



Up to 27,668,106 Shares of Common Stock

This prospectus relates to the offer and resale by the selling stockholders identified in this prospectus of up to an aggregate of 27,668,106 shares of our common stock, par value \$0.001 per share, or the common stock, issuable upon (i) the conversion of shares, referred to as the Preferred Shares, of our Series C convertible preferred stock, par value \$0.001 per share, or the Series C Preferred Stock, and (ii) the exercise of certain warrants, or the Warrants.

The Preferred Shares and Warrants were acquired by the applicable selling stockholders under the Securities Purchase Agreement dated July 18, 2024, or the Tranche I Purchase Agreement, by and among us and the investors party thereto, or the Tranche I Investors, and under the Securities Purchase Agreement dated July 26, 2024, or the Tranche II Purchase Agreement, and together with the Tranche I Purchase Agreement, the Purchase Agreements, by and among us and the investor party thereto, or the Tranche II Investor, and together with the Tranche I Investors, the Investors.

The sale of the Preferred Shares and Warrants was not registered under the Securities Act of 1933, as amended, or the Securities Act, in reliance upon the exemption from the registration requirements in Section 4(a)(2) of the Securities Act and Regulation D promulgated thereunder.

We are registering the resale of the shares of common stock covered by this prospectus as required by (i) the Registration Rights Agreement, dated July 22, 2024, by and among us and the Tranche I Investors, or the Tranche I Registration Rights Agreement, and (ii) the Registration Rights Agreement, dated July 29, 2024, by and among us and the Tranche II Investors, or the Tranche II Registration Rights Agreement, and, together with the Tranche I Registration Rights Agreement, the Registration Rights Agreements, as applicable. The selling stockholders will receive all of the proceeds from any sales of the shares of common stock offered hereby. We will not receive any of the proceeds from the sale by the selling stockholders of the shares of common stock, although we will receive the exercise price of any Warrants not exercised by the selling stockholders on a cashless exercise basis.

Sales of the shares of common stock by the selling stockholders may occur in one or more transactions at fixed prices, at market prices prevailing at the time of sale, at prices related to prevailing market prices, at negotiated prices and/or at varying prices determined at the time of sale. The selling stockholders may sell the shares of common stock directly or to or through underwriters, broker-dealers or agents, who may receive compensation in the form of discounts, concessions or commissions from the selling stockholders, the purchasers of the shares, or both.

The selling stockholders may sell any, all or none of the securities offered by this prospectus and we do not know when or in what amount the selling stockholders may sell their shares of common stock hereunder following the effective date of the registration statement of which this prospectus forms a part. The registration of the shares on behalf of the selling stockholders, however, does not necessarily mean that any of the selling stockholders will offer or sell their shares of common stock under this registration statement or at any time in the near future. We cannot predict when, or in what amounts, the selling stockholders may sell any of the shares of common stock. We provide more information about how the selling stockholders may sell or otherwise dispose of their shares of common stock in the section titled "*Plan of Distribution*" beginning on page 18 of this prospectus.

We are paying the cost of registering the shares of common stock covered by this prospectus as well as various related expenses. The selling stockholders are responsible for all selling commissions, transfer taxes and other costs related to the offer and sale of their shares of common stock.

Our common stock is traded on the Nasdaq Capital Market, or Nasdaq, under the symbol "WINT". The last reported sale price of our common stock on Nasdaq on August 23, 2024 was \$10.65 per share.

We may amend or supplement this prospectus from time to time by filing amendments or supplements as required. You should read the entire prospectus and any amendments or supplements carefully before you make your investment decision.

Investing in our common stock involves a high degree of risk. You should consider carefully the "*Risk Factors*" beginning on page 6 of this prospectus and in any applicable prospectus supplement, and in the documents incorporated by reference herein, before purchasing any of the shares offered by this prospectus.

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

The date of this prospectus is September 3, 2024.

TABLE OF CONTENTS

	<u>Page</u>
<u>ABOUT THIS PROSPECTUS</u>	<u>1</u>
<u>PROSPECTUS SUMMARY</u>	<u>2</u>
<u>RISK FACTORS</u>	<u>6</u>
<u>SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS</u>	<u>8</u>
<u>USE OF PROCEEDS</u>	<u>10</u>
<u>SELLING STOCKHOLDERS</u>	<u>11</u>
<u>PLAN OF DISTRIBUTION</u>	<u>18</u>
<u>LEGAL MATTERS</u>	<u>21</u>
<u>EXPERTS</u>	<u>21</u>
<u>WHERE YOU CAN FIND MORE INFORMATION</u>	<u>22</u>
<u>INCORPORATION OF DOCUMENTS BY REFERENCE</u>	<u>23</u>

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 under the Securities Act that we filed with the Securities and Exchange Commission, or the SEC, using the “shelf” registration process. Under this shelf registration process, the selling stockholders named in this prospectus may offer and sell the shares of common stock described in this prospectus in one or more offerings. Any accompanying prospectus supplement or any related free writing prospectus may also add, update or change information contained in this prospectus or in any documents incorporated by reference into this prospectus. If the information varies between this prospectus and any accompanying prospectus supplement, you should rely on the information in the accompanying prospectus supplement. You should read this prospectus, any accompanying prospectus supplement and any related free writing prospectus, together with the information incorporated herein or therein by reference as described under the heading “*Where You Can Find More Information,*” before investing in the shares of common stock offered hereby.

