States to which the purchaser is subject. The underwriters and agents will not have any responsibility with respect to the validity or performance of these contracts.

We may engage in at-the-market offerings into an existing trading market in accordance with Rule 415(a)(4) under the Securities Act. In addition, we may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement so indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by us or borrowed from us or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from us in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and, if not identified in this prospectus, will be named in the applicable prospectus supplement (or a post-effective amendment). In addition, we may otherwise loan or pledge securities to a financial institution or other third party that in turn may sell the securities short using this prospectus and an applicable prospectus supplement. Such financial institution or other third party may transfer its economic short position to investors in our securities or in connection with a concurrent offering of other securities.

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

The underwriters, dealers and agents may engage in transactions with us, or perform services for us, in the ordinary course of business for which they receive compensation.

## **LEGAL MATTERS**

Troutman Pepper Hamilton Sanders LLP will pass upon certain legal matters relating to the issuance and sale of the securities offered hereby on behalf of Windtree Therapeutics, Inc. 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**

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2019, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our consolidated financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.



**\$75,000,000**

**Common Stock  
Preferred Stock  
Debt Securities  
Warrants  
Units  
Subscription Rights**

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**PROSPECTUS**

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**, 2020**

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**The information in this prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.**

**Subject to Completion, dated September 17, 2020**

**PROSPECTUS**



**Up to \$10,000,000**

**Common Stock**

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We have entered into an At The Market Offering Agreement, or the sales agreement, with Ladenburg Thalmann & Co. Inc., or Ladenburg, relating to shares of our 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, \$0.001 par value per share, or common stock, having an aggregate offering price of up to \$10,000,000 from time to time through Ladenburg, acting as sales agent.

Our common stock is listed on the Nasdaq Capital Market under the trading symbol "WINT." On September 16, 2020, the last reported sale price of our common stock on the Nasdaq Capital Market was \$6.79 per share.

Sales of our common stock, if any, under this prospectus may be made in sales deemed to be "at-the-market" equity offerings as defined in Rule 415 promulgated under the Securities Act of 1933, as amended, or the Securities Act, or in privately negotiated transactions. Ladenburg is not required to sell any specific number or dollar amounts of securities, but will act as sales agent and use commercially reasonable efforts to sell on our behalf all of the shares of common stock requested to be sold by us, consistent with its normal trading and sales practices, on mutually agreed terms between Ladenburg and us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

Ladenburg will be entitled to compensation at a commission rate of 3.0% of the aggregate gross sales price per share sold. See "Plan of Distribution" beginning on page 14 for additional information regarding Ladenburg's compensation. In connection with the sale of our common stock on our behalf, Ladenburg may be deemed to be an "underwriter" within the meaning of the Securities Act and the compensation of Ladenburg may be deemed to be underwriting commissions or discounts.

**Investing in our common stock involves a high degree of risk. Before making an investment decision, please read the information under the heading "Risk Factors" beginning on page 5 of this prospectus and in the documents 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 passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.**

**Ladenburg Thalmann**

**The date of this prospectus is                      , 2020**

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## ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we have filed with the U.S. Securities and Exchange Commission, or the SEC, utilizing a “shelf” registration process. Under this shelf registration process, we may offer shares of our common stock having an aggregate offering price of up to \$10,000,000 from time to time under this prospectus at prices and on terms to be determined by market conditions at the time of offering.

We provide information to you about this offering of shares of our common stock in this prospectus, which describes the specific details regarding this offering. If information in this prospectus is inconsistent with documents incorporated by reference in this prospectus filed prior to the date of this prospectus, you should rely on this prospectus. However, if any statement in one of these documents is inconsistent with a statement in another document having a later date, for example, a document incorporated by reference in this prospectus, the statement in the document having the later date modifies or supersedes the earlier statement as our business, financial condition, results of operations and prospects may have changed since the earlier dates.

You should rely only on the information contained in, or incorporated by reference into, this prospectus and in any free writing prospectus that we may authorize for use in connection with this offering. We have not, and Ladenburg has not, authorized anyone to provide you with any information other than that contained in or incorporated by reference in this prospectus and any free writing prospectus prepared by or on behalf of us or to which we have referred you. We and Ladenburg take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are not, and Ladenburg is not, making an offer to sell or soliciting an offer to buy our securities in any jurisdiction in which an offer or solicitation is not authorized or in which the person making that offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation. 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 may authorize 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 may authorize for use in connection with this offering, in their entirety before making an investment decision. You should also read and consider the information in the documents to which we have referred you in the sections of this prospectus entitled “Where You Can Find More Information” and “Incorporation by Reference.”

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

We are offering to sell, and seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted. The distribution of this prospectus and the offering of our common stock in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of our common stock and the distribution of this prospectus outside the United States. This prospectus does not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

Unless the context otherwise requires, references in this prospectus to “Windtree,” “Windtree Therapeutics,” “the Company,” “we,” “our,” and “us” refer to Windtree Therapeutics, Inc., a Delaware corporation, and our consolidated subsidiaries.

We use “Windtree Therapeutics,” as our trademark, and we have been granted a trademark or have a trademark application on file with the United States Patent and Trademark Office. All trademarks or trade names referred to in this prospectus are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus are referred to without the ® and ™ symbols, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto. We do not intend the use or display of other companies’ trademarks and trade names to imply a relationship with, or endorsement or sponsorship of us, by any other companies.

## MARKET AND INDUSTRY DATA

This prospectus, including the information incorporated by reference herein, contains estimates, projections and other information concerning our industry, our business, and the markets for certain drugs, including data regarding the estimated size of those markets, their projected growth rates and the incidence of certain medical conditions. Unless otherwise expressly stated, we obtained the industry, market and competitive position data from our own internal estimates and research, as well as from independent market research, industry, medical and general publications and surveys, governmental agencies and publicly available information in addition to research, surveys and studies conducted by third parties. In some cases, we do not expressly refer to the sources from which this data is derived. In that regard, when we refer to one or more sources of this type of data in any paragraph, you should assume that other data of this type appearing in the same paragraph is derived from the same sources, unless otherwise expressly stated or the context otherwise requires. All market and industry data used involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates.

In addition, while we believe the industry, market and competitive position data included in this prospectus, including the information incorporated by reference herein is reliable and based on reasonable assumptions, such data involve risks and uncertainties and are subject to change based on various factors, including those described in the section titled “Risk Factors,” beginning on page 5 and the “Risk Factors” section included in our Annual Report on Form 10-K for the year ended December 31, 2019 and our Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2020 and June 30, 2020, as well as in our subsequent Quarterly Reports on Form 10-Q and our Annual Reports on Form 10-K filed with the SEC. These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties or by us.

**PROSPECTUS SUMMARY**

*The following summary highlights information contained or incorporated by reference elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our common stock, you should carefully read this entire prospectus and any related free writing prospectus, as well as the information under the caption “Risk Factors” beginning on page 5 of this prospectus and the “Risk Factors” section included in our Annual Report on Form 10-K for the year ended December 31, 2019 and our Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2020 and June 30, 2020, as well as our financial statements and the related notes thereto in our Annual Report on Form 10-K for the year ended December 31, 2019 and our Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2020 and June 30, 2020 and any subsequent Quarterly Report on Form 10-Q incorporated by reference herein.*

**Company Overview**

We are a clinical-stage, biopharmaceutical and medical device company focused on the development of novel therapeutics intended to address significant unmet medical needs in important acute care markets. Our development programs are primarily focused in the treatment of acute cardiovascular and pulmonary diseases. Our lead cardiovascular product candidate istaroxime, a first-in-class, dual-acting agent is being developed to improve cardiac function in patients with acute heart failure, or AHF, and cardiogenic shock with a potentially differentiated safety profile from existing treatments. Istaroxime demonstrated significant improvement in diastolic and systolic function in phase 2 clinical trials and has been granted Fast Track designation for the treatment of AHF by the U.S. Food and Drug Administration, or FDA. Our lead pulmonary product candidate is AEROSURF (lucinactant for inhalation), a novel drug/medical device combination for non-invasive delivery of our proprietary aerosolized KL4 surfactant, using our proprietary aerosol delivery system, or ADS, technology for the treatment of respiratory distress syndrome, or RDS, in premature infants. AEROSURF has been granted Fast Track designation by the FDA for the treatment of RDS. We are also developing plans to conduct a small pilot study of our proprietary KL4 surfactant for the treatment of lung injury resulting from severe novel coronavirus, or COVID-19, infections, if we are able to secure the required regulatory approvals to initiate the study. Our other drug product candidates include rostafuroxin, a novel medicine for the treatment of hypertension in patients with a specific genetic profile. We also have a number of pipeline preclinical product candidates that we are evaluating for progression into clinical development. We are evaluating and pursuing a number of early exploratory research programs to identify potential product candidates, including oral and intravenous SERCA-2a heart failure compounds and other product candidates utilizing our KL4 surfactant and ADS technologies.

**Our Development Programs**

The table below summarizes the current status and anticipated milestones for our principal product development programs. However, due to the recent global outbreak of COVID-19, our clinical trials and next expected milestones of our product candidates may be impacted, and we may experience delays in anticipated timelines and milestones.

Product Candidate	Indication	Status	Next Expected Milestone
Istaroxime	AHF	Phase 2b	Initiate start-up activities for second phase 2b clinical trial in ~300 patients in second half of 2020.
Istaroxime	Early Cardiogenic Shock	Phase 2a	Initiate phase 2a clinical trial in ~60 patients by end of third quarter 2020.
AEROSURF (aerosolized KL4 surfactant)	RDS	Phase 2b	Initiated in second quarter of 2020 a ~90-patient bridging study with new ADS (developed for use in our phase 3 program), relying on licensee resources.
Rostafuroxin	Genetically Associated Hypertension	Phase 2b	Out-licensing.
Lyophilized KL4 Surfactant	Lung Injury resulting from COVID-19	Pilot	Program planning; targeted IND filing in the third quarter of 2020 and a targeted start date in the second-half of 2020, subject to securing the required regulatory approval to initiate the study.

**Corporate Information**

We were incorporated in Delaware on November 6, 1992. Our principal executive offices are located at 2600 Kelly Road, Suite 100, Warrington, Pennsylvania 18976, and our telephone number is (215) 488-9300. Our website address is [www.windtreex.com](http://www.windtreex.com). The information on, or that can be accessed through, our website is not part of this prospectus and is not incorporated by reference herein and you should not consider it part of this prospectus. We have included our website address as an inactive textual reference only.



## THE OFFERING

Common stock offered by us	Shares of our common stock having an aggregate offering price of up to \$10,000,000.
Common stock to be outstanding after this offering	Up to 18,341,486 shares of common stock (as more fully described in the notes following this table), assuming sales of 1,472,754 shares of our common stock in this offering at an offering price of \$6.79 per share, which was the last reported sale price of our common stock on the Nasdaq Capital Market on September 16, 2020. The actual number of shares issued will vary depending on the sales price under this offering.
Manner of offering	“At-the-market” offering that may be made from time to time through the sales agent, Ladenburg. See “Plan of Distribution” on page 14.
Use of Proceeds	We intend to use the net proceeds from this offering, if any, for working capital and general corporate purposes, which may include capital expenditures, research and development, general and administrative expenses and repayment of indebtedness. See “Use of Proceeds” on page 8.
Risk Factors	An investment in our securities involves a high degree of risk. See “Risk Factors” on page 5 of this prospectus and the other information included in this prospectus and incorporated by reference herein for a discussion of factors you should carefully consider before deciding to invest in our common stock.
Nasdaq Capital Market symbol	“WINT”

The number of shares of our common stock that will be outstanding after this offering is based on 16,868,732 shares of common stock outstanding as of June 30, 2020, and excludes, in each case as of June 30, 2020:

- 1,761,949 shares of our common stock issuable upon the exercise of stock options outstanding as of June 30, 2020, at a weighted-average exercise price of \$17.41 per share;
- 7,913,900 shares of our common stock issuable upon the exercise of the warrants outstanding as of June 30, 2020, at a weighted-average exercise price of \$16.38 per share;
- 159,556 shares of common stock available for future grant as of June 30, 2020 under our 2011 Long-Term Incentive Plan, as amended; and
- 35,000 shares of common stock issuable upon the vesting of restricted stock units outstanding as of June 30, 2020.

Unless otherwise stated, all information contained in this prospectus reflects an assumed public offering price of \$6.79 per share, which was the last reported sale price of our common stock on the Nasdaq Capital Market on September 16, 2020.

## RISK FACTORS

*Investing in our common stock involves a high degree of risk. You should consider carefully the following risks and uncertainties as well as the risks and uncertainties described in the sections entitled “Risk Factors” contained in our Annual Report on Form 10-K for the year ended December 31, 2019, as filed with the SEC on April 3, 2020, our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2020, as filed with the SEC on May 13, 2020 and our Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2020, as filed with the SEC on August 14, 2020, as updated by our subsequent filings under the Securities Exchange Act of 1934, as amended, or the Exchange Act, each of which is incorporated in this prospectus by reference in their entirety, together with other information in this prospectus, the information and documents incorporated by reference and any free writing prospectus that we may authorize for use in connection with this offering before you make a decision to invest in our common stock. These risks and uncertainties are not the only risks and uncertainties we face. Additional risks and uncertainties not currently known to us, or that we currently view as immaterial, may also impair our business, operating results, prospects or financial condition. If any of the risks or uncertainties described in our SEC filings or any additional risks and uncertainties actually occur, our business, financial condition, results of operations and prospects could be materially and adversely affected. In that case, the trading price of our common stock could decline and you might lose all or part of your investment.*

### **Risks Related to this Offering**

***Our management team may invest or spend the proceeds of this offering in ways with which you may not agree or in ways which may not yield a significant return.***

Our management will have broad discretion over the use of proceeds from this offering. We intend to use the net proceeds, if any, from this offering for working capital and general corporate purposes, which may include capital expenditures, research and development, general and administrative expenses and repayment of indebtedness. Our management will have considerable discretion in the application of the net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. The net proceeds may be used for corporate purposes that do not increase our operating results or enhance the value of our common stock.

***You may experience immediate and substantial dilution in the net tangible book value per share of the common stock you purchase.***

The price per share of our common stock being offered may be higher than the net tangible book value per share of our common stock outstanding prior to this offering. Assuming that an aggregate of 1,472,754 shares are sold at an assumed offering price of \$6.79 per share, the last reported sale price of our common stock on the Nasdaq Capital Market on September 16, 2020, for aggregate gross proceeds of \$10,000,000 in this offering, and after deducting commissions and estimated aggregate offering expenses payable by us, you will suffer immediate and substantial dilution of \$6.78 per share, representing the difference between the as adjusted net tangible book value per share of our common stock as of June 30, 2020 after giving effect to this offering and the assumed offering price. To the extent that any options or warrants are exercised, any restricted stock units vest and are settled, any new equity awards are issued under our equity incentive plans, or we otherwise issue additional shares of common stock in the future (including shares issued in connection with strategic and other transactions), you will 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. See the section entitled “Dilution” below for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering.

***Sales of our common stock in this offering, or the perception that such sales may occur, could cause the market price of our common stock to fall.***

We may issue and sell shares of our common stock for aggregate gross proceeds of up to \$10,000,000 from time to time in connection with this offering. The actual number of shares of common stock that may be issued and sold in this offering, as well as the timing of any such sales, will depend on a number of factors, including, among others, the prices at which any shares are actually sold in this offering (which may be influenced by market conditions, the trading price of our common stock and other factors) and our determinations as to the appropriate timing, sources and amounts of funding we need. The issuance and sale from time to time of these new shares of common stock, or the mere fact that we are able to issue and sell these shares in this offering, could cause the market price of our common stock to decline.

***You may experience future dilution as a result of future equity offerings.***

In order to raise additional capital, we may in the future offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock. We cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock or other securities convertible into or exchangeable for our common stock in future transactions may be higher or lower than the price per share in this offering. As of June 30, 2020, 1,956,505 shares of common stock were either subject to outstanding options or restricted stock unit awards, or reserved for future issuance under our equity incentive plans and are eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules and 7,913,900 shares are reserved for the exercise of warrants outstanding.

***It is not possible to predict the aggregate proceeds resulting from sales made under the sales agreement.***

Subject to certain limitations in the sales agreement and compliance with applicable law, we have the discretion to deliver a placement notice to the sales agent, Ladenburg, at any time throughout the term of the sales agreement. The number of shares that are sold through Ladenburg after delivering a placement notice will fluctuate based on a number of factors, including the market price of our common stock during the sales period, any limits we may set with Ladenburg in any applicable placement notice and the demand for our common stock. Because the price per share of each share sold pursuant to the sales agreement will fluctuate over time, it is not currently possible to predict the aggregate proceeds to be raised in connection with sales under the sales agreement.

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

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

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the documents that we incorporate by reference herein, and any free writing prospectus that we have authorized for use in connection with this offering, contains forward-looking statements within the meaning of Section 27A of the Securities Act, Section 21E of the Exchange Act and the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical facts contained in this prospectus are forward-looking statements. In some cases, you can identify forward-looking statements by terms such as “may,” “will,” “should,” “expect,” “plan,” “anticipate,” “could,” “intend,” “target,” “project,” “contemplate,” “believe,” “estimate,” “predict,” “potential” or “continue” or the negative of these terms or other similar expressions, although not all forward-looking statements contain these words. These forward-looking statements include, but are not limited to, statements about:

- our estimates regarding future results of operations, financial position, research and development costs, capital requirements and our needs for additional financing;
- how long we can continue to fund our operations with our existing cash and cash equivalents;
- delays in our anticipated clinical timelines and milestones associated with COVID-19;
- the results, cost and timing of our preclinical studies and clinical trials, as well as the number of required trials for regulatory approval and the criteria for success in such trials;
- legal and regulatory developments in the U.S. and foreign countries, including any actions or advice that may affect the design, initiation, timing, continuation, progress or outcome of clinical trials or result in the need for additional clinical trials;
- the difficulties and expenses associated with obtaining and maintaining regulatory approval of our product candidates, and the indication and labeling under any such approval;
- our plans and ability to successfully execute development activities and commercialize our product candidates;
- risks related to manufacturing active pharmaceutical ingredients, drug product, medical devices and other materials we need;
- the size and growth of the potential markets for our product candidates, the rate and degree of market acceptance of our product candidates and our ability to serve those markets;
- the success of competing therapies and products that are or become available;
- our ability to limit our exposure under product liability lawsuits;
- our ability to obtain and maintain intellectual property protection for our product candidates;
- recently enacted and future legislation regarding the healthcare system, including changes to the Patient Protection and Affordable Care Act;
- delays, interruptions or failures in the manufacture and supply of our product candidates;
- the performance of third parties upon which we depend, including third-party contract research organizations, contract manufacturing organizations, contractor laboratories and independent contractors;
- our ability to recruit or retain key scientific, commercial or management personnel or to retain our executive officers; and
- our ability to maintain proper functionality and security of our internal computer and information systems and prevent or avoid cyber-attacks, malicious intrusion, breakdown, destruction, loss of data privacy or other significant disruption.

These forward-looking statements are based on management’s current expectations, estimates, forecasts and projections about our business and the industry in which we operate and management’s beliefs and assumptions and are not guarantees of future performance or development and involve known and unknown risks, uncertainties and other factors that are in some cases beyond our control. As a result, any or all of our forward-looking statements in, or incorporated by reference in, this prospectus may turn out to be inaccurate. Factors that may cause actual results to differ materially from current expectations include, among other things, those factors discussed under “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” or otherwise discussed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, our Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2020 and June 30, 2020, and in our other filings made from time to time with the SEC after the date of this prospectus. Potential investors are urged to consider these factors carefully in evaluating the forward-looking statements. These forward-looking statements speak only as of the date of this prospectus and the documents incorporated by reference herein, and any free writing prospectus, as applicable. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future. You should, however, review the factors and risks we describe in the reports we will file from time to time with the SEC after the date of this prospectus. See “Where You Can Find More Information.”

## USE OF PROCEEDS

We may issue and sell shares of our common stock having aggregate sales proceeds of up to \$10,000,000 from time to time. Because there is no minimum offering amount required pursuant to the sales agreement, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. Actual net proceeds will depend on the number of shares we sell and the prices at which such sales occur. There can be no assurance that we will sell any shares under or fully utilize the sales agreement as a source of financing.

We currently intend to use the net proceeds from the sale of the common stock offered by us hereunder, if any, for working capital and general corporate purposes, which may include capital expenditures, research and development, general and administrative expenses and repayment of indebtedness. As of the date of this prospectus, we cannot estimate with certainty the amount of net proceeds to be used for the purposes described above. We may find it necessary or advisable to use the net proceeds for other purposes, and we will have broad discretion in the application of the net proceeds. Pending the uses described above, we plan to invest the net proceeds from this offering in short-term, interest-bearing obligations, investment-grade instruments or other securities.

## DILUTION

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

Net tangible book value per share represents our total tangible assets less total liabilities, divided by the number of shares of our common stock outstanding. 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.

As of June 30, 2020, our historical net tangible book value was \$(9.3) million, or \$(0.55) per share, based on 16,868,732 shares of common stock outstanding as of June 30, 2020.

After giving effect to the sale of our common stock in the aggregate amount of \$10.0 million in this offering at an assumed offering price of \$6.79, the last reported sale price of our common stock on the Nasdaq Capital Market on September 16, 2020, and after deducting commissions and estimated aggregate offering expenses payable by us, our as adjusted net tangible book value as of June 30, 2020 would have been approximately \$0.2 million, or \$0.01 per share. This represents an immediate increase in net tangible book value of \$0.56 per share to existing stockholders and immediate dilution in net tangible book value of \$6.78 per share to new investors purchasing our common stock in this offering. The following table illustrates this dilution on a per share basis:

Assumed public offering price per share		\$	6.79
Net tangible book value per share as of June 30, 2020	\$	(0.55)	
Increase per share attributable to new investors	\$	0.56	
As adjusted net tangible book value per share after this offering		\$	0.01
Dilution per share to new investors		\$	6.78

The shares sold in this offering, if any, will be sold from time to time at various prices. An increase (decrease) of \$1.00 per share in the price at which the shares are sold from the assumed offering price of \$6.79 per share shown in the table above, assuming all of our common stock in the aggregate amount of \$10.0 million is sold at that price, would cause our as adjusted net tangible book value per share after the offering to be \$0.01 per share and would increase (decrease) the dilution in net tangible book value per share to new investors by \$1.00 per share, after deducting commissions and estimated aggregate offering expenses payable by us. This information is supplied for illustrative purposes only.

To the extent that outstanding options or warrants are exercised or outstanding restricted stock awards vest, investors purchasing our common stock in this offering will 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 we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

The above discussion and table are based on 16,868,732 shares of common stock outstanding as of June 30, 2020, and excludes, in each case as of June 30, 2020:

- 1,761,949 shares of our common stock issuable upon the exercise of stock options outstanding as of June 30, 2020, at a weighted-average exercise price of \$17.41 per share;
- 7,913,900 shares of our common stock issuable upon the exercise of the warrants outstanding as of June 30, 2020, at a weighted-average exercise price of \$16.38 per share;
- 159,556 shares of common stock available for future grant as of June 30, 2020 under our 2011 Long-Term Incentive Plan, as amended; and
- 35,000 shares of common stock issuable upon the vesting of restricted stock units outstanding as of June 30, 2020.

## DESCRIPTION OF CAPITAL STOCK

*The following description of our capital stock does not purport to be complete and is subject to, and qualified in its entirety by, our Amended and Restated Certificate of Incorporation, as amended, or the Certificate of Incorporation, and Amended and Restated By-Laws, or the By-Laws, which have been publicly filed with the SEC. See "Where You Can Find More Information." For a complete description, you should refer to our Certificate of Incorporation and By-Laws, copies of which are incorporated by reference as exhibits to the registration statement of which this prospectus is a part. The terms of our capital stock may also be affected by Delaware law.*

### General

Our Certificate of Incorporation authorizes 120,000,000 shares of common stock, \$0.001 par value per share, and 5,000,000 shares of preferred stock, \$0.001 par value per share.

### Common Stock

As of September 17, 2020, there were 16,886,482 shares of our common stock issued and outstanding. Subject to any preferential rights of any preferred stock created by Board, holders of our common stock are entitled to such dividends, if any, as our Board may declare from time to time out of funds that we can legally use to pay dividends.

Holders of our common stock are entitled to one vote for each share of common stock and do not have any right to cumulate votes in the election of directors. Upon our liquidation, dissolution or winding-up, holders of our common stock will be entitled to receive on a proportionate basis any assets remaining after provision for payment of creditors and after payment of any liquidation preferences to holders of preferred stock. Holders of our common stock have no preemptive rights and no conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to our common stock. All the outstanding shares of common stock are, and the shares offered by this prospectus, when issued and paid for, will be, validly issued, fully paid and nonassessable. The rights and privileges of the holders of our common stock are subject to and may be adversely effected by the rights of the holders of shares of any series of preferred stock that we may issue.

### Preferred Stock

Our Board may divide the preferred stock into any number of series, fix the designation and number of shares of each such series, and determine or change the designation, relative rights, preferences and limitations of any series of preferred 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 and may adversely affect the market price of the common stock and the voting and other rights of the holders of our common stock.

### Common Stock Warrants

#### *May 2020 Warrants*

On May 22, 2020, we completed a registered public offering for the purchase of an aggregate of 3,172,413 units consisting of: (i) one share of our common stock and (ii) a warrant to purchase one share of our common stock at an exercise price per share of common stock equal to \$7.975, or the May 2020 warrants. As of September 17, 2020, there are 3,154,663 May 2020 warrants currently outstanding. The May 2020 warrants were immediately exercisable upon issuance, in whole or in part, and expire on May 22, 2025. The May 2020 warrants may not be exercised to the extent that, following such exercise, the holder would beneficially own more than 4.99% (or, at the election of the purchaser prior to the date of issuance, 9.99%) of our outstanding shares of common stock, except that upon at least sixty-one (61) days' prior notice from the holder to us, the holder may increase the amount of ownership of outstanding stock after exercising the holder's May 2020 warrants up to 9.99% (or up to 19.99% upon prior written approval of the Company) of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the May 2020 warrants. The May 2020 warrants contain customary provisions that adjust the exercise price and the number of shares in the event of a corporate transaction.

*December 2019 Private Placement Warrants*

On December 6, 2019, we completed a private placement offering with select institutional investors for the purchase of an aggregate of 2,916,666 shares of common stock and we issued Series I Warrants to purchase up to 1,458,333 shares of our common stock, at an exercise price equal to \$12.09 per share, or the Series I Warrant Shares. The Series I Warrants may be exercised on the six-month anniversary of the date of issuance and through the 5-year anniversary of the date of issuance. The Series I Warrants may be exercised for cash or on a cashless basis if there is no effective registration statement registering the resale of the Series I Warrant Shares and may not be exercised to the extent that the holder thereof would, following such exercise or conversion, beneficially own more than 4.99% (or such other percent as designated by each holder not to exceed 19.99%) of our outstanding shares of common stock. The Series I Warrants contain customary provisions that adjust the exercise price and the number of Series I Warrant Shares in the event of a corporate transaction. On May 6, 2020, we entered into an amendment with certain holders of our Series I Warrants pursuant to which the exercise price of the Series I Warrant was amended from \$12.09 to \$9.67 if the Series I Warrant is exercised, in whole or in part, prior to December 5, 2021.

*December 2018 Private Placement Warrants*

On December 21, 2018, we completed a private placement offering with select institutional investors for the purchase of an aggregate of 3,928,513 shares of our common stock. In connection with this financing, we issued (i) Series F Warrants to purchase an aggregate of 667,847 shares of common stock, at an exercise price equal to \$11.04 per share, which are exercisable through the 18-month anniversary of the date of issuance, or the Series F Warrants, and (ii) Series G Warrants to purchase an aggregate of 1,296,410 shares of common stock, at an exercise price equal to \$12.15 per share, which are exercisable through the 5-year anniversary of the date of issuance, or the Series G Warrants and, together with the Series F Warrants, the December 2018 Warrants. The December 2018 Warrants (i) may not be exercised to the extent that, following such exercise, the holder would beneficially own more than 9.99% (or other percent as designated by each holder) of our outstanding shares of common stock, and (ii) otherwise contain customary provisions that adjust the exercise price and the number of shares of common stock into which they may be exercised in the event of a corporate transaction. On April 24, 2020, we entered into an amendment with the holders of our Series F Warrants whereby the expiration date of the Series F Warrant was extended from June 24, 2020 to December 24, 2020.

*AEROSURF Warrants (December 2018)*

In connection with our acquisition of CVie Investments Limited, an exempted company with limited liability incorporated under the laws of the Cayman Islands, our Board declared a dividend to the holders of record of our outstanding shares of common stock, and holders of certain warrants to purchase common stock, that were outstanding on December 20, 2018 of 0.6148 Series H (AEROSURF) Warrant, for each share of common stock held by a shareholder or each warrant held by a warrant holder, as applicable, on the record date, or the AEROSURF Warrants. The Company expects to distribute AEROSURF Warrants that are exercisable for an aggregate of 987,722 shares of common stock. Each AEROSURF Warrant has a term of five years and provides for automatic exercise into one share of common stock, without any exercise price, upon the Company's public announcement of the dosing of the first human subject enrolled in the Company's phase 3 clinical trial for AEROSURF.

*Battelle Collaboration Agreement Warrants (October 2014 and December 2018)*

We entered into the Battelle Collaboration Agreement with Battelle Memorial Institute, or Battelle, in October 2014, which was amended in August 2015 and March 2016, for the development of a new version of our ADS. In connection with the Battelle Collaboration Agreement, on October 10, 2014, we issued to Battelle warrants to purchase 1,190 shares of common stock, exercisable at a price of \$4,200.00 per share, which expire on October 10, 2024. In December 2018, we and Battelle entered into the Battelle Payment Restructuring, which reflected the terms of an October 2017 nonbinding memorandum of understanding, in which we outlined terms to restructure approximately \$4.3 million then due to Battelle, under a Research and Development Services Agreement dated as of June 22, 2012 and the Battelle Collaboration Agreement. In connection with the Battelle Payment Restructuring, on December 11, 2018, we issued to Battelle warrants to purchase 25,000 shares of common stock, exercisable at a price of \$19.50 per share, which expire on December 7, 2023.



*Panacea Venture Management Company Ltd. Warrants (July 2018)*

On July 2, 2018, we issued to Panacea Venture Management Company Ltd., or Panacea, a Secured Convertible Promissory Note, or the Panacea Note, with respect to a loan facility in the aggregate amount of up to \$1.5 million, which was funded in two loans of \$1.0 million on the date of the Panacea Note and \$0.5 million on July 23, 2018. In connection with the Panacea Note, we issued to Panacea warrants, or the Series D Warrants, to purchase 62,500 shares, or the Series D Warrant Shares, at an exercise price of \$12.00 per Series D Warrant Share, or the Exercise Price. The Series D Warrants may be exercised at any time beginning six months after the date of issuance and through the fifth anniversary of the date of issuance. The Series D Warrants may not be exercised to the extent that the holder thereof would, following such exercise, beneficially own more than 9.99% (or such other percent as designated by each holder) of the Company's outstanding shares of common stock, which percentage may be increased, decreased or waived by such holder upon sixty-one (61) days' notice to us. The Series D Warrants also contain customary provisions that adjust the Exercise Price and the number of Series D Warrant Shares in the event of a corporate transaction.

*LPH II Warrants (April 2018)*

On March 30, 2018, LPH II Investments Ltd. invested \$2.6 million in us and acquired 180,555 shares of common stock and 45,139 Series C Warrants to purchase 45,139 shares of common stock, at an exercise price of \$16.56 per Series C Warrant Share. The Series C Warrants may be exercised at any time beginning six months after the date of issuance and through the seventh anniversary of the date of issuance. The Series C Warrants may be exercised for cash or on a cashless basis if there is no effective registration statement registering the resale of the Series C Warrant Shares and may not be exercised to the extent that the holder thereof would, following such exercise, beneficially own more than 9.99% (or such other percent as designated by each holder) of the Company's outstanding shares of common stock, which percentage may be increased, decreased or waived by such holder upon sixty-one (61) days' notice to us. The Series C Warrants also contain customary provisions that adjust the exercise price and the number of Series C Warrant Shares in the event of a corporate transaction.

*February 2017 Private Placement Warrants*

On February 15, 2017, we completed a private placement offering of 2,349 Series A Convertible Preferred Stock units. Each unit consisted of: (i) one share of Series A Convertible Preferred Stock, par value \$0.001 per share; and (ii) 16 Series A-1 Warrants to purchase one share of common stock at an exercise price equal to \$82.20 per share. As of September 17, 2020, there are 117,485 Series A-1 Warrants currently outstanding. The Series A-1 Warrants may be exercised at any time beginning six months after the date of issuance and through the seventh anniversary of the date of issuance. The Series A-1 Warrants may not be converted or exercised to the extent that the holder would, following such exercise or conversion, beneficially own more than 9.99% (or other lesser percent as designated by each holder) of our outstanding shares of common stock.

### *July 2015 Warrants*

On July 22, 2015, we completed a registered public offering of 29,861 Series A units and 50,000 Series B units. Each Series A unit consisted of one share of common stock and a Series A warrant to purchase one share of common stock at an exercise price of \$588.00 per share. Each Series B unit consisted of a fully paid pre-funded Series B warrant to purchase one share of common stock at an exercise price of \$504.00 per share, and a Series B warrant to purchase one share of common stock at an exercise price of \$588.00 per share. As of December 31, 2017, all pre-funded Series B warrants were exercised. The Series A and Series B warrants, collectively the July 2015 Warrants, are exercisable immediately through the seventh anniversary of the date of issuance. The July 2015 Warrants may not be exercised to the extent that the holder would, following such exercise, beneficially own more than 9.99% (or 4.99% as may be elected by each holder) of our outstanding shares of common stock.

### **Anti-Takeover Effects of Provisions of the General Corporation Law of the State of Delaware, our Certificate of Incorporation and our By-Laws**

#### *Certificate of Incorporation and By-Laws*

Because our stockholders do not have cumulative voting rights, our stockholders holding a majority of the voting power of our shares of common stock outstanding will be able to elect all of our directors. According to Section 242 of the General Corporation Law of the State of Delaware, or the DGCL, and our By-Laws, the affirmative vote of holders of at least a majority of the voting power of all of the then outstanding shares of voting stock, voting as a single class, is required to amend certain provisions of our Certificate of Incorporation. Further, our By-Laws provide that stockholder actions may be effected at a duly called meeting of stockholders or by written consent.

Our By-Laws further provide the Board with the exclusive right to increase or decrease the size of the Board (not less than three), and with the right to elect directors to fill a vacancy created by the expansion of the Board or the resignation, death or removal of a director.

#### *Section 203 of the DGCL*

As a corporation organized under the laws of the State of Delaware, we are subject to Section 203 of the DGCL, which restricts our ability to enter into business combinations with an interested stockholder, the owner of 15% or more of the corporation's voting stock, or an interested stockholder's affiliates or associates, for a period of three years after such person became an interested stockholder. These restrictions do not apply if:

- before becoming an interested stockholder, our Board approves either the business combination or the transaction in which the stockholder becomes an interested stockholder;
- upon consummation of the transaction in which the stockholder becomes an interested stockholder, the interested stockholder owns at least 85% of our voting stock outstanding at the time the transaction commenced, subject to exceptions; or
- on or after the date a stockholder becomes an interested stockholder, the business combination is both approved by our Board and authorized at an annual or special meeting of our stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock not owned by the interested stockholder.

#### *Choice of Forum*

Our Certificate of Incorporation provides that, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for: (i) any derivative action or proceeding brought on behalf of us; (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers to us or our stockholders; (iii) any action asserting a claim against us arising pursuant to any provision of the DGCL or Certificate of Incorporation or By-Laws; or (iv) any action asserting a claim against us governed by the internal affairs doctrine. The exclusive forum provision in our Certificate of Incorporation shall not apply to any actions or proceedings brought against us under the Securities Act or Exchange Act, whereby the U.S. District Court for the District of Delaware shall be the sole and exclusive forum.

### **Limitations of Liability and Indemnification Matters**

Pursuant to our By-Laws, we indemnify our directors to the maximum extent permissible under the DGCL. In addition, we have entered into indemnity agreements with our officers and directors that provide, among other things, that we will indemnify them, under the circumstances and to the extent provided for therein, for expenses, damages, judgments, fines and settlements he or she may be required to pay in actions or proceedings to which he or she is or may be made a party by reason of his or her position as a director, officer, or other agent of ours, and otherwise to the fullest extent permitted under the DGCL and our By-Laws. These provisions may be held not to be enforceable for violations of the federal securities laws of the U.S.

### **Listing**

Our common stock is listed on the Nasdaq Capital Market under the symbol "WINT."

### **Transfer Agent and Registrar**

The transfer agent and registrar for our common stock is Continental Stock Transfer & Trust Company. The transfer agent and registrar's address is 1 State Street, 30<sup>th</sup> Floor, New York, New York 10004.

## PLAN OF DISTRIBUTION

We have entered into the sales agreement with Ladenburg, under which we may offer and sell up to \$10,000,000 of our shares of common stock from time to time through Ladenburg acting as agent and/or principal. Sales of our shares of common stock, if any, under this prospectus will be made by any method that is deemed to be an “at-the-market offering” as defined in Rule 415(a)(4) under the Securities Act or in privately negotiated transactions.

Each time we wish to issue and sell shares of common stock under the sales agreement, we will notify Ladenburg of the number of shares to be issued, the dates on which such sales may be made, any limitation on the number of shares to be sold in any one day and any minimum price below which sales may not be made. Once we have so instructed Ladenburg, unless Ladenburg declines to accept the terms of such notice, Ladenburg has agreed to use its commercially reasonable efforts consistent with its normal trading and sales practices to sell such shares up to the amount specified on such terms. The obligations of Ladenburg under the sales agreement to sell our shares of common stock are subject to a number of conditions that we must meet.

Under the terms of the sales agreement, we may also sell our shares of common stock to the agent as principal for its own account at prices agreed upon at the time of sale. If we sell our shares of common stock to the agent as principal, we will enter into a separate terms agreement with the agent.

The settlement of sales of shares between us and Ladenburg is generally anticipated to occur on the second trading day following the date on which the sale was made, or on some other date that is agreed upon by and between us and Ladenburg in connection with a particular transaction, in return for payment of the net proceeds to us. Sales of our shares of common stock as contemplated in this prospectus will be settled through the facilities of The Depository Trust Company or by such other means as we and Ladenburg may agree upon. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

We will pay Ladenburg a commission in cash of 3.0% of the aggregate gross proceeds we receive from each sale of our shares of common stock through Ladenburg as our agent. Because there is no minimum offering amount required as a condition to close this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. In addition, we have agreed to reimburse Ladenburg for the fees and disbursements of its counsel, payable upon execution of the sales agreement, in an amount not to exceed \$50,000, in addition to certain ongoing disbursements of its legal counsel up to \$3,000 per calendar quarter in connection with quarterly diligence bring downs. We estimate that the total expenses for the offering, excluding any commissions or expense reimbursement payable to Ladenburg under the terms of the sales agreement, will be approximately \$210,000. The remaining sale proceeds, after deducting any other transaction fees, will equal our net proceeds from the sale of such shares.

Ladenburg will provide written confirmation to us following the close of trading on the Nasdaq Capital Market on each day on which shares of common stock are sold under the sales agreement. Each confirmation will include the number of shares sold on that day, the aggregate gross proceeds of such sales and the proceeds to us.

In connection with the sale of the shares of common stock on our behalf, Ladenburg will be deemed to be an “underwriter” within the meaning of the Securities Act, and the compensation of Ladenburg will be deemed to be underwriting commissions or discounts. We have agreed to indemnify Ladenburg against certain civil liabilities, including liabilities under the Securities Act. We have also agreed to contribute to payments Ladenburg may be required to make in respect of such liabilities.

The offering of our shares of common stock pursuant to the sales agreement will terminate as permitted therein. We and Ladenburg may each terminate the sales agreement at any time upon five (5) business days’ prior notice.

This summary of the material provisions of the sales agreement does not purport to be a complete statement of its terms and conditions. A copy of the sales agreement is filed as an exhibit to the registration statement of which this prospectus forms a part.

Ladenburg and its affiliates have previously, and may in the future provide, various investment banking, commercial banking, financial advisory and other financial services for us and our affiliates, for which services they have received, and may in the future receive customary fees. In the course of its business, Ladenburg may actively trade our securities for its own account or for the accounts of customers, and, accordingly, Ladenburg may at any time hold long or short positions in such securities.

This prospectus in electronic format may be made available on a website maintained by Ladenburg, and Ladenburg may distribute this prospectus electronically.

## LEGAL MATTERS

Troutman Pepper Hamilton Sanders LLP will pass upon certain legal matters relating to this offering. Ellenoff Grossman & Schole LLP, New York, New York has acted as counsel to Ladenburg Thalmann & Co. Inc. in connection with this offering.

## EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2019, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our consolidated financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

## WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains a website that contains reports, proxy and information statements and other information about issuers, such as us, who file electronically with the SEC. The address of that website is <http://www.sec.gov>.

Our website address is [www.windreetx.com](http://www.windreetx.com). The information on, or that can be accessed through, our website is not part of this prospectus and is not incorporated by reference herein and you should not consider it part of this prospectus. We have included our website address as an inactive textual reference only.

This prospectus is part of a registration statement that we filed with the SEC and does not contain all of the information in the registration statement. The full registration statement may be obtained from the SEC or us, as provided below. Statements contained in this prospectus about other documents are summaries and each statement is qualified in all respects by reference to the document to which it refers. You should refer to the actual documents for a more complete description of the relevant matters.

## INCORPORATION BY REFERENCE

The SEC's rules allow us to "incorporate by reference" information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus, and subsequent information that we file with the SEC will automatically update and supersede that information. Any statement contained in this prospectus or a previously filed document incorporated by reference will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or a subsequently filed document incorporated by reference modifies or replaces that statement.

We incorporate by reference our documents listed below and any future filings made by us with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act between the date of this prospectus and the termination of the offering of the securities described in this prospectus. We are not, however, incorporating by reference any documents or portions thereof, whether specifically listed below or filed in the future, that are not deemed "filed" with the SEC, including any information furnished pursuant to Items 2.02 or 7.01 of Form 8-K or related exhibits furnished pursuant to Item 9.01 of Form 8-K.

This prospectus incorporates by reference the documents set forth below that have previously been filed with the SEC:

- Our Annual Report on [Form 10-K](#) for the year ended December 31, 2019 filed with the SEC on April 3, 2020;
- Our Quarterly Report on Form 10-Q for the quarter ended [March 31, 2020](#) and [June 30, 2020](#), filed with the SEC on May 13, 2020 and August 14, 2020;
- Our Current Reports on Form 8-K filed with the SEC on [March 13, 2020](#), [March 23, 2020](#), [April 24, 2020](#), [April 29, 2020](#), [April 30, 2020](#), [May 7, 2020](#), [May 22, 2020](#), [July 15, 2020](#) and [July 23, 2020](#); and
- The description of our common stock included in our [Form 8-A](#) filed with the SEC on May 15, 2020, including any amendments or reports filed for the purpose of updating such description.