You should rely only on the information that we have included or incorporated by reference into this prospectus, any accompanying prospectus supplement and any applicable free writing prospectus. We have not, and the selling stockholders have not, authorized anyone to give any information or to make any representation other than those contained or incorporated by reference in this prospectus, any accompanying prospectus supplement or any applicable free writing prospectus that we may authorize to be provided to you. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus, any accompanying prospectus supplement or any applicable free writing prospectus. This prospectus, any accompanying prospectus supplement and any applicable free writing prospectus do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they relate, nor do this prospectus, any accompanying prospectus supplement or any applicable free writing prospectus constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. Since the respective dates of this prospectus and the documents incorporated by reference into this prospectus, our business, financial condition, results of operations and prospects may have changed.

For investors outside the United States, neither we nor the selling stockholders have done anything that would permit this offering, or possession or distribution of this prospectus, any prospectus supplement or free writing prospectus, in any jurisdiction where action for that purpose is required other than in the United States. Persons outside the United States who come into possession of this prospectus, any applicable prospectus supplement or free writing prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus outside of the United States.

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 its 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 and the documents incorporated by reference herein are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus and the documents incorporated by reference herein 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.

All references to “this prospectus” refer to this prospectus and any applicable prospectus supplement, including the documents incorporated by reference herein and therein, unless the context otherwise requires.

PROSPECTUS SUMMARY

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

Overview

We are a biotechnology company focused on advancing early and late-stage innovative therapies for critical conditions and diseases. Our portfolio of product candidates includes istaroxime, a Phase 2 candidate that inhibits the sodium-potassium ATPase and also activates sarco endoplasmic reticulum Ca²⁺-ATPase 2a, or SERCA2a, for acute heart failure and associated cardiogenic shock; preclinical SERCA2a activators for heart failure; rostaduroxin for the treatment of hypertension in patients with a specific genetic profile; and a preclinical atypical protein kinase C iota, or aPKC ι , inhibitor (topical and oral formulations), being developed for potential application in rare and broad oncology indications. We also have a licensing business model with partnership out-licenses currently in place.

Our lead product candidate, istaroxime, is a first-in-class, dual-acting agent being developed to increase blood pressure and improve cardiac function in patients with cardiogenic shock and to improve cardiac function in patients with acute heart failure, or AHF, and reverse the hypotension and hypoperfusion associated with heart failure that deteriorates to cardiogenic shock. Istaroxime demonstrated significant improvement in both systolic and diastolic aspects of cardiac function and was generally well tolerated in three Phase 2 clinical trials. Istaroxime has been granted Fast Track designation for the treatment of AHF by the U.S. Food and Drug Administration. Based on the profile observed in our Phase 2 clinical studies in AHF, where istaroxime significantly improved cardiac function and systolic blood pressure in acute decompensated heart failure patients and had a favorable renal profile, we initiated a Phase 2 global clinical study, or the SEISMic Study, to evaluate istaroxime for the treatment of early cardiogenic shock (Society for Cardiovascular Angiography and Interventions, or SCAI, Stage B shock), a severe form of AHF characterized by very low blood pressure and risk for hypoperfusion to critical organs and mortality. In April 2022, we announced our observations in the SEISMic Study that istaroxime rapidly and significantly increased systolic blood pressure while also improving cardiac function and preserving renal function. We believe that istaroxime has the potential to fulfill an unmet need in early and potentially more severe cardiogenic shock. We further believe that the data from the SEISMic Study supports continued development in both cardiogenic shock and AHF. In the fourth quarter of 2023, we initiated an extension to the SEISMic Study, or the SEISMic Extension, to evaluate a longer dosing period and to continue to characterize the effects of istaroxime, including activation of SERCA2a. The SEISMic Extension study is expected to enroll up to 30 subjects with SCAI Stage B cardiogenic shock with data anticipated in the second half of 2024. Additionally, we have recently initiated a small study in more severe SCAI Stage C cardiogenic shock, or the SEISMic C Study, to evaluate the safety and efficacy of istaroxime in cardiogenic shock patients who are also receiving standard of care rescue therapy for shock. The SEISMic C Study is expected to enroll up to 20 subjects with SCAI Stage C cardiogenic shock with enrollment anticipated to be completed in late 2024. Our ability to complete both of these studies with their intended sample size is dependent upon our ability to secure adequate resourcing for the program through financing efforts or business development activities.

Our heart failure cardiovascular portfolio also includes other SERCA2a activators. One family of compounds has the dual mechanism of action that includes inhibition of the sodium-potassium ATPase as well as activation of SERCA2a. The other family of compounds are considered selective SERCA2a activators and are devoid of activity against the sodium-potassium ATPase. This research program is evaluating these preclinical product candidates, including oral and intravenous SERCA2a activator heart failure compounds. These candidates would potentially be developed for both acute decompensated and chronic out-patient heart failure. In addition, our cardiovascular drug product candidates include rostaduroxin, a novel product candidate for the treatment of hypertension in patients with a specific genetic profile. We are pursuing potential licensing arrangements and/or other strategic partnerships and do not intend to advance the development of rostaduroxin without securing such an arrangement or partnership.

Our cardiovascular assets and programs are associated with a regional licensed partnership with Lee's Pharmaceutical (HK) Ltd., or Lee's (HK), for the development and commercialization of our product candidate, istaroxime, in Greater China. In addition to istaroxime, the agreement also licenses our preclinical next-generation dual mechanism SERCA2a activators, and rosfuroxin. In addition, we are supporting the efforts of Lee's (HK) in starting a Phase 3 trial in AHF with istaroxime.

On April 2, 2024, we entered into an Asset Purchase Agreement, or the Asset Purchase Agreement, with Varian Biopharmaceuticals, Inc., or Varian. Pursuant to the Asset Purchase Agreement, we purchased all of the assets of Varian's business associated with a license agreement, dated as of July 5, 2019, by and between Varian and Cancer Research Technology Limited, or the Licence Agreement, which includes the Licence Agreement, all rights in molecules and compounds subject to the Licence Agreement, know-how and inventory of drug substance, or the Transferred Assets. The Transferred Assets include a novel, potential high-potency, specific, aPKCi inhibitor with possible broad use in oncology as well as certain rare malignant diseases. The asset platform includes two formulations (topical and oral) of an aPKCi inhibitor. We plan to advance investigational new drug enabling activities and are in the process of determining the expected clinical development plan for the platform.