All reports and other documents we subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the termination of this offering, including all such documents we may file with the SEC after the date of the initial registration statement and prior to the effectiveness of the registration statement, but excluding any information furnished to, rather than filed with, the SEC, will also be incorporated by reference into this prospectus and deemed to be part of this prospectus from the date of the filing of such reports and documents.

You may request a copy, without charge, of any of the documents incorporated by reference in this prospectus (other than exhibits, unless they are specifically incorporated by reference in the documents) by writing or telephoning us at the following address:

Windtree Therapeutics, Inc.  
2600 Kelly Road, Suite 100  
Warrington, Pennsylvania 18976  
(215) 488-9300  
Attention: Chief Financial Officer

Exhibits to the filings will not be sent, however, unless those exhibits have specifically been incorporated by reference in this prospectus.



**Up to \$10,000,000**

**Common Stock**

**PROSPECTUS**

**Ladenburg Thalmann**

**You should rely only on the information contained in this prospectus. No dealer, salesperson or other person is authorized to give information that is not contained in this prospectus. This prospectus is not an offer to sell nor is it seeking an offer to buy these securities in any jurisdiction where the offer or sale is not permitted. The information contained in this prospectus is correct only as of the date of this prospectus, regardless of the time of the delivery of this prospectus or any sale of these securities.**

**The date of this prospectus is \_\_\_\_\_, 2020**

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

The following is an estimate of the expenses (all of which are to be paid by the registrant) that we may incur in connection with the securities being registered hereby, other than the SEC registration fee.

SEC registration fee	\$	9,735
The Nasdaq Capital Market supplemental listing fee	\$	(1)
Fees and expenses of the trustee	\$	(1)
Printing expenses	\$	(1)
Legal fees and expenses	\$	(1)
Accounting fees and expenses	\$	(1)
Blue Sky, qualification fees and expenses	\$	(1)
Transfer agent fees and expenses	\$	(1)
Miscellaneous	\$	(1)
<b>Total</b>	<b>\$</b>	<b>(1)</b>

(1) 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 Directors and Officers.**

Article Eight of our Certificate of Incorporation limits the liability of directors to the maximum extent permitted by Delaware law. Delaware law provides that directors of a corporation will not be personally liable for monetary damages for breach of their fiduciary duties as directors, except for liability for (i) any breach of their duty of loyalty to the corporation or its stockholders, (ii) acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law, (iii) unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the DGCL or (iv) any transaction from which the director derives an improper personal benefit.

Our By-Laws provide that we shall indemnify our directors and officers, the directors and officers of any of our subsidiaries and any other individuals acting as directors or officers of any other corporation at our request, to the fullest extent permitted by law.

We have entered into indemnification agreements with our executive officers and directors containing provisions that may require us, among other things, to indemnify them against liabilities that may arise by reason of their status or service as officers or directors, as applicable, other than liabilities arising from willful misconduct of a culpable nature and to advance certain expenses incurred as a result of any proceeding against them as to which they could be indemnified. We have obtained limited directors' and officers' liability insurance.

These provisions in our Certificate of Incorporation and our By-Laws do not eliminate the officers' and directors' fiduciary duty, and in appropriate circumstances, equitable remedies such as injunctive or other forms of non-monetary relief will remain available under Delaware law. In addition, each officer and director will continue to be subject to liability for breach of their duty of loyalty to us for acts or omissions not in good faith or involving intentional misconduct, for knowing violations of law, for actions leading to improper personal benefit to the officer or director and for payment of dividends or approval of stock repurchases or redemptions that are unlawful under Delaware law. The provisions also do not affect an officer's or director's responsibilities under any other law, such as the federal securities laws or state or federal environmental laws.

**Item 16. Exhibits.**

(a) *Exhibits*

**EXHIBIT INDEX**

<b>Exhibit Number</b>	<b>Exhibit Description</b>
1.1*	Form of Underwriting Agreement.
1.2	<a href="#">At The Market Offering Agreement (filed herewith).</a>
3.1	<a href="#">Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to Windtree's Annual Report on Form 10-K, as filed with the SEC on April 17, 2018).</a>
3.2	<a href="#">Certificate of Amendment to the Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to Windtree's Form 8-K filed on April 29, 2020).</a>
3.3	<a href="#">Amended and Restated By-Laws (incorporated by reference to Exhibit 3.2 to Windtree's Form 8-K filed on April 18, 2016).</a>
4.1*	Form of Preferred Stock Certificate.
4.2*	Certificate of Designations of Preferred Stock.
4.3	<a href="#">Form of Indenture (filed herewith).</a>
4.4*	Form of Debt Security.
4.5*	Form of Warrant.
4.6*	Form of Warrant Agreement for Common Stock, including Warrant Certificate for Common Stock.
4.7*	Form of Warrant Agreement for Preferred Stock, including Warrant Certificate for Preferred Stock.
4.8*	Form of Warrant Agreement for Debt Securities, including Warrant Certificate for Debt Securities.
4.9*	Form of Unit.
4.10*	Form of Unit Agreement.
4.11*	Form of Subscription Rights Agreement.
5.1	<a href="#">Opinion of Troutman Pepper Hamilton Sanders LLP (filed herewith).</a>
23.1	<a href="#">Consent of Ernst &amp; Young LLP, Independent Registered Public Accounting Firm (filed herewith).</a>
23.2	<a href="#">Consent of Troutman Pepper Hamilton Sanders LLP (included in Exhibit 5.1).</a>
24.1	<a href="#">Powers of Attorney (incorporated by reference to the signature page hereto).</a>
25.1‡	Statement of Eligibility on Form T-1 under the Trust Indenture Act of 1939, as amended, of the trustee, as trustee under the indenture filed herewith.

\* To be filed by amendment or incorporated by reference in connection with the offering of the securities.

‡ To be filed in accordance with the requirements of Item 601(b)(25) of Regulation S-K.



**Item 17. Undertakings.**

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

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

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

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

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

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

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

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

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**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 Warrington, Pennsylvania, on September 17, 2020.

Windtree Therapeutics, Inc.

By: /s/ Craig E. Fraser

Name: Craig E. Fraser

Title: President and Chief Executive Officer

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Craig E. Fraser and John P. Hamill, or either of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to file and sign any and all amendments, including post-effective amendments and any registration statement for the same offering that is to be effective under Rule 462(b) of the Securities Act, and to file the same, with all exhibits thereto and other documents in connection therewith, to this registration statement, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith and about the premises as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or their substitute or substitutes may lawfully do or cause to be done by virtue hereof. This power of attorney shall be governed by and construed with the laws of the State of Delaware and applicable federal securities laws.

Pursuant to the requirements of the Securities Act, this registration statement has been signed below by the following persons on behalf of the registrant in the capacities and on the dates indicated.

<b>Signature</b>	<b>Title</b>	<b>Date</b>
<u>/s/ Craig E. Fraser</u> Craig E. Fraser	Director, President, and Chief Executive Officer (Principal Executive Officer)	September 17, 2020
<u>/s/ John P. Hamill</u> John P. Hamill	Senior Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	September 17, 2020
<u>/s/ James Huang</u> James Huang	Director (Chairman of the Board)	September 17, 2020
<u>/s/ Daniel E. Geffken</u> Daniel E. Geffken	Director	September 17, 2020
<u>/s/ John R. Leone</u> John R. Leone	Director	September 17, 2020
<u>/s/ Joseph M. Mahady</u> Joseph M. Mahady	Director	September 17, 2020
<u>/s/ Bruce A. Peacock</u> Bruce A. Peacock	Director	September 17, 2020
<u>/s/ Brian D. Schreiber, M.D.</u> Brian D. Schreiber, M.D.	Director	September 17, 2020

## AT THE MARKET OFFERING AGREEMENT

September 17, 2020

Ladenburg Thalmann & Co. Inc.  
277 Park Avenue, 26<sup>th</sup> Floor  
New York, NY 10172

Ladies and Gentlemen:

Windtree Therapeutics, Inc., a corporation organized under the laws of Delaware (the "Company"), confirms its agreement (this "Agreement") with Ladenburg Thalmann & Co. Inc. (the "Manager") as follows:

1. Definitions. The terms that follow, when used in this Agreement and any Terms Agreement, shall have the meanings indicated.

"Accountants" shall have the meaning ascribed to such term in Section 4(m).

"Act" shall mean the Securities Act of 1933, as amended, and the rules and regulations of the Commission promulgated thereunder.

"Action" shall have the meaning ascribed to such term in Section 3(q).

"Affiliate" shall have the meaning ascribed to such term in Section 3(p).

"Applicable Time" shall mean, with respect to any Shares, the time of sale of such Shares pursuant to this Agreement or any relevant Terms Agreement.

"Board" shall have the meaning ascribed to such term in Section 2(b)(iii).

"Broker Fee" shall have the meaning ascribed to such term in Section 2(b)(v).

"Business Day" means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed; provided, however, for clarification, commercial banks shall not be deemed to be authorized or required by law to remain closed due to "stay at home", "shelter-in-place", "non-essential employee" or any other similar orders or restrictions or the closure of any physical branch locations at the direction of any governmental authority so long as the electronic funds transfer systems (including for wire transfers) of commercial banks in The City of New York generally are open for use by customers on such day.

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“Commission” shall mean the United States Securities and Exchange Commission.

“Common Stock” shall have the meaning ascribed to such term in Section 2.

“Common Stock Equivalents” shall have the meaning ascribed to such term in Section 3(g).

“Company Counsel” shall have the meaning ascribed to such term in Section 4(l).

“DTC” shall have the meaning ascribed to such term in Section 2(b)(vii).

“Effective Date” shall mean each date and time that the Registration Statement and any post-effective amendment or amendments thereto became or becomes effective.

“Exchange Act” shall mean the Securities Exchange Act of 1934, as amended, and the rules and regulations of the Commission promulgated thereunder.

“Execution Time” shall mean the date and time that this Agreement is executed and delivered by the parties hereto.

“Free Writing Prospectus” shall mean a free writing prospectus, as defined in Rule 405.

“GAAP” shall have the meaning ascribed to such term in Section 3(n).

“Incorporated Documents” shall mean the documents or portions thereof filed with the Commission on or prior to the Effective Date that are incorporated by reference in the Registration Statement or the Prospectus and any documents or portions thereof filed with the Commission after the Effective Date that are deemed to be incorporated by reference in the Registration Statement or the Prospectus.

“Intellectual Property Rights” shall have the meaning ascribed to such term in Section 3(v).

“Issuer Free Writing Prospectus” shall mean an issuer free writing prospectus, as defined in Rule 433.

“Losses” shall have the meaning ascribed to such term in Section 7(d).

“Manager Compensation” shall have the meaning ascribed to such term in Section 7(d).

“Material Adverse Effect” shall have the meaning ascribed to such term in Section 3(b).

“Material Permits” shall have the meaning ascribed to such term in Section 3(t).

“Net Proceeds” shall have the meaning ascribed to such term in Section 2(b)(v).

“Permitted Free Writing Prospectus” shall have the meaning ascribed to such term in Section 4(g).

“Placement” shall have the meaning ascribed to such term in Section 2(c).

“Proceeding” shall have the meaning ascribed to such term in Section 3(b).

“Prospectus” shall mean the Sales Prospectus, in the form in which such Sales Prospectus, as it may be supplemented by any prospectus supplement, if applicable, has been most recently filed by the Company with the Commission pursuant to Rule 424(b) under the Act.

“Registration Statement” shall mean the shelf registration statement on Form S-3 filed with the Commission at the Execution Time, including exhibits and financial statements and the information contained in a Prospectus that is filed with the Commission pursuant to Rule 424(b) and deemed part of such registration statement pursuant to Rule 430B, as amended on each Effective Date and, in the event any post-effective amendment thereto becomes effective, shall also mean such registration statement as so amended.

“Representation Date” shall have the meaning ascribed to such term in Section 4(k).

“Required Approvals” shall have the meaning ascribed to such term in Section 3(e).

“Rule 158”, “Rule 163”, “Rule 164”, “Rule 172”, “Rule 173”, “Rule 405”, “Rule 415”, “Rule 424”, “Rule 430B” and “Rule 433” refer to such rules under the Act.

“Sales Notice” shall have the meaning ascribed to such term in Section 2(b)(i).

“Sales Prospectus” shall mean the prospectus included as part of the Registration Statement as of its initial Effective Date specifically relating to the Shares.

“SEC Reports” shall have the meaning ascribed to such term in Section 3(m).

“Settlement Date” shall have the meaning ascribed to such term in Section 2(b)(vii).

“Subsidiary” shall have the meaning ascribed to such term in Section 3(a).

“Terms Agreement” shall have the meaning ascribed to such term in Section 2(a).

“Time of Delivery” shall have the meaning ascribed to such term in Section 2(c).

“Trading Day” means a day on which the Trading Market is open for trading.

“Trading Market” means Nasdaq Capital Market.

2. Sale and Delivery of Shares. The Company proposes to issue and sell through or to the Manager, as sales agent and/or principal, from time to time during the term of this Agreement and on the terms set forth herein, up to the “Maximum Amount,” which is equal to the lesser of such number or dollar amount of shares (the “Shares”) of the Company’s common stock, \$0.001 par value per share (“Common Stock”), that (a) equals the number or dollar amount of shares of Common Stock registered on the Registration Statement, pursuant to which the offering is being made, (b) equals the number or dollar amount of Shares registered on the Prospectus, (c) equals the number of authorized but unissued shares of Common Stock (less the number of 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), or (d) would cause the Company or the offering of the Shares to not satisfy the eligibility and transaction requirements for use of Form S-3, including, if applicable, General Instruction I.B.6 of Registration Statement on Form S-3 (the lesser of (a), (b), (c) and (d), the “Maximum Amount”). Notwithstanding anything to the contrary contained herein, the parties hereto agree that compliance with the limitations set forth in this Section 2 on the number and aggregate sales price of Shares issued and sold under this Agreement shall be the sole responsibility of the Company and that the Manager shall have no obligation in connection with such compliance.

(a) Appointment of Manager as Selling Agent; Terms Agreement. For purposes of selling the Shares through the Manager, the Company hereby appoints the Manager as exclusive agent of the Company for the purpose of selling the Shares of the Company pursuant to this Agreement and the Manager agrees to use its commercially reasonable efforts to sell the Shares on the terms and subject to the conditions stated herein. The Company agrees that, whenever it determines to sell the Shares directly to the Manager as principal, it will enter into a separate agreement (each, a "Terms Agreement") in substantially the form of Annex I hereto, relating to such sale in accordance with Section 2 of this Agreement.

(b) Agent Sales. Subject to the terms and conditions and in reliance upon the representations and warranties herein set forth, the Company will issue and agrees to sell Shares from time to time through the Manager, acting as sales agent, and the Manager agrees to use its commercially reasonable efforts to sell, as sales agent for the Company, on the following terms:

(i) The Shares are to be sold on a daily basis or otherwise as shall be agreed to by the Company and the Manager on any day that (A) is a Trading Day, (B) the Company has instructed the Manager by telephone (confirmed promptly by electronic mail) to make such sales ("Sales Notice") and (C) the Company has satisfied its obligations under Section 6 of this Agreement. The Company will designate the maximum amount of the Shares to be sold by the Manager daily (subject to the limitations set forth in Section 2(d)) and the minimum price per Share at which such Shares may be sold. Subject to the terms and conditions hereof, the Manager shall use its commercially reasonable efforts to sell on a particular day all of the Shares designated for the sale by the Company on such day. The gross sales price of the Shares sold under this Section 2(b) shall be the market price for the shares of Common Stock sold by the Manager under this Section 2(b) on the Trading Market at the time of sale of such Shares.

(ii) The Company acknowledges and agrees that (A) there can be no assurance that the Manager will be successful in selling the Shares, (B) the Manager will incur no liability or obligation to the Company or any other person or entity if it does not sell the Shares for any reason other than a failure by the Manager to use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable law and regulations to sell such Shares as required under this Agreement, and (C) the Manager shall be under no obligation to purchase Shares on a principal basis pursuant to this Agreement, except as otherwise specifically agreed by the Manager and the Company pursuant to a Terms Agreement.



(iii) The Company shall not authorize the issuance and sale of, and the Manager shall not be obligated to use its commercially reasonable efforts to sell, any Share at a price lower than the minimum price therefor designated from time to time by the Company's Board of Directors (the "Board"), or a duly authorized committee thereof, or such duly authorized officers of the Company, and notified to the Manager in writing. The Company or the Manager may, upon notice to the other party hereto by telephone (confirmed promptly by electronic mail), suspend the offering of the Shares for any reason and at any time; provided, however, that such suspension or termination shall not affect or impair the parties' respective obligations with respect to the Shares sold hereunder prior to the giving of such notice.

(iv) The Manager may sell Shares by any method permitted by law deemed to be an "at the market offering" as defined in Rule 415 under the Act, including without limitation sales made directly on the Trading Market, on any other existing trading market for the Common Stock or to or through a market maker. The Manager may also sell Shares in privately negotiated transactions, provided that the Manager receives the Company's prior written approval for any sales in privately negotiated transactions and if so provided in the "Plan of Distribution" section of the Prospectus or a supplement to the Prospectus disclosing the terms of such privately negotiated transaction.

(v) The compensation to the Manager for sales of the Shares under this Section 2(b) shall be a placement fee of 3.0% of the gross sales price of the Shares sold pursuant to this Section 2(b) ("Broker Fee"). The foregoing rate of compensation shall not apply when the Manager acts as principal, in which case the Company may sell Shares to the Manager as principal at a price agreed upon at the relevant Applicable Time pursuant to a Terms Agreement. The remaining proceeds, after deduction of the Broker Fee and deduction of any transaction fees imposed by any clearing firm, execution broker, or governmental or self-regulatory organization in respect of such sales, shall constitute the net proceeds to the Company for such Shares (the "Net Proceeds").

(vi) The Manager shall provide written confirmation (which may be by facsimile or electronic mail) to the Company following the close of trading on the Trading Market each day in which the Shares are sold under this Section 2(b) setting forth the number of the Shares sold on such day, the aggregate gross sales proceeds and the Net Proceeds to the Company, and the compensation payable by the Company to the Manager with respect to such sales.

(vii) Unless otherwise agreed between the Company and the Manager, settlement for sales of the Shares will occur at 10:00 a.m. (New York City time) on the second (2nd) Trading Day (or such earlier day as is industry practice for regular-way trading) following the date on which such sales are made (each, a “Settlement Date”). On or before the Trading Day prior to each Settlement Date, the Company will, or will cause its transfer agent to, electronically transfer the Shares being sold by crediting the Manager’s or its designee’s account (provided that the Manager shall have given the Company written notice of such designee at least one Trading Day prior to the Settlement Date) at The Depository Trust Company (“DTC”) through its Deposit and Withdrawal at Custodian System or by such other means of delivery as may be mutually agreed upon by the parties hereto which Shares in all cases shall be freely tradable, transferable, registered shares in good deliverable form. On each Settlement Date, the Manager will deliver the related Net Proceeds in same day funds to an account designated by the Company. The Company agrees that, if the Company, or its transfer agent (if applicable), defaults in its obligation to deliver duly authorized Shares on a Settlement Date, in addition to and in no way limiting the rights and obligations set forth in Section 7 hereto, the Company will (i) hold the Manager harmless against any loss, claim, damage, or reasonable, documented expense (including reasonable and documented legal fees and expenses), as incurred, arising out of or in connection with such default by the Company, and (ii) pay to the Manager any commission, discount or other compensation to which the Manager would otherwise have been entitled absent such default.

(viii) At each Applicable Time, Settlement Date, and Representation Date, the Company shall be deemed to have affirmed each representation and warranty contained in this Agreement as if such representation and warranty were made as of such date, modified as necessary to relate to the Registration Statement and the Prospectus as amended as of such date. Any obligation of the Manager to use its commercially reasonable efforts to sell the Shares on behalf of the Company shall be subject to the continuing accuracy of the representations and warranties of the Company herein, to the performance by the Company of its obligations hereunder and to the continuing satisfaction of the additional conditions specified in Section 6 of this Agreement.

(ix) If the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a “Distribution” and the record date for the determination of stockholders entitled to receive the Distribution, the “Record Date”), the Company hereby covenants and agrees that, in connection with any sales of Shares pursuant to a Sales Notice on the Record Date, the Company shall issue and deliver such Shares to the Manager on the Record Date and the Record Date shall be the Settlement Date and the Company shall cover any additional costs of the Manager in connection with the delivery of Shares on the Record Date.

(c) Term Sales. If the Company wishes to sell the Shares pursuant to this Agreement but other than as set forth in Section 2(b) of this Agreement (each, a "Placement"), the Company will notify the Manager of the proposed terms of such Placement. If the Manager, acting as principal, wishes to accept such proposed terms (which it may decline to do for any reason in its sole discretion) or, following discussions with the Company wishes to accept amended terms, the Manager and the Company will enter into a Terms Agreement setting forth the terms of such Placement. The terms set forth in a Terms Agreement will not be binding on the Company or the Manager unless and until the Company and the Manager have each executed such Terms Agreement accepting all of the terms of such Terms Agreement. In the event of a conflict between the terms of this Agreement and the terms of a Terms Agreement, the terms of such Terms Agreement will control. A Terms Agreement may also specify certain provisions relating to the reoffering of such Shares by the Manager. The commitment of the Manager to purchase the Shares pursuant to any Terms Agreement shall be deemed to have been made on the basis of the representations and warranties of the Company herein contained and shall be subject to the terms and conditions herein set forth. Each Terms Agreement shall specify the number of the Shares to be purchased by the Manager pursuant thereto, the price to be paid to the Company for such Shares, any provisions relating to rights of, and default by, underwriters acting together with the Manager in the reoffering of the Shares, and the time and date (each such time and date being referred to herein as a "Time of Delivery") and place of delivery of and payment for such Shares. Such Terms Agreement shall also specify any requirements for opinions of counsel, accountants' letters and officers' certificates pursuant to Section 6 of this Agreement and any other information or documents required by the Manager.

(d) Maximum Number of Shares. Under no circumstances shall the Company cause or request the offer or sale of any Shares if, after giving effect to the sale of such Shares, the aggregate amount of Shares sold pursuant to this Agreement would exceed the lesser of (A) together with all sales of Shares under this Agreement, the Maximum Amount, (B) the amount available for offer and sale under the currently effective Registration Statement and (C) the amount authorized from time to time to be issued and sold under this Agreement by the Board, a duly authorized committee thereof or a duly authorized executive committee, and notified to the Manager in writing. Under no circumstances shall the Company cause or request the offer or sale of any Shares pursuant to this Agreement at a price lower than the minimum price authorized from time to time by the Board, a duly authorized committee thereof or a duly authorized executive officer, and notified to the Manager in writing. Further, under no circumstances shall the Company cause or permit the aggregate offering amount of Shares sold pursuant to this Agreement to exceed the Maximum Amount.

(e) Regulation M Notice. Unless the exceptive provisions set forth in Rule 101(c)(1) of Regulation M under the Exchange Act are satisfied with respect to the Shares, the Company shall give the Manager at least one Business Day's prior notice of its intent to sell any Shares in order to allow the Manager time to comply with Regulation M.

3. Representations and Warranties. The Company represents and warrants to, and agrees with, the Manager at the Execution Time and on each such time the following representations and warranties are repeated or deemed to be made pursuant to this Agreement, as set forth below:

(a) Subsidiaries. All of the direct and indirect subsidiaries (individually, a "Subsidiary") of the Company are set forth on Exhibit 21.1 to the Company's most recent Annual Report on Form 10-K filed with the Commission. The Company owns, directly or indirectly, all of the capital stock or other equity interests of each Subsidiary free and clear of any "Liens" (which for purposes of this Agreement shall mean a lien, charge, security interest, encumbrance, right of first refusal, preemptive right or other restriction), and all of the issued and outstanding shares of capital stock of each Subsidiary are validly issued and are fully paid, non-assessable and free of preemptive and similar rights to subscribe for or purchase securities.

(b) Organization and Qualification. The Company and each of the Subsidiaries is an entity duly incorporated or otherwise organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization, with the requisite power and authority to own and use its properties and assets and to carry on its business as currently conducted. Neither the Company nor any Subsidiary is in violation nor default of any of the provisions of its respective certificate or articles of incorporation, bylaws or other organizational or charter documents. Each of the Company and the Subsidiaries is duly qualified to conduct business and is in good standing as a foreign corporation or other entity in each jurisdiction in which the nature of the business conducted or property owned by it makes such qualification necessary, except where the failure to be so qualified or in good standing, as the case may be, could not have or reasonably be expected to result in: (i) a material adverse effect on the legality, validity or enforceability of this Agreement, (ii) a material adverse effect on the results of operations, assets, business, prospects or condition (financial or otherwise) of the Company and the Subsidiaries, taken as a whole, or (iii) a material adverse effect on the Company's ability to perform in any material respect on a timely basis its obligations under this Agreement (any of (i), (ii) or (iii), a "Material Adverse Effect") and no "Proceeding" (which for purposes of this Agreement shall mean any action, claim, suit, investigation or proceeding (including, without limitation, an investigation or partial proceeding, such as a deposition), whether commenced or threatened) has been instituted in any such jurisdiction revoking, limiting or curtailing or seeking to revoke, limit or curtail such power and authority or qualification.

(c) Authorization and Enforcement. The Company has the requisite corporate power and authority to enter into and to consummate the transactions contemplated by this Agreement and otherwise to carry out its obligations hereunder. The execution and delivery of this Agreement by the Company and the consummation by it of the transactions contemplated hereby have been duly authorized by all necessary action on the part of the Company and no further action is required by the Company, the Board of Directors or the Company's stockholders in connection herewith other than in connection with the Required Approvals. This Agreement has been duly executed and delivered by the Company and, when delivered in accordance with the terms hereof, will constitute the valid and binding obligation of the Company enforceable against the Company in accordance with its terms, except (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.

(d) No Conflicts. The execution, delivery and performance by the Company of this Agreement, the issuance and sale of the Shares and the consummation by it of the transactions contemplated hereby do not and will not (i) conflict with or violate any provision of the Company's or any Subsidiary's certificate or articles of incorporation, bylaws or other organizational or charter documents, or (ii) conflict with, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, result in the creation of any Lien upon any of the properties or assets of the Company or any Subsidiary, or give to others any rights of termination, amendment, anti-dilution or similar adjustments, acceleration or cancellation (with or without notice, lapse of time or both) of, any agreement, credit facility, debt or other instrument (evidencing a Company or Subsidiary debt or otherwise) or other understanding to which the Company or any Subsidiary is a party or by which any property or asset of the Company or any Subsidiary is bound or affected, or (iii) subject to the Required Approvals, conflict with or result in a violation of any law, rule, regulation, order, judgment, injunction, decree or other restriction of any court or governmental authority to which the Company or a Subsidiary is subject (including federal and state securities laws and regulations), or by which any property or asset of the Company or a Subsidiary is bound or affected; except in the case of each of clauses (ii) and (iii), such as could not have or reasonably be expected to result in a Material Adverse Effect.

(e) Filings, Consents and Approvals. The Company is not required to obtain any consent, waiver, authorization or order of, give any notice to, or make any filing or registration with, any court or other federal, state, local or other governmental authority or other "Person" (defined as an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind, including the Trading Market) in connection with the execution, delivery and performance by the Company of this Agreement, other than (i) the filings required by this Agreement, (ii) the filing with the Commission of the Prospectus, (iii) the filing of application(s) to and approval by the Trading Market for the listing of the Shares for trading thereon in the time and manner required thereby, and (iv) such filings as are required to be made under applicable state securities laws and the rules and regulations of the Financial Industry Regulatory Authority, Inc. ("FINRA") (collectively, the "Required Approvals").

(f) Issuance of Shares. The Shares are duly authorized and, when issued and paid for in accordance with this Agreement, will be duly and validly issued, fully paid and nonassessable, free and clear of all Liens imposed by the Company. The Company will reserve from its duly authorized capital stock the maximum number of shares of Common Stock issuable pursuant to this Agreement. The Shares will be issued pursuant to the Registration Statement and the issuance of the Shares will be registered by the Company under the Act. The “Plan of Distribution” section within the Registration Statement and Prospectus permits the issuance and sale of the Shares as contemplated by this Agreement. Upon receipt of the Shares, the Shares will be freely tradable on the Trading Market.

(g) Capitalization. The capitalization of the Company is as set forth in the SEC Reports. The Company has not issued any capital stock since its most recently filed periodic or current report under the Exchange Act, other than pursuant to the exercise of employee stock options under the Company’s stock option plans, the issuance of shares of Common Stock to employees pursuant to the Company’s employee stock purchase plan and pursuant to the conversion and/or exercise of securities exercisable, exchangeable or convertible into Common Stock (“Common Stock Equivalents”) outstanding as of the date of the most recently filed periodic report under the Exchange Act. Except as set forth in the SEC Reports, no Person has any right of first refusal, preemptive right, right of participation, or any similar right to participate in the transactions contemplated by this Agreement. Except as set forth in the SEC Reports, there are no outstanding options, warrants, scrip rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities, rights or obligations convertible into or exercisable or exchangeable for, or giving any Person any right to subscribe for or acquire, any shares of Common Stock, or contracts, commitments, understandings or arrangements by which the Company is or may become bound to issue additional shares of Common Stock or Common Stock Equivalents. The issuance and sale of the Shares will not obligate the Company to issue shares of Common Stock or other securities to any Person. Except as set forth in the SEC Reports, there are no outstanding securities or instruments of the Company with any provision that adjusts the exercise, conversion, exchange or reset price of such security or instrument upon an issuance of securities by the Company. Except as set forth in the SEC Reports, there are no outstanding securities or instruments of the Company that contain any redemption or similar provisions, and there are no contracts, commitments, understandings or arrangements by which the Company is or may become bound to redeem a security of the Company. The Company does not have any stock appreciation rights or “phantom stock” plans or agreements or any similar plan or agreement. All of the outstanding shares of capital stock of the Company are duly authorized, validly issued, fully paid and nonassessable, have been issued in compliance with all federal and state securities laws, and none of such outstanding shares was issued in violation of any preemptive rights or similar rights to subscribe for or purchase securities. No further approval or authorization of any stockholder, the Board of Directors or others is required for the issuance and sale of the Shares. Except as set forth in the SEC Reports, there are no stockholders agreements, voting agreements or other similar agreements with respect to the Company’s capital stock to which the Company is a party or, to the knowledge of the Company, between or among any of the Company’s stockholders.

(h) Registration Statement. The Company meets the requirements for use of Form S-3 under the Act and has prepared and filed with the Commission the Registration Statement, including the Prospectus, for registration under the Act of the offering and sale of the Shares. Upon commencement of the offering of the Shares under this Agreement, such Registration Statement shall have become effective and available for the offer and sale of the Shares as of the Effective Date. As filed, the Prospectus contains all information required by the Act and the rules thereunder, and, except to the extent the Manager shall agree in writing to a modification, shall be in all substantive respects in the form furnished to the Manager following the initial Effective Date of the Registration Statement or prior to any such time this representation is repeated or deemed to be made. The Registration Statement, on the initial Effective Date, each such time this representation is repeated or deemed to be made, and at all times during which a prospectus is required by the Act to be delivered (whether physically or through compliance with Rule 172, 173 or any similar rule) in connection with any offer or sale of the Shares, meets the requirements set forth in Rule 415(a)(1)(x). The initial Effective Date of the Registration Statement was not earlier than the date three years before the Execution Time.

(i) Accuracy of Incorporated Documents. The Incorporated Documents, when they were filed with the Commission, conformed in all material respects to the requirements of the Exchange Act and the rules thereunder, and none of the Incorporated Documents, when they were filed with the Commission, contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made not misleading; and any further documents so filed and incorporated by reference in the Registration Statement or the Prospectus, when such documents are filed with the Commission, will conform in all material respects to the requirements of the Exchange Act and the rules thereunder, as applicable, and will not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading.

(j) Ineligible Issuer. (i) At the earliest time after the filing of the Registration Statement that the Company or another offering participant made a bona fide offer (within the meaning of Rule 164(h)(2)) of the Shares and (ii) as of the Execution Time and on each such time this representation is repeated or deemed to be made (with such date being used as the determination date for purposes of this clause (ii)), the Company was not and is not an Ineligible Issuer (as defined in Rule 405), without taking account of any determination by the Commission pursuant to Rule 405 that it is not necessary that the Company be considered an Ineligible Issuer.

(k) Free Writing Prospectus. The Company is eligible to use Issuer Free Writing Prospectuses. Each Issuer Free Writing Prospectus does not include any information the substance of which conflicts with the information contained in the Registration Statement, including any Incorporated Documents and any Prospectus deemed to be a part thereof that has not been superseded or modified; and each Issuer Free Writing Prospectus does not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The foregoing sentence does not apply to statements in or omissions from any Issuer Free Writing Prospectus based upon and in conformity with written information furnished to the Company by the Manager specifically for use therein. Any Issuer Free Writing Prospectus that the Company is required to file pursuant to Rule 433(d) has been, or will be, filed with the Commission in accordance with the requirements of the Act and the rules thereunder. Each Issuer Free Writing Prospectus that the Company has filed, or is required to file, pursuant to Rule 433(d) or that was prepared by or behalf of or used by the Company complies or will comply in all material respects with the requirements of the Act and the rules thereunder. The Company will not, without the prior consent of the Manager, prepare, use or refer to, any Issuer Free Writing Prospectuses.

(l) Proceedings Related to Registration Statement. The Registration Statement is not the subject of a pending proceeding or examination under Section 8(d) or 8(e) of the Act, and the Company is not the subject of a pending proceeding under Section 8A of the Act in connection with the offering of the Shares. The Company has not received any notice that the Commission has issued or intends to issue a stop-order with respect to the Registration Statement or that the Commission otherwise has suspended or withdrawn the effectiveness of the Registration Statement, either temporarily or permanently, or intends or has threatened in writing to do so.



(m) SEC Reports. The Company has filed all reports, schedules, forms, statements and other documents required to be filed by the Company under the Act and the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, for the two years preceding the date hereof (or such shorter period as the Company was required by law or regulation to file such material) (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, being collectively referred to herein as the “SEC Reports”) on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Reports prior to the expiration of any such extension, except as could not have or reasonably be expected to result in a Material Adverse Effect. As of their respective dates, the SEC Reports complied in all material respects with the requirements of the Act and the Exchange Act, as applicable, and none of the SEC Reports, when filed, contained any 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. The financial statements of the Company included in the SEC Reports comply in all material respects with applicable accounting requirements and the rules and regulations of the Commission with respect thereto as in effect at the time of filing. Such financial statements have been prepared in accordance with United States generally accepted accounting principles applied on a consistent basis during the periods involved (“GAAP”), except as may be otherwise specified in such financial statements or the notes thereto and except that unaudited financial statements may not contain all footnotes required by GAAP, and fairly present in all material respects the financial position of the Company and its consolidated Subsidiaries as of and for the dates thereof and the results of operations and cash flows for the periods then ended, subject, in the case of unaudited statements, to normal, immaterial, year-end audit adjustments.

(n) Material Changes; Undisclosed Events, Liabilities or Developments. Since the date of the latest audited financial statements included within the Registration Statement and Prospectus, except as specifically disclosed in a subsequent SEC Report filed prior to the date hereof, (i) there has been no event, occurrence or development that has had or that could reasonably be expected to result in a Material Adverse Effect, (ii) the Company has not incurred any material liabilities (contingent or otherwise) other than (A) trade payables and accrued expenses incurred in the ordinary course of business consistent with past practice and (B) liabilities not required to be reflected in the Company’s financial statements pursuant to GAAP or disclosed in filings made with the Commission, (iii) the Company has not altered its method of accounting, (iv) the Company has not declared or made any dividend or distribution of cash or other property to its stockholders or purchased, redeemed or made any agreements to purchase or redeem any shares of its capital stock and (v) the Company has not issued any equity securities to any officer, director or “Affiliate” (defined as any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 144 under the Act), except pursuant to existing Company stock option plans. The Company does not have pending before the Commission any request for confidential treatment of information. Except for the issuance of the Shares contemplated by this Agreement or as set forth in the SEC Reports, no event, liability, fact, circumstance, occurrence or development has occurred or exists or is reasonably expected to occur or exist with respect to the Company or its Subsidiaries or their respective businesses, prospects, properties, operations, assets or financial condition that would be required to be disclosed by the Company under applicable securities laws at the time this representation is made or deemed made that has not been publicly disclosed at least 1 Trading Day prior to the date that this representation is made.

(o) Litigation. Except as set forth in the SEC Reports, there is no action, suit, inquiry, notice of violation, proceeding or investigation pending or, to the knowledge of the Company, threatened against or affecting the Company, any Subsidiary or any of their respective properties before or by any court, arbitrator, governmental or administrative agency or regulatory authority (federal, state, county, local or foreign) (collectively, an “Action”). None of the Actions set forth in the SEC Reports, (i) adversely affects or challenges the legality, validity or enforceability of this Agreement or the Shares or (ii) could, if there were an unfavorable decision, have or reasonably be expected to result in a Material Adverse Effect. Neither the Company nor any Subsidiary, nor any director or officer thereof, is or has been the subject of any Action involving a claim of violation of or liability under federal or state securities laws or a claim of breach of fiduciary duty. There has not been, and to the knowledge of the Company, there is not pending or contemplated, any investigation by the Commission involving the Company or any current or former director or officer of the Company. The Commission has not issued any stop order or other order suspending the effectiveness of any registration statement filed by the Company or any Subsidiary under the Exchange Act or the Act.

(p) Labor Relations. No labor dispute exists or, to the knowledge of the Company, is imminent with respect to any of the employees of the Company, which could reasonably be expected to result in a Material Adverse Effect. None of the Company’s or its Subsidiaries’ employees is a member of a union that relates to such employee’s relationship with the Company or such Subsidiary, and neither the Company nor any of its Subsidiaries is a party to a collective bargaining agreement, and the Company and its Subsidiaries believe that their relationships with their employees are good. To the knowledge of the Company, no executive officer of the Company or any Subsidiary, is, or is now expected to be, in violation of any material term of any employment contract, confidentiality, disclosure or proprietary information agreement or non-competition agreement, or any other contract or agreement or any restrictive covenant in favor of any third party, and the continued employment of each such executive officer does not subject the Company or any of its Subsidiaries to any liability with respect to any of the foregoing matters. The Company and its Subsidiaries are in compliance with all U.S. federal, state, local and foreign laws and regulations relating to employment and employment practices, terms and conditions of employment and wages and hours, except where the failure to be in compliance could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(q) Compliance. Neither the Company nor any Subsidiary: (i) is in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by the Company or any Subsidiary under), nor has the Company or any Subsidiary received notice of a claim that it is in default under or that it is in violation of, any indenture, loan or credit agreement or any other agreement or instrument to which it is a party or by which it or any of its properties is bound (whether or not such default or violation has been waived), (ii) is in violation of any judgment, decree or order of any court, arbitrator or other governmental authority or (iii) is or has been in violation of any statute, rule, ordinance or regulation of any governmental authority, including without limitation all foreign, federal, state and local laws relating to taxes, environmental protection, occupational health and safety, product quality and safety and employment and labor matters, except in each case as could not have or reasonably be expected to result in a Material Adverse Effect.

(r) Environmental Laws. The Company and its Subsidiaries (i) are in compliance with all federal, state, local and foreign laws relating to pollution or protection of human health or the environment (including ambient air, surface water, groundwater, land surface or subsurface strata), including laws relating to emissions, discharges, releases or threatened releases of chemicals, pollutants, contaminants, or toxic or hazardous substances or wastes (collectively, "Hazardous Materials") into the environment, or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials, as well as all authorizations, codes, decrees, demands, or demand letters, injunctions, judgments, licenses, notices or notice letters, orders, permits, plans or regulations, issued, entered, promulgated or approved thereunder ("Environmental Laws"); (ii) have received all permits licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses; and (iii) are in compliance with all terms and conditions of any such permit, license or approval where in each clause (i), (ii) and (iii), the failure to so comply could be reasonably expected to have, individually or in the aggregate, a Material Adverse Effect.

(s) Regulatory Permits. The Company and the Subsidiaries possess all certificates, authorizations and permits issued by the appropriate federal, state, local or foreign regulatory authorities necessary to conduct their respective businesses as described in the SEC Reports, except where the failure to possess such permits could not reasonably be expected to result in a Material Adverse Effect ("Material Permits"), and neither the Company nor any Subsidiary has received any notice of proceedings relating to the revocation or modification of any Material Permit.

(t) Title to Assets. The Company and the Subsidiaries have good and marketable title in fee simple to, or have valid and marketable rights to lease or otherwise use, all real property and all personal property that is material to the business of the Company and the Subsidiaries, in each case free and clear of all Liens, except for (i) Liens as do not materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company and the Subsidiaries and (ii) Liens for the payment of federal, state or other taxes, for which appropriate reserves have been made therefor in accordance with GAAP, and the payment of which is neither delinquent nor subject to penalties. Any real property and facilities held under lease by the Company and the Subsidiaries are held by them under valid, subsisting and enforceable leases with which the Company and the Subsidiaries are in compliance, except where failure to be in compliance could not reasonably be expected to have a Material Adverse Effect.

(u) Intellectual Property. To their knowledge, the Company and the Subsidiaries have, or have rights to use, all patents, patent applications, trademarks, trademark applications, service marks, trade names, trade secrets, inventions, copyrights, licenses and other intellectual property rights and similar rights necessary or required for use in connection with their respective businesses as described in the SEC Reports and which the failure to do so could have a Material Adverse Effect (collectively, the "Intellectual Property Rights"). None of, and neither the Company nor any Subsidiary has received a notice (written or otherwise) that any of, the Intellectual Property Rights has expired, terminated or been abandoned, or is expected to expire or terminate or be abandoned, within two (2) years from the date of this Agreement, with the exception of certain non-core patents in-licensed from Philip Morris USA, Inc. or Philip Morris Products S.A., which have expired or will expire within two (2) years from the date of this Agreement. Neither the Company nor any Subsidiary has received, since the date of the latest audited financial statements included within the SEC Reports, a written notice of a claim or otherwise has any knowledge that the Intellectual Property Rights violate or infringe upon the rights of any Person, except as could not have or reasonably be expected to not have a Material Adverse Effect. To the knowledge of the Company, all such Intellectual Property Rights are enforceable and there is no existing infringement by another Person of any of the Intellectual Property Rights. The Company and its Subsidiaries have taken reasonable security measures to protect the secrecy, confidentiality and value of all of their intellectual properties, except where failure to do so could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(v) Insurance. The Company and the Subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as are prudent and customary in the businesses in which the Company and the Subsidiaries are engaged, including, but not limited to, directors and officers insurance coverage. Neither the Company nor any Subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business without a significant increase in cost.