Our ability to advance our development programs is dependent upon our ability to secure additional capital in both the near and long-term, through public or private securities offerings; convertible debt financings; and/or potential strategic opportunities, including licensing agreements, drug product development, marketing collaboration arrangements, pharmaceutical research cooperation arrangements, and/or other similar transactions in geographic markets, including the U.S., and/or through potential grants and other funding commitments from U.S. government agencies, in each case, if available. We have engaged with potential counterparties in various markets and will continue to pursue non-dilutive sources of capital as well as potential private and public securities offerings. There can be no assurance, however, that we will be able to identify and enter into public or private securities offerings on acceptable terms and in amounts sufficient to meet our needs or qualify for non-dilutive funding opportunities under any grant programs sponsored by U.S. government agencies, private foundations, and/or leading academic institutions, or identify and enter into any strategic transactions that will provide the additional capital that we will require. If none of these alternatives is available, or if available and we are unable to raise sufficient capital through such transactions, we potentially could be forced to limit or cease our development activities, as well as modify or cease our operations, either of which would have a material adverse effect on our business, financial condition, and results of operations.

Private Placement of Preferred Shares and Warrants

On July 22, 2024, we consummated the first tranche of a private placement in which we issued and sold 16,260 shares, or the Preferred Shares, of our Series C convertible preferred stock, par value \$0.001 per share, or the Series C Preferred Stock, and 3,503,523 warrants, or the Warrants, pursuant to the Securities Purchase Agreement, dated July 18, 2024, or the Tranche I Purchase Agreement, by and among us and the investors party thereto, or the Tranche I Investors, for aggregate proceeds to us of approximately \$12.9 million, of which \$9.5 million was paid through the cancellation and extinguishment of certain holders' (x) outstanding principal amount, conversion/exchange premiums and all accrued interest and dividends thereon under our (i) 10% senior convertible notes due January 2025, (ii) senior secured notes due June 2025, (iii) senior unsecured promissory notes due July 2025, and (iv) senior secured notes due July 2025, and (y) 5,500 shares of our Series B Convertible Preferred Stock, par value \$0.001 per share.

On July 29, 2024, we consummated the second tranche of a private placement in which we issued and sold 1,280 Preferred Shares and 275,402 Warrants, pursuant to the Securities Purchase Agreement, dated July 26, 2024, or the Tranche II Purchase Agreement and together with the Tranche I Purchase Agreement, the Purchase Agreements, by and among us and the investor party thereto, or the Tranche II Investor, and together with the Tranche I Investors, the Investors, for aggregate cash proceeds to us of approximately \$1.0 million. We refer to such transactions collectively as the "Private Placement."

The terms of the Series C Preferred Stock are as set forth in the Certificate of Designations of the Series C Convertible Preferred Stock, or the Series C Certificate of Designations, which was filed and became effective with the Secretary of State of the State of Delaware on July 19, 2024. Each holder of Series C Preferred Stock may convert all, or any part, of the outstanding Series C Preferred Stock, at any time at such holder's option, into shares of our common stock at an initial conversion price of \$3.74, which is subject to adjustment as provided in the Series C Certificate of Designations to no lower than \$1.28.

The Warrants have an exercise price of \$4.11 per share, subject to customary adjustments, will become exercisable on the six month and one day anniversary of the issuance date, or the Initial Exercisability Date, and will expire on the fifth anniversary of the Initial Exercisability Date.

Under the terms of the Purchase Agreements, we agreed to prepare and file, within 30 calendar days following the closing of the Private Placement, one or more registration statements with the SEC to register for resale the shares of our common stock issuable upon (i) the conversion of the Preferred Shares, and (ii) upon exercise of the Warrants, and to generally to cause the applicable registration statements to become effective within 60 calendar days following the closing.

Notwithstanding the foregoing, our ability to issue shares of common stock upon the conversion of the Preferred Shares and exercise of the Warrants is subject to certain limitations set forth in Series C the Certificate of Designations and the Warrants. Prior to receiving stockholder approval, such limitations include a limit on the number of shares that may be issued until the time, if any, that our stockholders have approved the issuance of more than 19.99% of our outstanding shares of common stock in accordance with Nasdaq listing standards, or the Stockholder Approval. We agreed to seek the Stockholder Approval at a meeting to be held no later than the ninetieth (90th) calendar day after the closing of the Private Placement. Until such time as we have received the Stockholder Approval, we cannot issue any shares upon the conversion of the Preferred Shares or exercise of the Warrants if such issuance would exceed 19.99% of our issued and outstanding shares of common stock prior to the Private Placement, which amount is the aggregate number of shares of common stock which we may issue under the rules or regulations of Nasdaq.

For additional information on each of the first and second tranche of the Private Placement, including additional terms of the Series C Preferred Stock and Warrants, please see our Current Reports on Form 8-K filed with the SEC on July 22, 2024 and July 29, 2024, respectively.

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.windtrete.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.

Implications of Being a Smaller Reporting Company

We are a smaller reporting company as defined in the Securities Exchange Act of 1934, as amended, or the Exchange Act. We may take advantage of certain of the scaled disclosures available to smaller reporting companies and will be able to take advantage of these scaled disclosures for so long as (i) the market value of our voting and non-voting common stock held by non-affiliates is less than \$250 million measured on the last business day of our second fiscal quarter or (ii) our annual revenue is less than \$100 million during the most recently completed fiscal year and the market value of our voting and non-voting common stock held by non-affiliates is less than \$700 million measured on the last business day of our second fiscal quarter. Specifically, as a smaller reporting company, we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Reports on Form 10-K and have reduced disclosure obligations regarding executive compensation, and, as long as we are a smaller reporting company with less than \$100 million in annual revenue, we are not required to obtain an attestation report on internal control over financial reporting from our independent registered public accounting firm.