(w) Affiliate Transactions. Except as set forth in the SEC Reports, none of the officers or directors of the Company or any Subsidiary and, to the knowledge of the Company, none of the employees of the Company or any Subsidiary is presently a party to any transaction with the Company or any Subsidiary (other than for services as employees, officers and directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, providing for the borrowing of money from or lending of money to or otherwise requiring payments to or from any officer, director or such employee or, to the knowledge of the Company, any entity in which any officer, director, or any such employee has a substantial interest or is an officer, director, trustee, stockholder, member or partner, in each case in excess of \$120,000 other than for (i) payment of salary or consulting fees for services rendered, (ii) reimbursement for expenses incurred on behalf of the Company and (iii) other employee benefits, including stock option agreements under any stock option plan of the Company.

(x) Sarbanes Oxley Compliance. The Company and the Subsidiaries are in compliance in all material respects with any and all applicable requirements of the Sarbanes-Oxley Act of 2002 that are effective as of the date hereof, and any and all applicable rules and regulations promulgated by the Commission thereunder that are effective as of the date hereof. The Company and the Subsidiaries maintain a system of internal accounting controls sufficient to provide reasonable assurance that: (i) transactions are executed in accordance with management's general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability, (iii) access to assets is permitted only in accordance with management's general or specific authorization, and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. The Company and the Subsidiaries have established disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the Company and the Subsidiaries and designed such disclosure controls and procedures to ensure that information required to be disclosed by the Company in the reports 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. The Company's certifying officers have evaluated the effectiveness of the disclosure controls and procedures of the Company and the Subsidiaries as of the end of the period covered by the most recently filed periodic report under the Exchange Act (such date, the "Evaluation Date"). The Company presented in its most recently filed periodic report under the Exchange Act the conclusions of the certifying officers about the effectiveness of the disclosure controls and procedures based on their evaluations as of the Evaluation Date. Since the Evaluation Date, there have been no changes in the internal control over financial reporting (as such term is defined in the Exchange Act) of the Company and its Subsidiaries that have materially affected, or is reasonably likely to materially affect, the internal control over financial reporting of the Company and its Subsidiaries.

(y) Certain Fees. Other than payments to be made to the Manager, no brokerage or finder's fees or commissions are or will be payable by the Company or any Subsidiary to any broker, financial advisor or consultant, finder, placement agent, investment banker, bank or other Person with respect to the transactions contemplated by this Agreement. The Manager shall have no obligation with respect to any fees or with respect to any claims made by or on behalf of other Persons for fees of a type contemplated in this Section 3(y) that may be due in connection with the transactions contemplated by this Agreement.

(z) No Other Sales Agency Agreement. The Company has not entered into any other sales agency agreements or other similar arrangements with any agent or any other representative in respect of at the market offerings of the Shares.

(aa) [RESERVED]

(bb) Listing and Maintenance Requirements. The Common Stock is registered pursuant to Section 12(b) or 12(g) of the Exchange Act, and the Company has taken no action designed to, or which to its knowledge is likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act nor has the Company received any notification that the Commission is contemplating terminating such registration. The Company has not, in the 12 months preceding the date hereof, received notice from any Trading Market on which the Common Stock is or has been listed or quoted to the effect that the Company is not in compliance with the listing or maintenance requirements of such Trading Market. The Company is, and has no reason to believe that it will not in the foreseeable future continue to be, in compliance with all such listing and maintenance requirements. The Common Stock is currently eligible for electronic transfer through the Depository Trust Company or another established clearing corporation and the Company is current in payment of the fees to the Depository Trust Company (or such other established clearing corporation) in connection with such electronic transfer.

(cc) Application of Takeover Protections. The Company and the Board of Directors have taken all necessary action, if any, in order to render inapplicable any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Company's certificate of incorporation (or similar charter documents) or the laws of its state of incorporation that is or could become applicable to the Shares.

(dd) Solvency. Based on the consolidated financial condition of the Company as of the Effective Date, (i) the fair saleable value of the Company's assets exceeds the amount that will be required to be paid on or in respect of the Company's existing debts and other liabilities (including known contingent liabilities) as they mature, (ii) the Company's assets do not constitute unreasonably small capital to carry on its business as now conducted and as proposed to be conducted including its capital needs taking into account the particular capital requirements of the business conducted by the Company, consolidated and projected capital requirements and capital availability thereof, and (iii) the current cash flow of the Company, together with the proceeds the Company would receive, were it to liquidate all of its assets, after taking into account all anticipated uses of the cash, would be sufficient to pay all amounts on or in respect of its liabilities when such amounts are required to be paid. The Company does not intend to incur debts beyond its ability to pay such debts as they mature (taking into account the timing and amounts of cash to be payable on or in respect of its debt). The Company has no knowledge of any facts or circumstances which lead it to believe that it will file for reorganization or liquidation under the bankruptcy or reorganization laws of any jurisdiction within one year from the date hereof. The SEC Reports set forth as of the date hereof all outstanding secured and unsecured Indebtedness of the Company or any Subsidiary, or for which the Company or any Subsidiary has commitments. For the purposes of this Agreement, "Indebtedness" means (x) any liabilities for borrowed money or amounts owed in excess of \$50,000 (other than trade accounts payable incurred in the ordinary course of business), (y) all guaranties, endorsements and other contingent obligations in respect of indebtedness of others, whether or not the same are or should be reflected in the Company's consolidated balance sheet (or the notes thereto), except guaranties by endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of business; and (z) the present value of any lease payments in excess of \$50,000 due under leases required to be capitalized in accordance with GAAP. Neither the Company nor any Subsidiary is in default with respect to any Indebtedness.

(ee) Tax Status. Except for matters that would not, individually or in the aggregate, have or reasonably be expected to result in a Material Adverse Effect, the Company and its Subsidiaries each (i) has made or filed all United States federal, state and local income and all foreign income and franchise tax returns, reports and declarations required by any jurisdiction to which it is subject, (ii) has paid all taxes and other governmental assessments and charges that are material in amount, shown or determined to be due on such returns, reports and declarations and (iii) has set aside on its books provision reasonably adequate for the payment of all material taxes for periods subsequent to the periods to which such returns, reports or declarations apply. There are no unpaid taxes in any material amount claimed to be due by the taxing authority of any jurisdiction and none of the Company or its Subsidiaries has received a written notice of an intention to audit the Company or Subsidiaries with respect to taxes.

(ff) Foreign Corrupt Practices. Neither the Company, nor to the knowledge of the Company, any agent or other person acting on behalf of the Company or any Subsidiary, has (i) directly or indirectly, used any funds for unlawful contributions, gifts, entertainment or other unlawful expenses related to foreign or domestic political activity, (ii) made any unlawful payment to foreign or domestic government officials or employees or to any foreign or domestic political parties or campaigns from corporate funds, (iii) failed to disclose fully any contribution made by the Company or any Subsidiary (or made by any person acting on its behalf of which the Company is aware) which is in violation of law, or (iv) violated in any material respect any provision of FCPA.

(gg) Accountants. The Company's accounting firm is set forth in the SEC Reports. To the knowledge and belief of the Company, such accounting firm (i) is a registered public accounting firm as required by the Exchange Act and (ii) shall express its opinion with respect to the financial statements to be included in the Company's Annual Report for the fiscal year ending December 31, 2020.

(hh) Regulation M Compliance. The Company has not, and to its knowledge no one acting on its behalf has, (i) taken, directly or indirectly, any action designed to cause or to result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of any of the Shares, (ii) sold, bid for, purchased, or, paid any compensation for soliciting purchases of, any of the Shares, or (iii) paid or agreed to pay to any Person any compensation for soliciting another to purchase any other securities of the Company, other than, in the case of clauses (ii) and (iii), compensation paid to the Manager in connection with the Shares.

(ii) FDA. As to each product subject to the jurisdiction of the U.S. Food and Drug Administration ("FDA") under the Federal Food, Drug and Cosmetic Act, as amended, and the regulations thereunder ("FDCA") that is manufactured, packaged, labeled, tested, distributed, sold, and/or marketed by the Company or any of its Subsidiaries (each such product, a "Pharmaceutical Product"), such Pharmaceutical Product is being manufactured, packaged, labeled, tested, distributed, sold and/or marketed by the Company in compliance with all applicable requirements under FDCA and similar laws, rules and regulations relating to registration, investigational use, premarket clearance, licensure, or application approval, good manufacturing practices, good laboratory practices, good clinical practices, product listing, quotas, labeling, advertising, record keeping and filing of reports, except where the failure to be in compliance would not have a Material Adverse Effect. There is no pending, completed or, to the Company's knowledge, threatened, action (including any lawsuit, arbitration, or legal or administrative or regulatory proceeding, charge, complaint, or investigation) against the Company or any of its Subsidiaries, and none of the Company or any of its Subsidiaries has received any notice, warning letter or other communication from the FDA or any other governmental entity, which (i) contests the premarket clearance, licensure, registration, or approval of, the uses of, the distribution of, the manufacturing or packaging of, the testing of, the sale of, or the labeling and promotion of any Pharmaceutical Product, (ii) withdraws its approval of, requests the recall, suspension, or seizure of, or withdraws or orders the withdrawal of advertising or sales promotional materials relating to, any Pharmaceutical Product, (iii) imposes a clinical hold on any clinical investigation by the Company or any of its Subsidiaries, (iv) enjoins production at any facility of the Company or any of its Subsidiaries, (v) enters or proposes to enter into a consent decree of permanent injunction with the Company or any of its Subsidiaries, or (vi) otherwise alleges any violation of any laws, rules or regulations by the Company or any of its Subsidiaries, and which, either individually or in the aggregate, would have a Material Adverse Effect. The properties, business and operations of the Company have been and are being conducted in all material respects in accordance with all applicable laws, rules and regulations of the FDA. The Company has not been informed by the FDA that the FDA will prohibit the marketing, sale, license or use in the United States of any product proposed to be developed, produced or marketed by the Company nor, to the knowledge of the Company, has the FDA expressed any concern as to approving or clearing for marketing any product being developed or proposed to be developed by the Company.



(jj) Stock Option Plans. Each stock option granted by the Company under the Company's stock option plan was granted (i) in accordance with the terms of the Company's stock option plan and (ii) with an exercise price at least equal to the fair market value of the Common Stock on the date such stock option would be considered granted under GAAP and applicable law. No stock option granted under the Company's stock option plan has been backdated. The Company has not knowingly granted, and there is no and has been no Company policy or practice to knowingly grant, stock options prior to, or otherwise knowingly coordinate the grant of stock options with, the release or other public announcement of material information regarding the Company or its Subsidiaries or their financial results or prospects.

(kk) Office of Foreign Assets Control. Neither the Company nor any Subsidiary nor, to the Company's knowledge, any director, officer, agent or employee of the Company is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("OFAC").

(ll) U.S. Real Property Holding Corporation. The Company is not and has never been a U.S. real property holding corporation within the meaning of Section 897 of the Internal Revenue Code of 1986, as amended, and the Company shall so certify upon the Manager's request.

(mm) Bank Holding Company Act. Neither the Company nor any of its Subsidiaries is subject to the Bank Holding Company Act of 1956, as amended (the "BHCA") and to regulation by the Board of Governors of the Federal Reserve System (the "Federal Reserve"). Neither the Company nor any of its Subsidiaries owns or controls, directly or indirectly, five percent (5%) or more of the outstanding shares of any class of voting securities or twenty-five percent or more of the total equity of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve. Neither the Company nor any of its Subsidiaries exercises a controlling influence over the management or policies of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve.

(nn) Money Laundering. To the extent the Company and its subsidiaries are subject to such requirements, the operations of the Company and its Subsidiaries are and have been conducted at all times in compliance with applicable financial record-keeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, applicable money laundering statutes and applicable rules and regulations thereunder (collectively, the "Money Laundering Laws"), and no Action or Proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any Subsidiary with respect to the Money Laundering Laws is pending or, to the knowledge of the Company or any Subsidiary, threatened.

(oo) FINRA Member Shareholders. To the Company's knowledge, there are no affiliations with any FINRA member firm among the Company's officers, directors or any five percent (5%) or greater stockholder of the Company, except as set forth in the Registration Statement or the Prospectus.

4. Agreements. The Company agrees with the Manager that:

(a) Right to Review Amendments and Supplements to Registration Statement and Prospectus. During any period when the delivery of a prospectus relating to the Shares is required (including in circumstances where such requirement may be satisfied pursuant to Rule 172, 173 or any similar rule) to be delivered under the Act in connection with the offering or the sale of Shares, the Company will not file any amendment to the Registration Statement or supplement to the Prospectus (other than documents incorporated by reference therein) unless the Company has furnished to the Manager a copy for its review prior to filing and will not file any such proposed amendment or supplement to which the Manager reasonably objects. The Company has properly completed the Prospectus, in a form approved by the Manager, and filed such Prospectus, as amended at the Execution Time, with the Commission pursuant to the applicable paragraph of Rule 424(b) and will cause any supplement to the Prospectus to be properly completed, in a form approved by the Manager, and will file such supplement with the Commission pursuant to the applicable paragraph of Rule 424(b) within the time period prescribed thereby and will provide evidence reasonably satisfactory to the Manager of such timely filing. The Company will promptly advise the Manager (i) when the Prospectus, and any supplement thereto, shall have been filed (if required) with the Commission pursuant to Rule 424(b), (ii) when, during any period when the delivery of a prospectus (whether physically or through compliance with Rule 172, 173 or any similar rule) is required under the Act in connection with the offering or sale of the Shares, any amendment to the Registration Statement shall have been filed or become effective (other than any annual report of the Company filed pursuant to Section 13(a) or 15(d) of the Exchange Act), (iii) of any request by the Commission or its staff for any amendment of the Registration Statement, or any Rule 462(b) Registration Statement, or for any supplement to the Prospectus or for any additional information, (iv) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or of any notice objecting to its use or the institution or threatening of any proceeding for that purpose and (v) of the receipt by the Company of any notification with respect to the suspension of the qualification of the Shares for sale in any jurisdiction or the institution or threatening of any proceeding for such purpose. The Company will use its reasonable best efforts to prevent the issuance of any such stop order or the occurrence of any such suspension or objection to the use of the Registration Statement and, upon such issuance, occurrence or notice of objection, to obtain as soon as possible the withdrawal of such stop order or relief from such occurrence or objection, including, if necessary, by filing an amendment to the Registration Statement or a new registration statement and using its reasonable best efforts to have such amendment or new registration statement declared effective as soon as practicable.

(b) Subsequent Events. If, at any time on or after an Applicable Time but prior to the related Settlement Date, any event occurs as a result of which the Registration Statement or Prospectus would include any untrue statement of a material fact or omit to state any material fact necessary to make the statements therein in the light of the circumstances under which they were made or the circumstances then prevailing not misleading, the Company will (i) notify promptly the Manager so that any use of the Registration Statement or Prospectus may cease until such are amended or supplemented; (ii) amend or supplement the Registration Statement or Prospectus to correct such statement or omission; and (iii) supply any amendment or supplement to the Manager in such quantities as the Manager may reasonably request.

(c) Notification of Subsequent Filings. During any period when the delivery of a prospectus relating to the Shares is required (including in circumstances where such requirement may be satisfied pursuant to Rule 172, 173 or any similar rule) to be delivered under the Act, any event occurs as a result of which the Prospectus as then supplemented would include any untrue statement of a material fact or omit to state any material fact necessary to make the statements therein in the light of the circumstances under which they were made not misleading, or if it shall be necessary to amend the Registration Statement, file a new registration statement or supplement the Prospectus to comply with the Act or the Exchange Act or the respective rules thereunder, including in connection with use or delivery of the Prospectus, the Company promptly will (i) notify the Manager of any such event, (ii) subject to Section 4(a), prepare and file with the Commission an amendment or supplement or new registration statement which will correct such statement or omission or effect such compliance, (iii) use its reasonable best efforts to have any amendment to the Registration Statement or new registration statement declared effective as soon as practicable in order to avoid any disruption in use of the Prospectus and (iv) supply any supplemented Prospectus to the Manager in such quantities as the Manager may reasonably request.

(d) Earnings Statements. As soon as practicable, the Company will make generally available to its security holders and to the Manager an earnings statement or statements of the Company and its Subsidiaries which will satisfy the provisions of Section 11(a) of the Act and Rule 158. For the avoidance of doubt, the Company's compliance with the reporting requirements of the Exchange Act shall be deemed to satisfy the requirements of this Section 4(d).

(e) Delivery of Registration Statement. Upon the request of the Manager, the Company will furnish to the Manager and counsel for the Manager, without charge, signed copies of the Registration Statement (including exhibits thereto) and, so long as delivery of a prospectus by the Manager or dealer may be required by the Act (including in circumstances where such requirement may be satisfied pursuant to Rule 172, 173 or any similar rule), as many copies of the Prospectus and each Issuer Free Writing Prospectus and any supplement thereto as the Manager may reasonably request, provided that the Company's obligations to provide such copies shall not apply to any filing available via EDGAR. The Company will pay the expenses of printing or other production of all documents relating to the offering.

(f) Qualification of Shares. The Company will arrange, if necessary, for the qualification of the Shares for sale under the laws of such jurisdictions as the Manager may designate and will maintain such qualifications in effect so long as required for the distribution of the Shares; provided that in no event shall the Company be obligated to qualify to do business in any jurisdiction where it is not now so qualified or to take any action that would subject it to service of process in suits, other than those arising out of the offering or sale of the Shares, in any jurisdiction where it is not now so subject.

(g) Free Writing Prospectus. The Company agrees that, unless it has or shall have obtained the prior written consent of the Manager, and the Manager agrees with the Company that, unless it has or shall have obtained, as the case may be, the prior written consent of the Company, it has not made and will not make any offer relating to the 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 by the Company or the Manager, as applicable, with the Commission or retained by the Company under Rule 433. Any such free writing prospectus consented to by the Manager or the Company is hereinafter referred to as a "Permitted Free Writing Prospectus." The Company agrees that (i) it has treated and will treat, as the case may be, each Permitted Free Writing Prospectus as an Issuer Free Writing Prospectus and (ii) it has complied and will comply, as the case may be, with the requirements of Rules 164 and 433 applicable to any Permitted Free Writing Prospectus, including in respect of timely filing with the Commission, legending and record keeping.

(h) Subsequent Equity Issuances. The Company shall not deliver any Sales Notice hereunder (and any Sales Notice previously delivered shall not apply during such three Business Days) for at least three (3) Business Days prior to any date on which the Company or any Subsidiary offers, sells, issues, contracts to sell, contracts to issue or otherwise disposes of, directly or indirectly, any Common Stock or any Common Stock Equivalents (other than the Shares), subject to the Manager's right to waive this obligation, provided that, without compliance with the foregoing obligation, the Company may issue and sell Common Stock pursuant to any employee stock option plan, stock ownership plan or dividend reinvestment plan of the Company in effect at the Execution Time and the Company may issue Common Stock issuable upon the conversion or exercise of Common Stock Equivalents outstanding at the Execution Time.

(i) Market Manipulation. Until the termination of this Agreement, the Company will not take, directly or indirectly, any action designed to or that would constitute or that might reasonably be expected to cause or result in, under the Exchange Act or otherwise, stabilization or manipulation in violation of the Act, Exchange Act or the rules and regulations thereunder of the price of any security of the Company to facilitate the sale or resale of the Shares or otherwise violate any provision of Regulation M under the Exchange Act.

(j) Notification of Incorrect Certificate. The Company will, at any time during the term of this Agreement, as supplemented from time to time, advise the Manager as soon as practicable after it shall have received notice or obtained knowledge thereof, of any information or fact that would alter or affect any opinion, certificate, letter and other document provided to the Manager pursuant to Section 6 herein.

(k) Certification of Accuracy of Disclosure. Upon commencement of the offering of the Shares under this Agreement (and upon the recommencement of the offering of the Shares under this Agreement following the termination of a suspension of sales hereunder lasting more than 30 Trading Days), and each time that (i) the Registration Statement or Prospectus shall be amended or supplemented, other than by means of Incorporated Documents or relating solely to the offering of securities other than the Shares, (ii) the Company files its Annual Report on Form 10-K under the Exchange Act, (iii) the Company files its quarterly reports on Form 10-Q under the Exchange Act, (iv) the Company files a Current Report on Form 8-K containing amended financial information (other than information that is furnished and not filed), if the Manager reasonably determines that the information in such Form 8-K is material, or (v) the Shares are delivered to the Manager as principal at the Time of Delivery pursuant to a Terms Agreement (such commencement or recommencement date and each such date referred to in (i), (ii), (iii), (iv) and (v) above, a “Representation Date”), unless waived by the Manager, the Company shall furnish or cause to be furnished to the Manager forthwith a certificate dated and delivered on the Representation Date, (or if the Representation Date is triggered by the filing of an SEC Report, then delivery shall be within three (3) Business Days of such Representation Date) in form reasonably satisfactory to the Manager to the effect that the statements contained in the certificate referred to in Section 6 of this Agreement which were last furnished to the Manager are true and correct at the Representation Date, as though made at and as of such date (except that such statements shall be deemed to relate to the Registration Statement and the Prospectus as amended and supplemented to such date) or, in lieu of such certificate, a certificate of the same tenor as the certificate referred to in said Section 6, modified as necessary to relate to the Registration Statement and the Prospectus as amended and supplemented to the date of delivery of such certificate.

(l) Bring Down Opinions; Negative Assurance. At each Representation Date (or if the Representation Date is triggered by the filing of an SEC Report, then delivery shall be within three (3) Business Days of such Representation Date) unless waived by the Manager, the Company shall furnish or cause to be furnished forthwith to the Manager and to counsel to the Manager (i) a written opinion of counsel to the Company (“Company Counsel”) addressed to the Manager and dated and delivered on such Representation Date, in form and substance reasonably satisfactory to the Manager, including a negative assurance representation and (ii) a legal opinion of counsel to the Company with respect to intellectual property matters (“Company IP Counsel”) addressed to the Manager and dated and delivered on such Representation Date, in form and substance reasonably satisfactory to the Manager, including a negative assurance representation. The requirement to furnish or cause to be furnished opinions (but not with respect to a negative assurance representation) under this Section 4(l) shall be waived for any Representation Date other than a Representation Date on which a material amendment to the Registration Statement or Prospectus is made or the Company files its Annual Report on Form 10-K or a material amendment thereto under the Exchange Act.

(m) Auditor Bring Down “Comfort” Letter. At each Representation Date (or if the Representation Date is triggered by the filing of the Company’s Annual Report on Form 10-K, then delivery shall be within three (3) Business Days of such Form 10-K filing), unless waived by the Manager, the Company shall cause the Company’s auditors (the “Accountants”), or other independent accountants satisfactory to the Manager forthwith to furnish the Manager a letter, and, if reasonably requested by the Manager, the Company shall cause the Chief Financial Officer of the Company forthwith to furnish the Manager a certificate, in each case dated on such Representation Date, in form satisfactory to the Manager, of the same tenor as the letters and certificate referred to in Section 6 of this Agreement but modified to relate to the Registration Statement and the Prospectus, as amended and supplemented to the date of such letters and certificate. The requirement to furnish or cause to be furnished a “comfort” letter under this Section 4(m) shall be waived for any Representation Date other than a Representation Date on which a material amendment to the Registration Statement or Prospectus is made which includes amended audited financial information or the Company files its Annual Report on Form 10-K or a material amendment thereto under the Exchange Act.

(n) Due Diligence Session. Upon commencement of the offering of the Shares under this Agreement (and upon the recommencement of the offering of the Shares under this Agreement following the termination of a suspension of sales hereunder lasting more than 30 Trading Days), and at each Representation Date (or if the Representation Date is triggered by the filing of an SEC Report, then within three (3) Business Days of such Representation Date), the Company will conduct a due diligence session, in form and substance, reasonably satisfactory to the Manager, which shall include representatives of management and Accountants. The Company shall cooperate timely with any reasonable due diligence request from or review conducted by the Manager or its agents from time to time in connection with the transactions contemplated by this Agreement, including, without limitation, providing information and available documents and reasonable access to appropriate corporate officers and the Company’s agents during regular business hours. The Company shall reimburse the Manager for Manager’s counsel’s time in each such due diligence update session, up to a maximum of \$3,000 per update, plus any incidental expense incurred by the Manager in connection therewith.

(o) Representation Date Waiver. Notwithstanding the foregoing and Sections 4(k), 4(l), 4(m) and 4(n) hereof, the requirement in connection with each Representation Date to hold a due diligence session and to provide Company Counsel opinions, a comfort letter, certificates and documents under this Section 4 shall be waived for any Representation Date occurring at a time at which no Sales Notice is pending, which waiver shall continue until the date the Company delivers a Sales Notice to the Manager. Notwithstanding the foregoing, if the Company subsequently decides to sell Shares following a Representation Date when the Company relied on such waiver and did not hold a due diligence session or provide the Manager with the opinions, comfort letter, certificates and documents under this Section 4, then before the Manager sells any Shares pursuant to Section 2(b) or 2(c), the Company shall hold a due diligence session and cause the opinions, comfort letter, certificates and documents that would be delivered on a Representation Date to be delivered.

(p) Acknowledgment of Trading. The Company consents to the Manager trading in the Common Stock for the Manager's own account and for the account of its clients at the same time as sales of the Shares occur pursuant to this Agreement or pursuant to a Terms Agreement, provided such trading complies with applicable requirements of the Act, the Exchange Act and the Trading Market.

(q) Disclosure of Shares Sold. The Company will disclose in its Annual Reports on Form 10-K and Quarterly Reports on Form 10-Q, as applicable, the number of Shares sold through the Manager under this Agreement, the Net Proceeds to the Company and the compensation paid by the Company with respect to sales of Shares pursuant to this Agreement during the relevant quarter; and, if required by any subsequent change in Commission policy or request, more frequently by means of a Current Report on Form 8-K or a further supplement to the Prospectus.

(r) Bring Down of Representations and Warranties. Each acceptance by the Company of an offer to purchase the Shares hereunder, and each execution and delivery by the Company of a Terms Agreement, shall be deemed to be an affirmation to the Manager that the representations and warranties of the Company contained in or made pursuant to this Agreement are true and correct as of the date of such acceptance or of such Terms Agreement as though made at and as of such date, and an undertaking that such representations and warranties will be true and correct as of the Settlement Date for the Shares relating to such acceptance or as of the Time of Delivery relating to such sale, as the case may be, as though made at and as of such date (except that such representations and warranties shall be deemed to relate to the Registration Statement and the Prospectus as amended and supplemented relating to such Shares).

(s) Reservation of Shares. The Company shall ensure that there are at all times sufficient shares of Common Stock to provide for the issuance, free of any preemptive rights, out of its authorized but unissued shares of Common Stock or shares of Common Stock held in treasury, of the maximum aggregate number of Shares authorized for issuance by the Board pursuant to the terms of this Agreement. The Company will use its commercially reasonable efforts to cause the Shares to be listed for trading on the Trading Market and to maintain such listing.

(t) Obligation Under Exchange Act. During any period when the delivery of a prospectus relating to the Shares is required (including in circumstances where such requirement may be satisfied pursuant to Rule 172, 173 or any similar rule) to be delivered under the Act, the Company will file all documents required to be filed with the Commission pursuant to the Exchange Act within the time periods required by the Exchange Act and the regulations thereunder.

(u) DTC Facility. The Company shall cooperate with Manager and use its reasonable efforts to permit the Shares to be eligible for clearance and settlement through the facilities of DTC.

(v) Use of Proceeds. The Company will apply the Net Proceeds from the sale of the Shares in the manner set forth in the Prospectus.

(w) Filing of Prospectus Supplement. If any material sales are made pursuant to this Agreement which are not made in “at the market” offerings as defined in Rule 415 and in connection with any Placement pursuant to a Terms Agreement, the Company shall file a supplement to the Prospectus describing the terms of such transaction, the amount of Shares sold, the price thereof, the Manager’s compensation, and such other information as may be required pursuant to Rule 424 and Rule 430B, as applicable, within the time required by Rule 424.

(x) Additional Registration Statement. To the extent that the Registration Statement is not available for the sales of the Shares as contemplated by this Agreement, the Company shall file a new registration statement with respect to any additional shares of Common Stock necessary to complete such sales of the Shares and shall cause such registration statement to become effective as promptly as practicable. After the effectiveness of any such registration statement, all references to “Registration Statement” included in this Agreement shall be deemed to include such new registration statement, including all documents incorporated by reference therein pursuant to Item 12 of Form S-3, and all references to “Prospectus” included in this Agreement shall be deemed to include the final form of prospectus relating to the Shares, including all documents incorporated therein by reference, included in any such registration statement at the time such registration statement became effective.

5. Payment of Expenses. The Company agrees to pay the costs and expenses incident to the performance of its obligations under this Agreement, whether or not the transactions contemplated hereby are consummated, including without limitation: (i) the preparation, printing or reproduction and filing with the Commission of the Registration Statement (including financial statements and exhibits thereto), the Prospectus and each Issuer Free Writing Prospectus, and each amendment or supplement to any of them; (ii) the printing (or reproduction) and delivery (including postage, air freight charges and charges for counting and packaging) of such copies of the Registration Statement, the Prospectus, and each Issuer Free Writing Prospectus, and all amendments or supplements to any of them, as may, in each case, be reasonably requested for use in connection with the offering and sale of the Shares; (iii) the preparation, printing, authentication, issuance and delivery of certificates for the Shares, including any stamp or transfer taxes in connection with the original issuance and sale of the Shares; (iv) the printing (or reproduction) and delivery of this Agreement, any blue sky memorandum and all other agreements or documents printed (or reproduced) and delivered in connection with the offering of the Shares; (v) the registration of the Shares under the Exchange Act, if applicable, and the listing of the Shares on the Trading Market; (vi) any registration or qualification of the Shares for offer and sale under the securities or blue sky laws of the several states (including filing fees and the reasonable fees and expenses of counsel for the Manager relating to such registration and qualification); (vii) the transportation and other expenses incurred by or on behalf of Company representatives in connection with presentations to prospective purchasers of the Shares; (viii) the fees and expenses of the Company’s accountants and the fees and expenses of counsel (including local and special counsel) for the Company; (ix) the filing fee under FINRA Rule 5110; (x) the reasonable fees and expenses of the Manager’s counsel, not to exceed \$50,000 (excluding any periodic due diligence fees provided for under Section 4(n)), which shall be paid upon the Execution Time; and (xi) all other costs and expenses incident to the performance by the Company of its obligations hereunder.



6. Conditions to the Obligations of the Manager. The obligations of the Manager under this Agreement and any Terms Agreement shall be subject to (i) the accuracy of the representations and warranties on the part of the Company contained herein as of the Execution Time, each Representation Date, and as of each Applicable Time, Settlement Date and Time of Delivery, (ii) the performance in all material respects by the Company of its obligations hereunder and (iii) the following additional conditions:

(a) Registration Statement Effective; Filing of Prospectus. The Registration Statement shall have become effective. The Prospectus shall have been filed with the Commission in the manner and within the time period so required; each supplement to the Prospectus shall have been filed in the manner required by Rule 424(b) within the time period required hereunder and under the Act; any other material required to be filed by the Company pursuant to Rule 433(d) under the Act, shall have been filed with the Commission within the applicable time periods prescribed for such filings by Rule 433; and no stop order suspending the effectiveness of the Registration Statement or any notice objecting to its use shall have been issued and no proceedings for that purpose shall have been instituted or threatened.

(b) Delivery of Opinions. The Company, as required by Section 4(l) and provided a waiver does not apply, shall have caused the Company Counsel and the Company IP Counsel to furnish to the Manager their opinions and negative assurance statement, each dated as of such date and addressed to the Manager in form and substance acceptable to the Manager.

(c) Delivery of Officer's Certificate. The Company, as required by Section 4(k) and provided a waiver does not apply, shall have furnished or caused to be furnished to the Manager a certificate of the Company signed by the Chief Executive Officer or the President and the principal financial or accounting officer of the Company, dated as of such date, to the effect that the signers of such certificate have carefully examined the Registration Statement, the Prospectus and any documents incorporated by reference therein and any supplements or amendments thereto and this Agreement and that:

(i) the representations and warranties of the Company in this Agreement are true and correct on and as of such date with the same effect as if made on such date and the Company has complied in all material respects with all the agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to such date;

(ii) no stop order suspending the effectiveness of the Registration Statement or any notice objecting to its use has been issued and no proceedings for that purpose have been instituted or, to the Company's knowledge, threatened; and

(iii) since the date of the most recent financial statements included in the Registration Statement, the Prospectus and the Incorporated Documents, there has been no Material Adverse Effect on the condition (financial or otherwise), earnings, business or properties of the Company and its subsidiaries, taken as a whole, whether or not arising from transactions in the ordinary course of business, except as set forth in or contemplated in the Registration Statement and the Prospectus.

(d) Delivery of Accountants' "Comfort" Letter. The Company, as required by Section 4(m) and provided a waiver does not apply, shall have requested and caused the Accountants to have furnished to the Manager letters (which may refer to letters previously delivered to the Manager), dated as of such date the letters are delivered, in form and substance satisfactory to the Manager, (i) confirming that they are an independent public accounting firm within the meaning of the Act and the Exchange Act, (ii) stating, as of the date of such letter, 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) updating 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.

(e) No Material Adverse Event. Since the respective dates as of which information is disclosed in the Registration Statement, the Prospectus and the Incorporated Documents, except as otherwise stated therein, there shall not have been (i) any change or decrease in previously reported results specified in the letter or letters referred to in paragraph (d) of this Section 6 or (ii) any change, or any development involving a prospective change, in or affecting the condition (financial or otherwise), earnings, business or properties of the Company and its subsidiaries taken as a whole, whether or not arising from transactions in the ordinary course of business, except as set forth in or contemplated in the Registration Statement, the Prospectus and the Incorporated Documents (exclusive of any amendment or supplement thereto) the effect of which, in any case referred to in clause (i) or (ii) above, is, in the sole judgment of the Manager, so material and adverse as to make it impractical or inadvisable to proceed with the offering or delivery of the Shares as contemplated by the Registration Statement (exclusive of any amendment thereof), the Incorporated Documents and the Prospectus (exclusive of any amendment or supplement thereto).

(f) No FINRA Objections. FINRA shall not have raised any objection with respect to the fairness and reasonableness of the terms and arrangements under this Agreement.

(g) Shares Listed on Trading Market. The Shares shall have been listed and admitted and authorized for trading on the Trading Market, and satisfactory evidence of such actions shall have been provided to the Manager.

(h) Other Assurances. Prior to each Settlement Date and Time of Delivery, as applicable, the Company shall have furnished to the Manager such further information, certificates and documents as the Manager may reasonably request.

If any of the conditions specified in this Section 6 shall not have been fulfilled when and as provided in this Agreement, or if any of the opinions and certificates mentioned above or elsewhere in this Agreement shall not be reasonably satisfactory in form and substance to the Manager and counsel for the Manager, this Agreement and all obligations of the Manager hereunder may be canceled at, or at any time prior to, any Settlement Date or Time of Delivery, as applicable, by the Manager. Notice of such cancellation shall be given to the Company in writing or by telephone or facsimile confirmed in writing.

The documents required to be delivered by this Section 6 shall be delivered to the office of Ellenoff Grossman & Schole LLP, counsel for the Manager, at 1345 Avenue of the Americas, New York, New York 10105, on each such date as provided in this Agreement.

7. Indemnification and Contribution.

(a) Indemnification by Company. The Company agrees to indemnify and hold harmless the Manager, the directors, officers, employees and agents of the Manager and each person who controls the Manager within the meaning of either the Act or the Exchange Act against any and all losses, claims, damages or liabilities, joint or several, to which they or any of them may become subject under the Act, the Exchange Act or other Federal or state statutory law or regulation, at common law or otherwise, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement for the registration of the Shares as originally filed or in any amendment thereof, or in the Prospectus, any Issuer Free Writing Prospectus, or in any amendment thereof or supplement thereto, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading and agrees to reimburse each such indemnified party for any legal or other expenses reasonably incurred by them in connection with investigating or defending any such loss, claim, damage, liability or action; provided, however, that the Company will not be liable in any such case to the extent that any such loss, claim, damage or liability arises out of or is based upon any such untrue statement or alleged untrue statement or omission or alleged omission made therein in reliance upon and in conformity with written information furnished to the Company by the Manager specifically for inclusion therein. This indemnity agreement will be in addition to any liability that the Company may otherwise have.

(b) Indemnification by Manager. The Manager agrees to indemnify and hold harmless the Company, each of its directors, each of its officers who signs the Registration Statement, and each person who controls the Company within the meaning of either the Act or the Exchange Act, to the same extent as the foregoing indemnity from the Company to the Manager, but only with reference to written information relating to the Manager furnished to the Company by the Manager specifically for inclusion in the documents referred to in the foregoing indemnity; provided, however, that in no case shall the Manager be responsible for any amount in excess of the Manager Compensation. This indemnity agreement will be in addition to any liability which the Manager may otherwise have.

(c) Indemnification Procedures. Promptly after receipt by an indemnified party under this Section 7 of notice of the commencement of any action, such indemnified party will, if a claim in respect thereof is to be made against the indemnifying party under this Section 7, notify the indemnifying party in writing of the commencement thereof; but the failure so to notify the indemnifying party (i) will not relieve it from liability under paragraph (a) or (b) above unless and to the extent it did not otherwise learn of such action and such failure results in the forfeiture by the indemnifying party of substantial rights and defenses and (ii) will not, in any event, relieve the indemnifying party from any obligations to any indemnified party other than the indemnification obligation provided in paragraph (a) or (b) above. The indemnifying party shall be entitled to appoint counsel of the indemnifying party's choice at the indemnifying party's expense to represent the indemnified party in any action for which indemnification is sought (in which case the indemnifying party shall not thereafter be responsible for the fees and expenses of any separate counsel retained by the indemnified party or parties except as set forth below); provided, however, that such counsel shall be reasonably satisfactory to the indemnified party. Notwithstanding the indemnifying party's election to appoint counsel to represent the indemnified party in an action, the indemnified party shall have the right to employ separate counsel (including local counsel), and the indemnifying party shall bear the reasonable fees, costs and expenses of such separate counsel if (i) the use of counsel chosen by the indemnifying party to represent the indemnified party would present such counsel with a conflict of interest, (ii) the actual or potential defendants in, or targets of, any such action include both the indemnified party and the indemnifying party and the indemnified party shall have reasonably concluded that there may be legal defenses available to it and/or other indemnified parties which are different from or additional to those available to the indemnifying party, (iii) the indemnifying party shall not have employed counsel reasonably satisfactory to the indemnified party to represent the indemnified party within a reasonable time after notice of the institution of such action or (iv) the indemnifying party shall authorize the indemnified party to employ separate counsel at the expense of the indemnifying party. An indemnifying party will not, without the prior written consent of the indemnified parties, settle or compromise or consent to the entry of any judgment with respect to any pending or threatened claim, action, suit or proceeding in respect of which indemnification or contribution may be sought hereunder (whether or not the indemnified parties are actual or potential parties to such claim or action) unless such settlement, compromise or consent includes an unconditional release of each indemnified party from all liability arising out of such claim, action, suit or proceeding.

(d) **Contribution.** In the event that the indemnity provided in paragraph (a), (b) or (c) of this Section 7 is unavailable to or insufficient to hold harmless an indemnified party for any reason, the Company and the Manager agree to contribute to the aggregate losses, claims, damages and liabilities (including legal or other expenses reasonably incurred in connection with investigating or defending the same) (collectively "Losses") to which the Company and the Manager may be subject in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and by the Manager on the other from the offering of the Shares; provided, however, that in no case shall the Manager be responsible for any amount in excess of the sum of (i) the Broker Fee applicable to the Shares sold pursuant to Section 2(b) and paid hereunder and (ii) the underwriting discounts and commissions applicable to the Shares purchased by the Manager pursuant to a Placement as contemplated by Section 2(c) and paid hereunder (collectively, the "Manager Compensation"). If the allocation provided by the immediately preceding sentence is unavailable for any reason, the Company and the Manager severally shall contribute in such proportion as is appropriate to reflect not only such relative benefits but also the relative fault of the Company on the one hand and of the Manager on the other in connection with the statements or omissions which resulted in such Losses as well as any other relevant equitable considerations. Benefits received by the Company shall be deemed to be equal to the total net proceeds from the offering (before deducting expenses) received by it, and benefits received by the Manager shall be deemed to be equal to the Manager Compensation as determined by this Agreement. Relative fault shall be determined by reference to, among other things, whether any untrue or any alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information provided by the Company on the one hand or the Manager on the other, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such untrue statement or omission. The Company and the Manager agree that it would not be just and equitable if contribution were determined by pro rata allocation or any other method of allocation which does not take account of the equitable considerations referred to above. Notwithstanding the provisions of this paragraph (d), no person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. For purposes of this Section 7, each person who controls the Manager within the meaning of either the Act or the Exchange Act and each director, officer, employee and agent of the Manager shall have the same rights to contribution as the Manager, and each person who controls the Company within the meaning of either the Act or the Exchange Act, each officer of the Company who shall have signed the Registration Statement and each director of the Company shall have the same rights to contribution as the Company, subject in each case to the applicable terms and conditions of this paragraph (d).

8. Termination.

(a) The Company shall have the right, by giving written notice as hereinafter specified, to terminate the provisions of this Agreement relating to the solicitation of offers to purchase the Shares in its sole discretion at any time upon five (5) Business Days' prior written notice. Any such termination shall be without liability of any party to any other party except that (i) with respect to any pending sale, through the Manager for the Company, the obligations of the Company, including in respect of compensation of the Manager, shall remain in full force and effect notwithstanding the termination and (ii) the provisions of Sections 5, 7, 8, 9, 10, 12, the second sentence of 13 and 14 of this Agreement shall remain in full force and effect notwithstanding such termination.

(b) The Manager shall have the right, by giving written notice as hereinafter specified, to terminate the provisions of this Agreement relating to the solicitation of offers to purchase the Shares in its sole discretion at any time upon five (5) Business Days' prior written notice. Any such termination shall be without liability of any party to any other party except that the provisions of Sections 5, 7, 8, 9, 10, 12, the second sentence of 13 and 14 of this Agreement shall remain in full force and effect notwithstanding such termination.

(c) This Agreement shall remain in full force and effect until such date that this Agreement is terminated pursuant to Sections 8(a) or (b) above or otherwise by mutual agreement of the parties, provided that any such termination by mutual agreement shall in all cases be deemed to provide that Sections 5, 7, 8, 9, 10, 12, the second sentence of 13 and 14 shall remain in full force and effect.

(d) Any termination of this Agreement shall be effective on the date specified in such notice of termination, provided that such termination shall not be effective until the close of business on the date of receipt of such notice by the Manager or the Company, as the case may be. If such termination shall occur prior to the Settlement Date or Time of Delivery for any sale of the Shares, such sale of the Shares shall settle in accordance with the provisions of Section 2(b) of this Agreement.