The Offering

Common stock that may be offered by the selling stockholders	The 27,668,106 shares of common stock covered by this prospectus consist of (i) an aggregate of 16,331,331 shares of common stock issuable upon the conversion of the Preferred Shares and (ii) an aggregate of 11,336,775 shares of common stock issuable upon exercise of the Warrants.
Common stock outstanding prior to this offering	591,909
Common stock outstanding immediately after this offering	Up to 28,260,015*
Terms of the offering	The selling stockholders, including their transferees, donees, pledgees, assignees or successors-in-interest, may sell, transfer or otherwise dispose of any or all of the shares of common stock offered by this prospectus from time to time on The Nasdaq Capital Market or any other stock exchange, market or trading facility on which the shares are traded or in private transactions. The shares of common stock may be sold at fixed prices, at prevailing market prices, at prices related to prevailing market prices, at negotiated prices and/or at varying prices determined at the time of sale. See “ <i>Plan of Distribution</i> ” on page 18.
Use of proceeds	We will not receive any of the proceeds from the sale by the selling stockholders of the shares of common stock, although we will receive the exercise price of any Warrants not exercised by the selling stockholders on a cashless exercise basis.
Risk factors	See “ <i>Risk Factors</i> ” beginning on page 6, for a discussion of factors you should carefully consider before deciding to invest in our common stock.
Nasdaq Capital Market symbol	WINT

* This prospectus generally covers the resale of 300% of the sum of (i) the maximum number of shares of common stock issuable pursuant to the Series C Certificate of Designations, including payment of 10% dividends on the Preferred Shares through the applicable Maturity Date, and (ii) the maximum number of shares of common stock issuable upon exercise of the Warrants, in each case, determined as if the outstanding Preferred Shares and Warrants were converted or exercised (as the case may be) in full at a conversion price or exercise price (as the case may be) calculated as of August 20, 2024. Because the conversion price of the Preferred Shares and the exercise price of the Warrants may be adjusted, the number of shares that will actually be issued may be more or less than the number of shares being offered by this prospectus.

Throughout this prospectus, when we refer to the shares of common stock being registered on behalf of the selling stockholders for offer and resale, we are referring to the shares of common stock issued. When we refer to the selling stockholders in this prospectus, we are referring to the selling stockholders identified in this prospectus and, as applicable, its transferees, donees, pledgees, distributes and other successors-in-interest that may be identified in a supplement to this prospectus or, if required, a post-effective amendment to the registration statement of which this prospectus is a part.

RISK FACTORS

Investing in our securities involves a high degree of risk. Before you decide to invest in our securities, you should carefully consider the following risks and uncertainties as well as the risks and uncertainties described under the section entitled “Risk Factors” contained in our Annual Report on Form 10-K for the year ended December 31, 2023 and our subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K, together with other information in this prospectus, the information and documents incorporated by reference herein, and in any free writing prospectus that we have authorized for use in connection with this offering. 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

A sale of a substantial number of shares of common stock by the selling stockholders could cause the price of our common stock to decline.

The shares of common stock covered by this prospectus represent a large number of shares of our common stock, and, following the effectiveness of the Registration Statement of which this prospectus forms a part, such shares of common stock may be sold by the selling stockholders in the public market without restriction. If the selling stockholders sell, or the market perceives that our stockholders intend to sell for various reasons, substantial amounts of the shares of common stock in the public market, the price of our common stock may decline. Additionally, such conditions may make it more difficult for us to sell equity or equity-related securities in the future at a time and price that we deem reasonable or appropriate.

You may experience future dilution as a result of future equity offerings and other issuances of our securities.

In order to raise additional capital, we may in the future offer additional shares of common stock or other securities convertible into or exchangeable for our common stock prices that may not be the same as the price per share paid by the selling stockholders. We may not 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 the 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 common stock or securities convertible into shares of common stock in future transactions may be higher or lower than the price per share paid to the selling stockholders. Our stockholders will incur dilution upon exercise of any outstanding stock options, warrants or other convertible securities or upon the issuance of shares of common stock under our stock incentive programs.

Any additional capital raised through the sale of equity or equity-backed securities may dilute our stockholders’ ownership percentages and could also result in a decrease in the market value of our equity securities.

The terms of any securities issued by us in future capital transactions may be more favorable to new investors, and may include preferences, superior voting rights and the issuance of warrants or other derivative securities, which may have a further dilutive effect on the holders of any of our securities then outstanding.

We expect to require additional capital in the future in order to pursue our strategic goals, including in order to develop our product candidates. If we do not obtain any such additional financing, it may be difficult to effectively realize our near- and long-term strategic goals and objectives.

Our current cash resources will not be sufficient to fund our research and development efforts for our product candidates, including our lead product candidate, istaroxime. If we cannot secure this additional funding when such funds are required, we may fail to develop our product candidates or be forced to forego certain strategic opportunities.

In addition, we may incur substantial costs in pursuing future capital financing, including investment banking fees, legal fees, accounting fees, securities law compliance fees, printing and distribution expenses and other costs. We may also be required to recognize non-cash expenses in connection with certain securities we issue, such as convertible notes and warrants, which may adversely impact our financial condition.

Risks Related to Our Finances and Capital Requirements

Our current cash position, losses, negative cash flows from operations and accumulated deficit raise substantial doubt about our ability to continue as a going concern absent obtaining adequate new debt or equity financings.

The auditor's opinion on our audited financial statements for the year ended December 31, 2023 includes an explanatory paragraph stating that we have incurred recurring losses from operations that raise substantial doubt about our ability to continue as a going concern. Management has also concluded that substantial doubt exists about our ability to continue as a going concern. As of June 30, 2024, we had cash and cash equivalents of \$1.8 million and current liabilities of \$8.8 million. In July 2024, we entered into the Purchase Agreements, pursuant to which we agreed to sell the Preferred Shares and Warrants for an aggregate of \$13.9 million in gross proceeds, of which \$9.5 million was paid through the cancellation and extinguishment of certain holders' (i) outstanding principal amount, conversion/exchange premiums and all accrued interest and dividends thereon under certain of our notes, and (ii) 5,500 shares of our Series B Convertible Preferred Stock, par value \$0.001 per share. As a result, we believe that we have sufficient resources available to fund our business operations into October 2024. We do not have sufficient cash and cash equivalents as of the date hereof to support our operations for at least the 12 months following the date of this prospectus. These conditions raise substantial doubt about our ability to continue as a going concern.

To alleviate the conditions that raise substantial doubt about our ability to continue as a going concern, management plans to secure additional capital, potentially through a combination of public or private securities offerings; convertible debt financings; and/or strategic transactions, including potential licensing arrangements, alliances and drug product collaborations focused on specified geographic markets; however, none of these alternatives are committed at this time. There can be no assurance that we will be successful in obtaining sufficient funding on terms acceptable to us to fund continuing operations, if at all, or identify and enter into any strategic transactions that will provide the capital that we will require. If none of these alternatives is available, or if available, we are unable to raise sufficient capital through such transactions, we will not have sufficient cash resources and liquidity to fund our business operations for at least the next 12 months following the date that the financial statements are issued. In addition, we may be unable to pay our vendors and other service partners on time, or at all. If any of our key vendors and service providers were to cease working with us or subject the delivery of products or services to timing or payment preconditions, our development activities may be adversely affected, which could have a material adverse effect on our business and operations. The failure to obtain sufficient additional capital on acceptable terms or at all. If such additional financing is not available on satisfactory terms, or is not available in sufficient amounts, we may be required to delay, limit or eliminate the development of business opportunities and our ability to achieve our business objectives and our competitiveness, and our business, financial condition and results of operations will be materially adversely affected. In addition, market instability, including as a result of geopolitical instability, may reduce our ability to access capital, which could negatively affect our liquidity and ability to continue as a going concern. Further, the perception that we may not be able to continue as a going concern may cause others to choose not to deal with us due to concerns about our ability to meet our contractual obligations.

Our forecast of the period of time through which our financial resources will be adequate to support our operating requirements is a forward-looking statement and involves risks and uncertainties, and actual results could vary as a result of a number of factors, including the factors discussed elsewhere in this "Risk Factors" section and Part I, Item 1A "Risk Factors" of our Annual Report on Form 10-K for the year ended December 31, 2023, filed with the SEC on April 16, 2024 and any of our subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K. We have based this estimate on a number of assumptions that may prove to be wrong and changing circumstances beyond our control may cause us to consume capital more rapidly than we currently anticipate. Our inability to obtain additional funding when we need it could seriously harm our business.

We have incurred significant operating losses since inception, we expect to incur operating losses in the future, and we may not be able to achieve or sustain profitability.

We have incurred operating losses since our incorporation on November 6, 1992. For the year ended December 31, 2023, we had operating losses of \$20.6 million. As of June 30, 2024 we had an accumulated deficit of \$846.6 million. To date, we have financed our operations primarily through private placements and public offerings of our common and preferred stock and borrowings from investors and financial institutions. As of June 30, 2024, we had cash and cash equivalents of \$1.8 million and current liabilities of \$8.8 million. In July 2024, we entered into the Purchase Agreements, pursuant to which we agreed to sell the Preferred Shares and Warrants for an aggregate of \$13.9 million in gross proceeds, of which \$9.5 million was paid through the cancellation and extinguishment of certain of our securities held by certain holders. As a result, we believe that we have sufficient resources available to fund our business operations into October 2024.

We expect to continue to incur significant research and clinical development, regulatory and other expenses as we (i) develop product candidates; (ii) seek regulatory clearances or approvals for our planned or future product candidates; (iii) conduct clinical trials on our planned or future product candidates; and (iv) manufacture, market, and sell any product candidates for which we may obtain regulatory approval. As a result, we expect to continue to incur operating losses for the foreseeable future and may never achieve profitability. Even if we do achieve profitability, we may not be able to sustain or increase profitability on an ongoing basis. If we do not achieve or sustain profitability, it will be more difficult for us to finance our business and accomplish our strategic objectives, either of which would have a material adverse effect on our business, financial condition and results of operations and may cause the market price of our common stock to decline.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. 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. Forward-looking statements include, but are not limited to, statements concerning:

- 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;
- changes in market conditions, general economic conditions, and the banking sector, and potential constraints in accessing capital or credit if and when needed with favorable terms, if at all;
- the potential impairment of our intangible assets on our condensed consolidated balance sheet, which could lead to material impairment charges in the future;
- our ability to repay indebtedness;
- potential delays and uncertainties in our anticipated timelines and milestones and additional costs associated with the impact of the residual effects of the COVID-19 pandemic and the evolving events in Israel and Gaza on our clinical trial operations;
- the costs, timing, and results, 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 United States, or 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;
- risks related to manufacturing active pharmaceutical ingredients, drug product, and other materials we need;
- delays, interruptions or failures in the manufacture and supply of our product candidates;
- the plans of our licensee, Lee’s Pharmaceutical (HK) Ltd., and its affiliate, Zhaoke Pharmaceutical (Hefei) Co. Ltd., and their ability to successfully source materials, execute necessary clinical and regulatory activities in a timely manner, if at all, to support development and commercialization of the licensed product candidates;
- the performance of third parties, both foreign and domestic, upon which we depend, including contract research organizations, contract manufacturing organizations, contract laboratories, and independent contractors;
- the size and growth of the potential markets for our product candidates, the regulatory requirements in such markets, 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 may 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, including but not limited to, the Inflation Reduction Act of 2022, regarding the healthcare system in the U.S. or the healthcare systems in foreign jurisdictions;
- our ability to recruit or retain key scientific, commercial or management personnel or to retain our executive officers;
- our ability to secure electronically stored work product, including clinical data, analyses, research, communications, and other materials necessary to gain regulatory approval of our product candidates, including those acquired from third parties, and assure the integrity, proper functionality, and security of our internal computer and information systems and prevent or avoid cyber-attacks, malicious intrusion, breakdown, destruction, security incidents, data privacy violations, or other significant disruption;
- economic uncertainty resulting from inflation and the rapid increase in interest rates, including concerns involving liquidity, defaults or other non-performance by financial institutions;
- economic uncertainty resulting from geopolitical instability, including the ongoing military conflict between Russia and Ukraine, the People’s Republic of China and the Republic of China (Taiwan), and the evolving events in Israel and Gaza; and
- other risks and uncertainties, including those described under the caption “*Risk Factors*” in this prospectus or in the documents incorporated by reference herein.

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

You should read this prospectus and the documents incorporated by reference in this prospectus completely and with the understanding that our actual future results, performance or achievements may be materially different from what we expect. We qualify all of the forward-looking statements in this prospectus by these cautionary statements.

Trademark Notice

AEROSURF®, **AFECTAIR®**, **SURFAXIN®**, **SURFAXIN LS™**, **WINDTREE THERAPEUTICS® (logo)**, **WINDTREE THERAPEUTICS™**, and **WINDTREE™** are registered and common law trademarks of Windtree Therapeutics, Inc. (Warrington, PA).

USE OF PROCEEDS

The selling stockholders will receive all of the proceeds from any sales of the shares of common stock offered hereby. We will not receive any of the proceeds from the sale by the selling stockholders of the shares of common stock, although we will receive the exercise price of any Warrants not exercised by the selling stockholders on a cashless exercise basis.

The selling stockholders may sell the shares of common stock directly or to or through underwriters, broker-dealers or agents, who may receive compensation in the form of discounts, concessions or commissions from the selling stockholders, the purchasers of the shares, or both.

We are paying the cost of registering the shares of common stock covered by this prospectus as well as various related expenses. The selling stockholders are responsible for all selling commissions, transfer taxes and other costs related to the offer and sale of their shares of common stock.

SELLING STOCKHOLDERS

The shares of common stock being offered by the selling stockholders are those issuable to the selling stockholders upon conversion of the Preferred Shares and exercise of the Warrants. For additional information regarding the issuance of the Preferred Shares and the Warrants, see “*Prospectus Summary—Private Placement of Preferred Shares and Warrants*” above. We are registering the shares of common stock in order to permit the selling stockholders to offer the shares for resale from time to time.

The term “selling stockholders” includes the stockholders listed below and their transferees, pledges, donees or other successors-in-interest who may acquire shares from a selling stockholder as a gift, pledge, partnership distribution or other non-sale related transfer after the date of this prospectus. Information concerning the selling stockholders may change after the date of this prospectus and changed information will be presented in a supplement to this prospectus if and when required.

Certain Information Concerning the Selling Stockholders

The following table sets forth, based on information provided to us by or on behalf of the selling stockholders or known to us, the name of the selling stockholders and the number of shares of our common stock beneficially owned by the selling stockholders before and after this offering. Unless otherwise described in the “*Material Relationship Between Certain Selling Stockholders and Windtree*” below, except for the ownership of the Preferred Shares and the Warrants issued pursuant to the Purchase Agreements, the selling stockholders have not had any material relationship with us within the past three years.

The table below lists the selling stockholders and other information regarding the beneficial ownership (as determined under Section 13(d) of the Exchange Act, and the rules and regulations thereunder) of the shares of common stock held by each of the selling stockholders.

In accordance with the terms of a registration rights agreement with the holders of the Preferred Shares and the Warrants, this prospectus generally covers the resale of 300% of the sum of (i) the maximum number of shares of common stock issued or issuable pursuant to the Series C Certificate of Designations, including payment of dividends on the Preferred Shares through August 20, 2024, and (ii) the maximum number of shares of common stock issued or issuable upon exercise of the Warrants, in each case, determined as if the outstanding Preferred Shares (including payment of 10% dividends on the Preferred Shares through August 20, 2024) and the Warrants were converted or exercised (as the case may be) in full (without regard to any limitations on conversion or exercise contained therein solely for the purpose of such calculation) at a conversion price or exercise price (as the case may be) calculated as of the trading day immediately preceding the date this registration statement was initially filed with the SEC. Because the conversion price of the Preferred Shares and the exercise price of the Warrants may be adjusted, the number of shares that will actually be issued may be more or less than the number of shares being offered by this prospectus. The fourth column assumes the sale of all of the shares offered by the selling stockholders pursuant to this prospectus.

Under the terms of the Preferred Shares and the Warrants, a selling stockholder may not convert the Preferred Shares or exercise the Warrants to the extent (but only to the extent) such selling stockholder or any of its affiliates would beneficially own a number of shares of our common stock which would exceed 4.99% of our outstanding shares, or the Maximum Percentage. The number of shares in the second column reflects these limitations. The selling stockholders may sell all, some or none of their shares in this offering. See “*Plan of Distribution*.”