(e) In the case of any purchase of Shares by the Manager pursuant to a Terms Agreement, the obligations of the Manager pursuant to such Terms Agreement shall be subject to termination, in the absolute discretion of the Manager, by prompt oral notice given to the Company prior to the Time of Delivery relating to such Shares, if any, and confirmed promptly by facsimile or electronic mail, if since the time of execution of the Terms Agreement and prior to such delivery and payment, (i) trading in the Common Stock shall have been suspended by the Commission or the Trading Market or trading in securities generally on the Trading Market shall have been suspended or limited or minimum prices shall have been established on such exchange, (ii) a banking moratorium shall have been declared either by Federal or New York State authorities or (iii) there shall have occurred any outbreak or escalation of hostilities, declaration by the United States of a national emergency or war, or other calamity or crisis the effect of which on financial markets is such as to make it, in the sole judgment of the Manager, impractical or inadvisable to proceed with the offering or delivery of the Shares as contemplated by the Prospectus (exclusive of any amendment or supplement thereto).

9. Representations and Indemnities to Survive. The respective agreements, representations and warranties and indemnities of the Company or its officers and of the Manager set forth in or made pursuant to this Agreement will remain in full force and effect, regardless of any investigation made by the Manager or the Company or any of the officers, directors, employees, agents or controlling persons referred to in Section 7, and will survive delivery of and payment for the Shares.

10. Notices. All communications hereunder will be in writing and effective only on receipt, and will be mailed, delivered, e-mailed or facsimiled to the addresses of the Company and the Manager, respectively, set forth on the signature page hereto.

11. Successors. This Agreement will inure to the benefit of and be binding upon the parties hereto and their respective successors and the officers, directors, employees, agents and controlling persons referred to in Section 7, and no other person will have any right or obligation hereunder.

12. No Fiduciary Duty. The Company hereby acknowledges that (a) the offering and sale of the Shares pursuant to this Agreement is an arm's-length commercial transaction between the Company, on the one hand, and the Manager and any affiliate through which it may be acting, on the other, (b) the Manager is acting solely as sales agent and/or principal in connection with the offering and sale of the Company's securities and not as a fiduciary of the Company and (c) the Company's engagement of the Manager in connection with the offering and the process leading up to the offering is as independent contractors and not in any other capacity. Furthermore, the Company agrees that it is solely responsible for making its own judgments in connection with the offering (irrespective of whether the Manager has advised or is currently advising the Company on related or other matters). The Company agrees that it will not claim that the Manager has rendered advisory services of any nature or respect, or owe an agency, fiduciary or similar duty to the Company, in connection with such transaction or the process leading thereto.

13. Integration. This Agreement and any Terms Agreement supersede all prior agreements and understandings (whether written or oral) between the Company and the Manager with respect to the subject matter hereof. Notwithstanding anything herein to the contrary, the letter agreement, dated January 10, 2020, as amended on April 30, 2020, by and between the Company and the Manager shall continue to be effective and the terms therein shall continue to survive and be enforceable by the Manager in accordance with its terms, provided that, in the event of a conflict between the terms of the letter agreement and this Agreement, the terms of this Agreement shall prevail.

14. Amendments; Waivers. No provision of this Agreement may be waived, modified, supplemented or amended except in a written instrument signed, in the case of an amendment, by the Company and the Manager. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of any party to exercise any right hereunder in any manner impair the exercise of any such right.

15. Applicable Law. This Agreement and any Terms Agreement will be governed by and construed in accordance with the laws of the State of New York applicable to contracts made and to be performed within the State of New York. Each of the Company and the Manager: (i) agrees that any legal suit, action or proceeding arising out of or relating to this Agreement shall be instituted exclusively in New York Supreme Court, County of New York, or in the United States District Court for the Southern District of New York, (ii) waives any objection which it may have or hereafter to the venue of any such suit, action or proceeding, and (iii) irrevocably consents to the jurisdiction of the New York Supreme Court, County of New York, and the United States District Court for the Southern District of New York in any such suit, action or proceeding. Each of the Company and the Manager further agrees to accept and acknowledge service of any and all process which may be served in any such suit, action or proceeding in the New York Supreme Court, County of New York, or in the United States District Court for the Southern District of New York and agrees that service of process upon the Company mailed by certified mail to the Company's address shall be deemed in every respect effective service of process upon the Company, in any such suit, action or proceeding, and service of process upon the Manager mailed by certified mail to the Manager's address shall be deemed in every respect effective service process upon the Manager, in any such suit, action or proceeding. If either party shall commence an action or proceeding to enforce any provision of this Agreement, then the prevailing party in such action or proceeding shall be reimbursed by the other party for its reasonable attorney's fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.



16. **WAIVER OF JURY TRIAL.** THE COMPANY 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, ANY TERMS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY OR THEREBY.

17. Counterparts. This Agreement and any Terms Agreement may be signed in one or more counterparts, each of which shall constitute an original and all of which together shall constitute one and the same agreement, which may be delivered by facsimile or in .pdf file via e-mail.

18. Headings. The section headings used in this Agreement and any Terms Agreement are for convenience only and shall not affect the construction hereof.

\*\*\*\*\*

If the foregoing is in accordance with your understanding of our agreement, please sign and return to us the enclosed duplicate hereof, whereupon this letter and your acceptance shall represent a binding agreement among the Company and the Manager.

Very truly yours,

**WINDTREE THERAPEUTICS, INC.**

By: /s/ Craig E. Fraser

Name: Craig E. Fraser

Title: President and Chief Executive Officer

Address for Notice:

2600 Kelly Road, Suite 100

Warrington, PA 18976

Attn: Chief Financial Officer

Email: [jhamill@windtreetx.com](mailto:jhamill@windtreetx.com)

Copy to:

Troutman Pepper Hamilton Sanders LLP

3000 Two Logan Square

Philadelphia, Pennsylvania 19103

Email: [rachael.bushey@troutman.com](mailto:rachael.bushey@troutman.com) and [jennifer.porter@troutman.com](mailto:jennifer.porter@troutman.com)

Attn: Rachael M. Bushey and Jennifer L. Porter

---

The foregoing Agreement is hereby confirmed and accepted as of the date first written above.

**LADENBURG THALMANN & CO. INC.**

By: /s/ Nicholas Stergis  
Name: Nicholas Stergis  
Title: Managing Director

Address for Notice:

277 Park Avenue, 26<sup>th</sup> Floor  
New York, NY 10172

Email:

Fax:

Attn: General Counsel and Head of Investment Banking

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**Form of Terms Agreement**

**ANNEX I**

**WINDTREE THERAPEUTICS, INC.**

**TERMS AGREEMENT**

Dear Sirs:

Windtree Therapeutics, Inc. (the "Company") proposes, subject to the terms and conditions stated herein and in the At The Market Offering Agreement, dated \_\_\_\_\_, 2020 (the "At The Market Offering Agreement"), between the Company and Ladenburg Thalmann & Co. Inc. ("Manager"), to issue and sell to Manager the securities specified in the Schedule I hereto (the "Purchased Shares").

Each of the provisions of the At The Market Offering Agreement not specifically related to the solicitation by the Manager, as agent of the Company, of offers to purchase securities is incorporated herein by reference in its entirety, and shall be deemed to be part of this Terms Agreement to the same extent as if such provisions had been set forth in full herein. Each of the representations and warranties set forth therein shall be deemed to have been made at and as of the date of this Terms Agreement and the Time of Delivery, except that each representation and warranty in Section 3 of the At The Market Offering Agreement which makes reference to the Prospectus (as therein defined) shall be deemed to be a representation and warranty as of the date of the At The Market Offering Agreement in relation to the Prospectus, and also a representation and warranty as of the date of this Terms Agreement and the Time of Delivery in relation to the Prospectus as amended and supplemented to relate to the Purchased Shares.

An amendment to the Registration Statement (as defined in the At The Market Offering Agreement), or a supplement to the Prospectus, as the case may be, relating to the Purchased Shares, in the form heretofore delivered to the Manager is now proposed to be filed with the Securities and Exchange Commission.

Subject to the terms and conditions set forth herein and in the At The Market Offering Agreement which are incorporated herein by reference, the Company agrees to issue and sell to the Manager and the latter agrees to purchase from the Company the number of shares of the Purchased Shares at the time and place and at the purchase price set forth in the Schedule I hereto.

If the foregoing is in accordance with your understanding, please sign and return to us a counterpart hereof, whereupon this Terms Agreement, including those provisions of the At The Market Offering Agreement incorporated herein by reference, shall constitute a binding agreement between the Manager and the Company.

**WINDTREE THERAPEUTICS, INC.**

By: \_\_\_\_\_  
Name:  
Title:

ACCEPTED as of the date first written above.

**LADENBURG THALMANN & CO. INC.**

By: \_\_\_\_\_  
Name:  
Title:

**WINDTREE THERAPEUTICS, INC.**

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**INDENTURE**

Dated as of [●], 20[●]

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**[●]**

Trustee

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## WINDTREE THERAPEUTICS, INC.

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

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

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

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Indenture dated as of [●], 20[●] between Windtree Therapeutics, Inc., a company incorporated under the laws of the State of Delaware (“Company”), and [●] (“Trustee”).

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

**ARTICLE I.  
DEFINITIONS AND INCORPORATION BY REFERENCE**

Section 1.1. Definitions.

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

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

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

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

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

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

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

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

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

“*Corporate Trust Office*” means the office of the Trustee at which at any particular time its corporate trust business related to this Indenture shall be principally administered.

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

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

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

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

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

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

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

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

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

“*Holder*” or “*Securityholder*” means a person in whose name a Security is registered.

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

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

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

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

“*Officer’s Certificate*” means a certificate signed by any Officer.

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

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

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

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

“SEC” means the Securities and Exchange Commission.

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

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

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

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

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

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

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

Section 1.2. Other Definitions.

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

Section 1.3. Incorporation by Reference of Trust Indenture Act.

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

“*Commission*” means the SEC.

“*indenture securities*” means the Securities.

“*indenture security holder*” means a Securityholder.

“indenture to be qualified” means this Indenture.

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

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

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

Section 1.4. Rules of Construction.

Unless the context otherwise requires:

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

**ARTICLE II.  
THE SECURITIES**

Section 2.1. Issuable in Series.

The aggregate principal amount of Securities that may be authenticated and delivered under this Indenture is unlimited. The Securities may be issued in one or more Series. All Securities of a Series shall be identical except as may be set forth or determined in the manner provided in a Board Resolution, a supplemental indenture or an Officer’s Certificate detailing the adoption of the terms thereof pursuant to authority granted under a Board Resolution. In the case of Securities of a Series to be issued from time to time, the Board Resolution, Officer’s Certificate or supplemental indenture detailing the adoption of the terms thereof pursuant to authority granted under a Board Resolution may provide for the method by which specified terms (such as interest rate, maturity date, record date or date from which interest shall accrue) are to be determined. Securities may differ between Series in respect of any matters, provided that all Series of Securities shall be equally and ratably entitled to the benefits of the Indenture.

Section 2.2. Establishment of Terms of Series of Securities.

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

2.2.1. the title (which shall distinguish the Securities of that particular Series from the Securities of any other Series) and ranking (including the terms of any subordination provisions) of the Series;

2.2.2. the price or prices (expressed as a percentage of the principal amount thereof) at which the Securities of the Series will be issued;

2.2.3. any limit upon the aggregate principal amount of the Securities of the Series which may be authenticated and delivered under this Indenture (except for Securities authenticated and delivered upon registration of transfer of, or in exchange for, or in lieu of, other Securities of the Series pursuant to Section 2.7, 2.8, 2.11, 3.6 or 9.6);

2.2.4. the date or dates on which the principal of the Securities of the Series is payable;

2.2.5. the interest rate or rates (which may be fixed or variable) per annum or, if applicable, the method used to determine such interest rate or rates (including, but not limited to, any commodity, commodity index, stock exchange index or financial index) at which the Securities of the Series shall bear interest, if any, the date or dates from which such interest, if any, shall accrue, the date or dates on which such interest, if any, shall commence and be payable and any regular record date for the interest payable on any interest payment date;

2.2.6. the place or places where the principal of, premium, if any and interest, if any, on the Securities of the Series shall be payable, where the Securities of such Series may be surrendered for registration of transfer or exchange and where notices and demands to or upon the Company in respect of the Securities of such Series and this Indenture may be delivered, and the method of such payment, if by wire transfer, mail or other means;

2.2.7. if applicable, the period or periods within which, the price or prices at which and the terms and conditions upon which the Securities of the Series may be redeemed, in whole or in part, at the option of the Company;

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

All Securities of any one Series need not be issued at the same time and may be issued from time to time, consistent with the terms of this Indenture, if so provided by or pursuant to the Board Resolution, supplemental indenture hereto or Officer's Certificate referred to above.

### Section 2.3. Execution and Authentication

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

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

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

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

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

Prior to the issuance of Securities of any Series, the Trustee shall have received and (subject to Section 7.2) shall be fully protected in relying on: (a) the Board Resolution, supplemental indenture hereto or Officer's Certificate establishing the form of the Securities of that Series or of Securities within that Series and the terms of the Securities of that Series or of Securities within that Series, (b) an Officer's Certificate complying with Section 10.4, and (c) an Opinion of Counsel complying with Section 10.4.

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

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

#### Section 2.4. Registrar and Paying Agent.

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

The Company may also from time to time designate one or more co-registrars, additional paying agents or additional notice agents and may from time to time rescind such designations; provided, however, that no such designation or rescission shall in any manner relieve the Company of its obligations to maintain a Registrar, Paying Agent and Notice Agent in each place so specified pursuant to Section 2.2 for Securities of any Series for such purposes. The Company will give prompt written notice to the Trustee of any such designation or rescission and of any change in the name or address of any such co-registrar, additional paying agent or additional notice agent. The term "*Registrar*" includes any co-registrar; the term "*Paying Agent*" includes any additional paying agent; and the term "*Notice Agent*" includes any additional notice agent. The Company or any of its Affiliates may serve as Registrar or Paying Agent.

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

#### Section 2.5. Paying Agent to Hold Money in Trust.

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



Section 2.6. Securityholder Lists.

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

Section 2.7. Transfer and Exchange.

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

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

Section 2.8. Mutilated, Destroyed, Lost and Stolen Securities.

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

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

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

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

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

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

#### Section 2.9. Outstanding Securities.

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

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

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

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

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

#### Section 2.10. Treasury Securities.

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

#### Section 2.11. Temporary Securities.

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

#### Section 2.12. Cancellation.

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

Section 2.13. Defaulted Interest.

If the Company defaults in a payment of interest on a Series of Securities, it shall pay the defaulted interest, plus, to the extent permitted by law, any interest payable on the defaulted interest, to the persons who are Securityholders of the Series on a subsequent special record date.

The Company shall fix the record date and payment date. At least 10 days before the special record date, the Company shall send to the Trustee and to each Securityholder of the Series a notice that states the special record date, the payment date and the amount of interest to be paid. The Company may pay defaulted interest in any other lawful manner.

Section 2.14. Global Securities.

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

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

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

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

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

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

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

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

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

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

#### Section 2.15. CUSIP Numbers.

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

### ARTICLE III. REDEMPTION

#### Section 3.1. Notice to Trustee.

The Company may, with respect to any Series of Securities, reserve the right to redeem and pay the Series of Securities or may covenant to redeem and pay the Series of Securities or any part thereof prior to the Stated Maturity thereof at such time and on such terms as provided for in such Securities. If a Series of Securities is redeemable and the Company wants or is obligated to redeem prior to the Stated Maturity thereof all or part of the Series of Securities pursuant to the terms of such Securities, it shall notify the Trustee in writing of the redemption date and the principal amount of Series of Securities to be redeemed. The Company shall give the notice at least 15 days before the redemption date, unless a shorter period is satisfactory to the Trustee.

#### Section 3.2. Selection of Securities to be Redeemed.

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

Section 3.3. Notice of Redemption.

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

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

(a) the redemption date;

(b) the redemption price;

(c) the name and address of the Paying Agent;

(d) if any Securities are being redeemed in part, the portion of the principal amount of such Securities to be redeemed and that, after the redemption date and upon surrender of such Security, a new Security or Securities in principal amount equal to the unredeemed portion of the original Security shall be issued in the name of the Holder thereof upon cancellation of the original Security;

(e) that Securities of the Series called for redemption must be surrendered to the Paying Agent to collect the redemption price;

(f) that interest on Securities of the Series called for redemption ceases to accrue on and after the redemption date unless the Company defaults in the deposit of the redemption price;

(g) the CUSIP number, if any; and

(h) any other information as may be required by the terms of the particular Series or the Securities of a Series being redeemed.

At the Company's request, the Trustee shall give the notice of redemption in the Company's name and at its expense, provided, however, that the Company has delivered to the Trustee, at least 10 days (unless a shorter time shall be acceptable to the Trustee) prior to the notice date, an Officer's Certificate requesting that the Trustee give such notice and setting forth the information to be stated in such notice.

Section 3.4. Effect of Notice of Redemption.

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

Section 3.5. Deposit of Redemption Price.

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

Section 3.6. Securities Redeemed in Part.

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

**ARTICLE IV.  
COVENANTS**

Section 4.1. Payment of Principal and Interest.

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

Section 4.2. SEC Reports.

To the extent any Securities of a Series are outstanding, the Company shall deliver to the Trustee within 15 days after it files them with the SEC copies of the annual reports and of the information, documents, and other reports (or copies of such portions of any of the foregoing as the SEC may by rules and regulations prescribe) which the Company is required to file with the SEC pursuant to Section 13 or 15(d) of the Exchange Act. The Company also shall comply with the other provisions of TIA § 314(a). Reports, information and documents filed with the SEC via the EDGAR system will be deemed to be delivered to the Trustee as of the time of such filing via EDGAR for purposes of this Section 4.2.

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

Section 4.3. Compliance Certificate.

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

Section 4.4. Stay, Extension and Usury Laws.

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

**ARTICLE V.  
SUCCESSORS**

Section 5.1. When Company May Merge, Etc.

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

(a) the Company is the surviving corporation or the successor person (if other than the Company) is a corporation organized and validly existing under the laws of any U.S. domestic jurisdiction or a corporation or comparable legal entity organized under the laws of a foreign jurisdiction and expressly assumes the Company’s obligations on the Securities and under this Indenture; and

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

The Company shall deliver to the Trustee prior to the consummation of the proposed transaction an Officer’s Certificate to the foregoing effect and an Opinion of Counsel stating that the proposed transaction and any supplemental indenture comply with this Indenture.

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

Section 5.2. Successor Corporation Substituted.

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

**ARTICLE VI.  
DEFAULTS AND REMEDIES**

Section 6.1. Events of Default.

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

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

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

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

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

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

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

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

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

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

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

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

#### Section 6.2. Acceleration of Maturity; Rescission and Annulment.

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



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

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

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

The Company covenants that if

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

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

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

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

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

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

Section 6.4. Trustee May File Proofs of Claim.

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

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

(b) to collect and receive any moneys or other property payable or deliverable on any such claims and to distribute the same,

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

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

Section 6.5. Trustee May Enforce Claims Without Possession of Securities.

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

Section 6.6. Application of Money Collected.

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

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

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

Third: To the Company.

Section 6.7. Limitation on Suits.

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

(a) such Holder has previously given written notice to the Trustee of a continuing Event of Default with respect to the Securities of that Series;

(b) the Holders of not less than 25% in principal amount of the outstanding Securities of that Series shall have made written request to the Trustee to institute proceedings in respect of such Event of Default in its own name as Trustee hereunder;

(c) such Holder or Holders have offered to the Trustee indemnity or security satisfactory to the Trustee against the costs, expenses and liabilities which might be incurred by the Trustee in compliance with such request;

(d) the Trustee for 60 days after its receipt of such notice, request and offer of indemnity has failed to institute any such proceeding; and

(e) no direction inconsistent with such written request has been given to the Trustee during such 60-day period by the Holders of a majority in principal amount of the outstanding Securities of that Series;

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

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

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

Section 6.9. Restoration of Rights and Remedies.

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

Section 6.10. Rights and Remedies Cumulative.

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

Section 6.11. Delay or Omission Not Waiver.

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

Section 6.12. Control by Holders.

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

(a) such direction shall not be in conflict with any rule of law or with this Indenture,

(b) the Trustee may take any other action deemed proper by the Trustee which is not inconsistent with such direction,

(c) subject to the provisions of Section 7.1, the Trustee shall have the right to decline to follow any such direction if the Trustee in good faith shall, by a Responsible Officer of the Trustee, determine that the proceeding so directed would involve the Trustee in personal liability, and

(d) prior to taking any action as directed under this Section 6.12, the Trustee shall be entitled to indemnity satisfactory to it against the costs, expenses and liabilities which might be incurred by it in compliance with such request or direction.

Section 6.13. Waiver of Past Defaults.

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

Section 6.14. Undertaking for Costs.

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

**ARTICLE VII.  
TRUSTEE**

Section 7.1. Duties of Trustee.

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

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

(i) The Trustee need perform only those duties that are specifically set forth in this Indenture and no others.

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

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

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

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

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

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

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

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

(g) No provision of this Indenture shall require the Trustee to risk its own funds or otherwise incur any financial liability in the performance of any of its duties, or in the exercise of any of its rights or powers, if adequate indemnity against such risk is not assured to the Trustee in its satisfaction.

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

#### Section 7.2. Rights of Trustee.

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

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

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

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

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

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

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

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

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

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

### Section 7.3. Individual Rights of Trustee.

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

### Section 7.4. Trustee's Disclaimer.

The Trustee makes no representation as to the validity or adequacy of this Indenture or the Securities, it shall not be accountable for the Company's use of the proceeds from the Securities, and it shall not be responsible for any statement in the Securities other than its authentication.