The common stock held by the selling stockholders represent a substantial number of our outstanding common stock. The sale of such common stock, or the perception that such sales might occur could significantly impact the price of our common stock. See “*Risk Factors—A sale of a substantial number of shares of common stock by the selling stockholders could cause the price of our common stock to decline*” for more information.

The information set forth below is based upon information obtained from the selling stockholders. To our knowledge, unless otherwise indicated, all persons named in the table below have sole voting and investment power with respect to their shares of common stock.

Name of Selling Stockholder	Shares of Common Stock Owned Prior to Offering		Maximum Number of Shares of Common Stock to be Sold(26)	Shares of Common Stock of Owned After Offering(27)	
	Number(24)	Percent(25)		Number	Percent(25)
Keystone Capital Partners, LLC(1)	31,088	4.99%	5,285,459	—	—%
Cavalry Investment Fund LP(2)	31,088	4.99%	3,027,470	—	—%
Mercer Street Global Opportunity Fund, LLC(3)	31,088	4.99%	2,728,992	—	—%
Armistice Capital, LLC(4)	31,088	4.99%	1,966,003	21,173	*%
Sabby Volatility Warrant Master Fund, Ltd. (5)	31,088	4.99%	1,966,003	18,961	*%
Paul Mann(6)	31,088	4.99%	2,240,838	—	—%
Seven Knots, LLC(7)	31,088	4.99%	1,359,451	—	—%
Five Narrow Lane LP(8)	31,088	4.99%	983,002	9,481	*%
Bigger Capital Fund, LP(9)	31,088	4.99%	983,002	5,847	*%
District 2 Capital Fund LP(9)	31,088	4.99%	983,002	5,847	*%
Robert Welner(10)	31,088	4.99%	1,129,131	—	—%
Mastiff Group, LLC(11)	31,088	4.99%	1,034,281	—	—%
First Fire Global Opportunities Fund LLC(12)	31,088	4.99%	1,107,892	—	—%
Cavalry Fund I, LP(13)	31,088	4.99%	837,450	10,081	*%
Kingsbrook Opportunities Master Fund LP(14)	31,088	4.99%	589,801	1,013	*%
WVP Emerging Manager Onshore Fund LLC(15)	31,088	4.99%	334,331	—	—%
Boothbay Absolute Return Strategies, LP(16)	31,088	4.99%	275,243	3,845	*%
Jim Fallon(17)	31,088	4.99%	278,362	—	—%
Boothbay Diversified Alpha Master Fund LP(18)	31,088	4.99%	117,961	1,960	*%
Craig Fraser(19)	31,088	4.99%	29,724	2,892	*%
Steven Simonson(20)	21,125	3.45%	20,127	998	*%
Ladenburg Thalmann & Co. Inc.(21)	31,088	4.99%	330,419	—	—%
Kingswood Capital Partners, LLC(22)	—	—%	18,000	—	—%
Lewis Silberman(23)	—	—%	42,162	—	—%

* Less than 1%

- (1) Column four of this table consists of (i) 3,130,325 shares of common stock underlying the Preferred Shares, and (ii) the 2,155,134 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. Keystone Capital Partners, LLC is managed by RANZ Group LLC. Fredric Zaino, the Managing Member of RANZ Group LLC, may be deemed to have investment discretion and voting power over the shares held by Keystone Capital Partners, LLC. RANZ Group LLC and Mr. Zaino each disclaim any beneficial ownership of these shares. The address of this selling stockholder is 139 Fulton Street, Suite 412, New York, NY 10038.
- (2) Column four of this table consists of (i) 1,792,349 shares of common stock underlying the Preferred Shares, and (ii) the 1,235,121 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. Cavalry Fund I Management LLC and C/M Capital Partners, LP are the general partners of Cavalry Investment Fund LP. As such, Cavalry Fund I Management LLC and C/M Capital Partners, LP may each be deemed to beneficially own (as that term is defined in Rule 13d-3 under the Securities Exchange Act of 1934) these shares. Thomas Walsh is the Manager of Cavalry Fund I Management LLC and C/M Capital Partners, LP. Each of Mr. Walsh, Cavalry Investment Fund LP and C/M Capital Partners, LP disclaim beneficial ownership of these securities. The address of this selling stockholder is 1111 Brickell Avenue, Suite 2920, Miami, Florida 33131.