### Section 7.5. Notice of Defaults.

If a Default or Event of Default occurs and is continuing with respect to the Securities of any Series and if it is known to a Responsible Officer of the Trustee, the Trustee shall send to each Securityholder of the Securities of that Series notice of a Default or Event of Default within 90 days after it occurs or, if later, after a Responsible Officer of the Trustee has knowledge of such Default or Event of Default (except if such Default or Event of Default has been validly cured or waived before the Trustee gives such notice). Except in the case of a Default or Event of Default in payment of principal of or interest on any Security of any Series, the Trustee may withhold the notice if and so long as its corporate trust committee or a committee of its Responsible Officers in good faith determines that withholding the notice is in the interests of Securityholders of that Series.

Section 7.6. Reports by Trustee to Holders.

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

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

Section 7.7. Compensation and Indemnity.

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

The Company shall indemnify each of the Trustee and any predecessor Trustee (including for the cost of defending itself) against any cost, expense or liability, including taxes (other than taxes based upon, measured by or determined by the income of the Trustee) incurred by it except as set forth in the next paragraph in the performance of its duties under this Indenture as Trustee or Agent. The Trustee shall notify the Company promptly of any claim for which it may seek indemnity. Failure by the Trustee to so notify the Company shall not relieve the Company of its obligations hereunder, unless and to the extent that the Company is materially prejudiced thereby. The Company shall defend the claim and the Trustee shall cooperate in the defense. The Trustee may have 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 will not be unreasonably withheld. This indemnification shall apply to officers, directors, employees, shareholders and agents of the Trustee.

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

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

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

The provisions of this Section shall survive the termination of this Indenture.

Section 7.8. Replacement of Trustee.

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

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

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

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

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

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

Section 7.9. Successor Trustee by Merger, Etc.

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

Section 7.10. Eligibility; Disqualification.

This Indenture shall always have a Trustee who satisfies the requirements of TIA § 310(a)(1), (2) and (5). The Trustee shall always have a combined capital and surplus of at least \$25,000,000 as set forth in its most recent published annual report of condition. The Trustee shall comply with TIA § 310(b).

Section 7.11. Preferential Collection of Claims Against Company.

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

**ARTICLE VIII.  
SATISFACTION AND DISCHARGE; DEFEASANCE**

Section 8.1. Satisfaction and Discharge of Indenture.

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



(a) either

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

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

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

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

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

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

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

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

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

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

Section 8.2. Application of Trust Funds; Indemnification.

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

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

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

Section 8.3. Legal Defeasance of Securities of any Series.

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

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

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

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

provided that, the following conditions shall have been satisfied:

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

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

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

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

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

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

#### Section 8.4. Covenant Defeasance.

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

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

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

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

(d) the Company shall have delivered to the Trustee an Officers' Certificate and an Opinion of Counsel to the effect that the Holders of the Securities of such Series will not recognize income, gain or loss for Federal income tax purposes as a result of such deposit and covenant defeasance and will be subject to Federal income tax on the same amount and in the same manner and at the same times as would have been the case if such deposit and covenant defeasance had not occurred;

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

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

Section 8.5. Repayment to Company.

Subject to applicable abandoned property law, the Trustee and the Paying Agent shall pay to the Company upon request any money held by them for the payment of principal and interest that remains unclaimed for two years. After that, Securityholders entitled to the money must look to the Company for payment as general creditors unless an applicable abandoned property law designates another person.

Section 8.6. Reinstatement.

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

**ARTICLE IX.  
AMENDMENTS AND WAIVERS**

Section 9.1. Without Consent of Holders.

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

- (a) to cure any ambiguity, defect or inconsistency;
- (b) to comply with Article V;
- (c) to provide for uncertificated Securities in addition to or in place of certificated Securities;
- (d) to add guarantees with respect to Securities of any Series or secure Securities of any Series;
- (e) to surrender any of the Company's rights or powers under this Indenture;
- (f) to add covenants or events of default for the benefit of the holders of Securities of any Series;
- (g) to comply with the applicable procedures of the applicable depository;
- (h) to make any change that does not adversely affect the rights of any Securityholder;
- (i) to provide for the issuance of and establish the form and terms and conditions of Securities of any Series as permitted by this Indenture;
- (j) to evidence and provide for the acceptance of appointment hereunder by a successor Trustee with respect to the Securities of one or more Series and to add to or change any of the provisions of this Indenture as shall be necessary to provide for or facilitate the administration of the trusts hereunder by more than one Trustee; or

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

Section 9.2. With Consent of Holders.

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

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

Section 9.3. Limitations.

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

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

Section 9.4. Compliance with Trust Indenture Act.

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

Section 9.5. Revocation and Effect of Consents.

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

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

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

Section 9.6. Notation on or Exchange of Securities.

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

Section 9.7. Trustee Protected.

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

**ARTICLE X.  
MISCELLANEOUS**

Section 10.1. Trust Indenture Act Controls.

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

Section 10.2. Notices.

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

if to the Company:

Windtree Therapeutics, Inc.  
2600 Kelly Road, Suite 100  
Warrington, Pennsylvania 18976  
Attn: Chief Financial Officer  
Email: jhamill@windtreetx.com

with a copy to:

Troutman Pepper Hamilton Sanders LLP  
3000 Two Logan Square  
Philadelphia, Pennsylvania 19103  
Email: rachael.bushey@troutman.com and jennifer.porter@troutman.com  
Attn: Rachael M. Bushey and Jennifer L. Porter

if to the Trustee:

[•]  
Attention: [•]  
Email: [•]

with a copy to:

[•]  
Attention: [•]  
Email: [•]

The Company or the Trustee by notice to the other may designate additional or different addresses for subsequent notices or communications.

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

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

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

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

Section 10.3. Communication by Holders with Other Holders.

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

Section 10.4. Certificate and Opinion as to Conditions Precedent.

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

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

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

Section 10.5. Statements Required in Certificate or Opinion.

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

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

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

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

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

Section 10.6. Rules by Trustee and Agents.

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

Section 10.7. Legal Holidays.

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

Section 10.8. No Recourse Against Others.

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

Section 10.9. Counterparts.

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

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

**THIS INDENTURE AND THE SECURITIES, INCLUDING ANY CLAIM OR CONTROVERSY ARISING OUT OF OR RELATING TO THE INDENTURE OR THE SECURITIES, SHALL BE GOVERNED BY THE LAWS OF THE STATE OF NEW YORK.**



**THE COMPANY, THE TRUSTEE AND THE HOLDERS (BY THEIR ACCEPTANCE OF THE SECURITIES) EACH HEREBY IRREVOCABLY WAIVE, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATING TO THIS INDENTURE, THE NOTES OR THE TRANSACTIONS CONTEMPLATED HEREBY OR THEREBY.**

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

Section 10.11. No Adverse Interpretation of Other Agreements.

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

Section 10.12. Successors.

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

Section 10.13. Severability.

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

Section 10.14. Table of Contents, Headings, Etc.

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

Section 10.15. Securities in a Foreign Currency.

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

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

Section 10.16. Judgment Currency.

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

Section 10.17. Force Majeure.

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

Section 10.18. U.S.A. Patriot Act.

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

**ARTICLE XI.  
SINKING FUNDS**

Section 11.1. Applicability of Article.

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

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

Section 11.2. Satisfaction of Sinking Fund Payments with Securities.

The Company may, in satisfaction of all or any part of any sinking fund payment with respect to the Securities of any Series to be made pursuant to the terms of such Securities (1) deliver outstanding Securities of such Series to which such sinking fund payment is applicable (other than any of such Securities previously called for mandatory sinking fund redemption) and (2) apply as credit Securities of such Series to which such sinking fund payment is applicable and which have been repurchased by the Company or redeemed either at the election of the Company pursuant to the terms of such Series of Securities (except pursuant to any mandatory sinking fund) or through the application of permitted optional sinking fund payments or other optional redemptions pursuant to the terms of such Securities, provided that such Securities have not been previously so credited. Such Securities shall be received by the Trustee, together with an Officer’s Certificate with respect thereto, not later than 15 days prior to the date on which the Trustee begins the process of selecting Securities for redemption, and shall be credited for such purpose by the Trustee at the price specified in such Securities for redemption through operation of the sinking fund and the amount of such sinking fund payment shall be reduced accordingly. If as a result of the delivery or credit of Securities in lieu of cash payments pursuant to this Section 11.2, the principal amount of Securities of such Series to be redeemed in order to exhaust the aforesaid cash payment shall be less than \$100,000, the Trustee need not call Securities of such Series for redemption, except upon receipt of a Company Order that such action be taken, and such cash payment shall be held by the Trustee or a Paying Agent and applied to the next succeeding sinking fund payment, provided, however, that the Trustee or such Paying Agent shall from time to time upon receipt of a Company Order pay over and deliver to the Company any cash payment so being held by the Trustee or such Paying Agent upon delivery by the Company to the Trustee of Securities of that Series purchased by the Company having an unpaid principal amount equal to the cash payment required to be released to the Company.

Section 11.3. Redemption of Securities for Sinking Fund.

Not less than 45 days (unless otherwise indicated in the Board Resolution, supplemental indenture hereto or Officer’s Certificate in respect of a particular Series of Securities) prior to each sinking fund payment date for any Series of Securities, the Company will deliver to the Trustee an Officer’s Certificate specifying the amount of the next ensuing mandatory sinking fund payment for that Series pursuant to the terms of that Series, the portion thereof, if any, which is to be satisfied by payment of cash and the portion thereof, if any, which is to be satisfied by delivering and crediting of Securities of that Series pursuant to Section 11.2, and the optional amount, if any, to be added in cash to the next ensuing mandatory sinking fund payment, and the Company shall thereupon be obligated to pay the amount therein specified. Not less than 30 days (unless otherwise indicated in the Board Resolution, Officer’s Certificate or supplemental indenture in respect of a particular Series of Securities) before each such sinking fund payment date the Securities to be redeemed upon such sinking fund payment date will be selected in the manner specified in Section 3.2 and the Company shall send or cause to be sent a notice of the redemption thereof to be given in the name of and at the expense of the Company in the manner provided in and in accordance with Section 3.3. Such notice having been duly given, the redemption of such Securities shall be made upon the terms and in the manner stated in Sections 3.4, 3.5 and 3.6.

*[Signature page follows]*

IN WITNESS WHEREOF, the parties hereto have caused this Indenture to be duly executed as of the day and year first above written.

WINDTREE THERAPEUTICS, INC.

By: \_\_\_\_\_  
Name:  
Its:

[•], as Trustee

By: \_\_\_\_\_  
Name:  
Its:

*[Signature page to Indenture]*



3000 Two Logan Square  
Eighteenth and Arch Streets  
Philadelphia, PA 19103-2799  
215.981.4000  
Fax 215.981.4750

September 17, 2020

Windtree Therapeutics, Inc.  
2600 Kelly Road, Suite 100  
Warrington, Pennsylvania 18976

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel to Windtree Therapeutics, Inc., a Delaware corporation (the "**Company**"), in connection with the Company's registration statement on Form S-3 (the "**Registration Statement**"), including the base prospectus that is part of the Registration Statement (the "**Base Prospectus**") and the sales prospectus that is part of the Registration Statement (the "**Sales Prospectus**"), filed on the date hereof, with the Securities and Exchange Commission (the "**Commission**") under the Securities Act of 1933, as amended (the "**Securities Act**"). The Base Prospectus provides that it may be supplemented in the future by one or more prospectus supplements (each, a "**Prospectus Supplement**"). The Base Prospectus, as supplemented by any applicable Prospectus Supplements, provides for the issuance and sale from time to time by the Company of up to an aggregate of \$75,000,000 of (i) shares of the Company's common stock, \$0.001 par value per share (the "**Common Stock**"), (ii) shares of the Company's preferred stock, \$0.001 par value per share (the "**Preferred Stock**"), (iii) one or more series of debt securities of the Company, which may be convertible into or exchangeable for shares of Common Stock and/or Preferred Stock (the "**Debt Securities**"), (iv) warrants to purchase shares of Common Stock, shares of Preferred Stock and/or Debt Securities (the "**Warrants**"), (v) shares of Common Stock and/or Preferred Stock issuable upon exercise of the Warrants or upon conversion or exchange of the Debt Securities, (vi) units comprised of one or more shares of Common Stock, shares of Preferred Stock, Debt Securities and Warrants, in any combination (the "**Units**"), (vii) subscription rights to one or more shares of Common Stock, shares of Preferred Stock or other securities (the "**Subscription Rights**"), and/or (viii) any combination of the foregoing securities. The Common Stock (including the ATM Shares (as defined below)), the Preferred Stock, the Debt Securities, the Warrants, the Units and the Subscription Rights are collectively herein referred to as the "**Registered Securities**." The Registered Securities may be offered and sold by the Company from time to time pursuant to Rule 415 under the Securities Act as set forth in the Base Prospectus, as supplemented by any applicable Prospectus Supplements that may be filed under the Securities Act. You have requested that we render the opinion set forth in this letter and we are furnishing this opinion to you pursuant to the requirements of Item 601(b) (5) of Regulation S-K, in connection with the filing of the Registration Statement.

The Debt Securities will be issued pursuant to one or more indentures in the form filed as an exhibit to the Registration Statement, as amended or supplemented from time to time (each, an "**Indenture**"), between the Company, as obligor, and a trustee chosen by the Company and qualified to act as such under the Trust Indenture Act of 1939, as amended (the "**Trustee**").

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Windtree Therapeutics, Inc.

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The Sales Prospectus relates to the sale by the Company of shares of Common Stock having an aggregate offering price of up to \$10,000,000 (the "*ATM Shares*") under an At The Market Offering Agreement, dated as of September 17, 2020, between the Company and Ladenburg Thalmann & Co. Inc. (the "*Sales Agreement*").

We have reviewed the corporate proceedings taken by the Company with respect to the registration of the Registered Securities. We have also examined and relied upon originals or copies of such corporate records, documents, agreements or other instruments of the Company, and such certificates and records of public officials, and such other papers, as we have deemed necessary or appropriate in connection herewith. As to all matters of fact, we have relied entirely upon certificates of officers of the Company, and have assumed, without independent inquiry, the accuracy of those certificates.

In rendering this opinion, we have assumed: the genuineness and authenticity of all signatures on original documents; the legal capacity of all natural persons; the authenticity of all documents submitted to us as originals; the conformity to originals of all documents submitted to us as certified or photocopies; the accuracy and completeness of all documents and records reviewed by us; the accuracy, completeness and authenticity of certificates issued by any governmental official, office or agency and the absence of change in the information contained therein from the effective date of any such certificate; and the due authorization, execution and delivery of all documents where authorization, execution and delivery are prerequisites to the effectiveness of such documents.

For purposes of this opinion letter, we have assumed that:

(i) the issuance, sale, amount, and terms of each of the Registered Securities to be offered from time to time by the Company will be duly authorized and established by proper action of the Board of Directors of the Company or an authorized committee thereof, and in accordance with the Amended and Restated Certificate of Incorporation of the Company, as amended from time to time, the Amended and Restated By-Laws of the Company, as amended from time to time, and applicable Delaware and New York law, and that, at the time of each such issuance and sale of such Registered Securities, the Company will continue to be validly existing and in good standing under the laws of the State of Delaware, with the requisite corporate power and authority to issue and sell all such Registered Securities at such time;

(ii) any shares of Common Stock (including the ATM Shares and any such shares included in, or issued upon exercise or conversion of, as applicable, Preferred Stock, Warrants, Debt Securities, Units and Subscription Rights) issued by the Company pursuant to the Registration Statement, the Sales Prospectus, as applicable, the Base Prospectus and the related Prospectus Supplement, from time to time will not exceed the maximum authorized number of shares of Common Stock under the Amended and Restated Certificate of Incorporation of the Company, as the same may have been amended, minus that number of shares of Common Stock that may have been issued and are outstanding, or are reserved for issuance for other purposes, at such time;

(iii) any shares of Preferred Stock (including any such shares included in, or issued upon exercise or conversion of, as applicable, Warrants, Debt Securities, Units and Subscription Rights) issued pursuant to the Registration Statement, the Base Prospectus and the related Prospectus Supplement, from time to time will not exceed the maximum authorized number of shares of Preferred Stock under the Amended and Restated Certificate of Incorporation of the Company, as the same may have been amended, minus that number of shares of Preferred Stock that may have been issued and are outstanding, or are reserved for issuance for other purposes, at such time;

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(iv) any Warrants (including any Warrants included in Units and Subscription Rights) issued by the Company pursuant to the Registration Statement, the Base Prospectus and the related Prospectus Supplement, from time to time, will be issued under one or more valid, binding, and enforceable warrant agreements (each a “**Warrant Agreement**”);

(v) any Debt Securities (including any Debt Securities included in, or issued upon exercise of, as applicable, Warrants, Units and Subscription Rights) issued by the Company pursuant to the Registration Statement, the Base Prospectus and the related Prospectus Supplement, from time to time, will be issued under and in conformity with, a valid, binding and enforceable Indenture, which shall be delivered by the Trustee, and the Trustee will have all requisite power and authority to effect the transactions contemplated by such Indenture, and the Trustee or an authenticating agent for the trustee will duly authenticate the Debt Securities pursuant to the applicable Indenture, and the applicable Indenture will be the valid and binding obligation of the Trustee and will be enforceable against the Trustee in accordance with its terms. We are expressing no opinion herein as to the application of or compliance with any foreign, federal or state law or regulation to the power, authority or competence of any party, other than the Company, to the applicable Indenture;

(vi) any Units issued by the Company pursuant to the Registration Statement, the Base Prospectus and the related Prospectus Supplement may be issued pursuant to a valid, binding, and enforceable Unit Agreement (the “**Unit Agreement**”) between the Company and a bank or trust company as unit agent;

(vii) any Subscription Rights issued by the Company pursuant to the Registration Statement, the Base Prospectus and the related Prospectus Supplement may be issued pursuant to a valid, binding, and enforceable Subscription Rights Agreement (the “**Subscription Rights Agreement**”); and

(viii) all requisite third-party consents necessary to register and/or issue the Registered Securities have been obtained by the Company.

Subject to the limitations set forth below, we have made such examination of law as we have deemed necessary for the purposes of expressing the opinions set forth in this letter. We express no opinion herein as to the law of any state or jurisdiction other than the laws of the State of Delaware and the internal laws of the State of New York, including statutory provisions and all applicable provisions of the Constitution of the State of Delaware and reported judicial decisions interpreting such laws of the State of Delaware, and the federal laws of the United States of America.

Based upon the foregoing, we are of the opinion that:

1. Following effectiveness of the Registration Statement, the Common Stock, when duly authorized and issued against the full payment specified therefor, which must have a value not less than the par value thereof, will be validly issued, fully paid and nonassessable.
  2. Following effectiveness of the Registration Statement, the shares of Preferred Stock registered under the Registration Statement, when duly authorized and issued against the full payment specified therefor, which must have a value not less than the par value thereof, will be validly issued, fully paid and nonassessable.
  3. Following effectiveness of the Registration Statement, the Warrants registered under the Registration Statement, when duly authorized, executed and delivered against the payment specified therefor and pursuant to a Warrant Agreement or agreements duly authorized, executed and delivered by the Company and the holder of the Warrants, will be legally issued binding obligations of the Company enforceable against the Company in accordance with their respective terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors’ rights generally, and subject to general principles of equity (regardless of whether enforcement is sought in a proceeding in equity or at law).
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4. Following effectiveness of the Registration Statement, the Debt Securities registered under the Registration Statement, when duly authorized, executed and delivered against the payment specified therefor and pursuant to an Indenture duly authorized, executed and delivered by the Company and the Trustee, will be legally issued binding obligations of the Company enforceable against the Company in accordance with their respective terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors' rights generally, and subject to general principles of equity (regardless of whether enforcement is sought in a proceeding in equity or at law).

5. Following effectiveness of the Registration Statement, the Units registered under the Registration Statement, when duly authorized, executed and delivered against payment specified therefor and pursuant to a Unit Agreement, if applicable, will be legally issued binding obligations of the Company enforceable against the Company in accordance with their respective terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors' rights generally, and subject to general principles of equity (regardless of whether enforcement is sought in a proceeding in equity or at law).

6. Following effectiveness of the Registration Statement, when the ATM Shares have been issued and sold in accordance with the Sales Agreement, and as described in the Registration Statement and Sales Prospectus, the ATM Shares will be validly issued, fully paid and nonassessable.

7. Following effectiveness of the Registration Statement, the Subscription Rights registered under the Registration Statement, when duly authorized, executed and delivered against payment specified therefor and pursuant to a Subscription Rights Agreement, if applicable, will be legally issued binding obligations of the Company enforceable against the Company in accordance with their respective terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors' rights generally, and subject to general principles of equity (regardless of whether enforcement is sought in a proceeding in equity or at law).

This opinion letter is given as of the date hereof, and we assume no obligation to supplement this opinion if any applicable law changes after the date hereof or if we become aware of any facts or circumstances that may change the opinions expressed herein after the date hereof.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to the reference to this firm under the heading "Legal Matters" in the Base Prospectus and Sales Prospectus. In rendering this opinion and giving this consent, we do not admit that we are an "expert" within the meaning of the Securities Act.

Very truly yours,

/s/ Troutman Pepper Hamilton Sanders LLP

Troutman Pepper Hamilton Sanders LLP



**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the reference to our firm under the caption “Experts” in the Registration Statement (Form S-3) and related Prospectus of Windtree Therapeutics, Inc. for the registration of up to \$75,000,000 of its common stock, preferred stock, debt securities, warrants, units, and/or subscription rights, and to the incorporation by reference therein of our report dated April 2, 2020 (except for the second paragraph of Note 2, as to which the date is May 6, 2020), with respect to the consolidated financial statements of Windtree Therapeutics, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2019, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Philadelphia, Pennsylvania

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