- (3) Column four of this table consists of (i) 1,616,373 shares of common stock underlying the Preferred Shares, and (ii) the 1,112,619 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. Mercer Street Global Opportunity Fund, LLC is managed by Mercer Street Capital Partners, LLC, which is managed by Jonathan Juchno. Mercer Street Capital Partners, LLC and Mr. Juchno, may be deemed to have investment discretion and voting power over the shares held by Mercer Street Global Opportunity Fund, LLC. Mercer Street Capital Partners, LLC and Mr. Juchno each disclaim any beneficial ownership of these shares. The address of this selling stockholder is 1111 Brickell Avenue, Suite 2920, Miami, FL 33131.
- (4) Column four of this table consists of (i) 1,163,863 shares of common stock underlying the Preferred Shares that this selling stockholder would beneficially own without regard to the Maximum percentage, and (ii) the 802,140 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 30, 2025 and, as such, are excluded from such holder's beneficial ownership. Armistice Capital Master Fund Ltd., a Cayman Islands exempted company, or the Master Fund, also holds (i) 2,212 shares of common stock issuable upon exercise of the warrants exercisable as of July 24, 2023, or the January 2023 Warrants, and (ii) 18,961 shares of common stock issuable upon the exercise of the warrants exercisable April 24, 2023, or the April 2023 Warrants. The securities are directly held by the Master Fund and may be deemed to be beneficially owned by: (i) Armistice Capital, LLC, or Armistice Capital, as the investment manager of the Master Fund; and (ii) Steven Boyd, as the Managing Member of Armistice Capital. The warrants are subject to a beneficial ownership limitation of 4.99%, which such limitation restricts the Selling Stockholder from exercising that portion of the warrants that would result in the Selling Stockholder and its affiliates owning, after exercise, a number of shares of common stock in excess of the beneficial ownership limitation. The address of Armistice Capital Master Fund Ltd. is c/o Armistice Capital, LLC, 510 Madison Avenue, 7th Floor, New York, NY 10022.
- (5) Column four of this table consists of (i) 1,163,863 shares of common stock underlying the Preferred Shares that this selling stockholder would beneficially own without regard to the Maximum percentage and (ii) the 802,140 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. This selling stockholder also holds 18,961 shares of common stock issuable upon the exercise of the April 2023 Warrants. The securities are directly held by Sabby Volatility Warrant Master Fund, Ltd., a Cayman Islands exempted company. Sabby Management, LLC serves as the investment manager of Sabby Volatility Warrant Master Fund, Ltd. Hal Mintz is the manager of Sabby Management, LLC and has voting and investment control of the securities held by Sabby Volatility Warrant Master Fund, Ltd. Each of Sabby Management, LLC and Hal Mintz disclaims beneficial ownership over the securities beneficially owned by Sabby Volatility Warrant Master Fund, Ltd., except to the extent of their respective pecuniary interest therein. The address of this selling stockholder is c/o Captiva (Cayman) Ltd, Governors Square, Bldg 4, 2nd Floor, 23 Lime Tree Bay Avenue, P.O. Box 32315, Grand Cayman KY1-1209, Cayman Islands.
- (6) Column four of this table consists of (i) 1,326,804 shares of common stock underlying the Preferred Shares that this selling stockholder would beneficially own without regard to the Maximum percentage, and (ii) the 914,034 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. The address of this selling stockholder is 153 Strada Cervaro, Port Saint Lucie, Florida 34952.
- (7) Column four of this table consists of (i) 805,393 shares of common stock underlying the Preferred Shares that this selling stockholder would beneficially own without regard to the Maximum percentage, and (ii) the 554,058 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. Marissa Welner, the Manager of Seven Knots, LLC, holds voting and dispositive power over the shares of common stock held by this selling stockholder. Ms. Welner disclaims any beneficial ownership of these shares. The business address of Seven Knots, LLC is 400 E 66th St., #8D, New York, NY 10065.
- (8) Column four of this table consists of (i) 581,932 shares of common stock underlying the Preferred Shares that this selling stockholder would beneficially own without regard to the Maximum percentage, and (ii) the 401,070 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. This selling stockholder also holds 9,481 shares of common stock issuable upon exercise of the April 2023 Warrants. Arie Rabinowitz and Joe Hammer have voting and investment control over the securities held by Five Narrow Lane LP. The address of this selling stockholder is 510 Madison Avenue, Suite 1400, New York, NY 10022.

- (9) With respect to Bigger Capital Fund, LP, or Bigger Capital, column four of this table consists of (i) 581,932 shares of common stock underlying the Preferred Shares that this selling stockholder would beneficially own without regard to the Maximum percentage, , and (ii) the 401,070 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. This selling stockholder also holds (i) 1,106 shares of common stock issuable upon exercise of the January 2023 Warrants, and (ii) 4,741 shares of common stock issuable upon exercise of the April 2023 Warrants.

With respect to District 2 Capital Fund LP, or District 2 CF, column four of this table consists of (i) 581,932 shares of common stock underlying the Preferred Shares that this selling stockholder would beneficially own without regard to the Maximum percentage, and (ii) the 401,070 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. This selling stockholder also holds (i) 1,106 shares of common stock issuable upon exercise of the January 2023 Warrants, and (ii) 4,741 shares of common stock issuable upon exercise of the April 2023 Warrants.

Bigger Capital Fund GP, LLC, or Bigger GP, is a general partner of Bigger Capital and District 2 Capital LLC, or District 2, is the investment manager of District 2 CF. Michael Bigger is the managing member of Bigger GP and District 2 and District 2 Holdings LLC, or District 2 Holdings, which is the managing member of District 2 GP LLC, or District 2 GP, the general partner of District 2 CF. Therefore, Mr. Bigger, District 2, District 2 Holdings and District 2 CF may be deemed to be the beneficial owner, and have the shared power to dispose of or direct the disposition, of the shares reported as beneficially owned by District 2 CF and Mr. Bigger and Bigger GP may be deemed to be the beneficial owner, and have the shared power to dispose of or direct the disposition, of the shares reported as beneficially owned by Bigger Capital and District 2 CF. The address of Bigger Capital is 11700 W Charleston Blvd 170-659 Las Vegas, NV 89135 and the address of District 2 CF is 14 Wall Street, 2nd Floor, Huntington, NY 11743.

- (10) Column four of this table consists of (i) 668,523 shares of common stock underlying the Preferred Shares that this selling stockholder would beneficially own without regard to the Maximum percentage, and (ii) the 460,608 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. The address of this selling stockholder is 7 Rose Avenue, Great Neck, NY 11021.
- (11) Column four of this table consists of (i) 612,658 shares of common stock underlying the Preferred Shares that this selling stockholder would beneficially own without regard to the Maximum percentage, and (ii) the 421,623 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. Daniel Wainstein, the Managing Partner of this selling stockholder, holds sole voting and dispositive power over the shares of common stock held by this selling stockholder. Mr. Wainstein disclaims any beneficial ownership of these shares. The address of this selling stockholder is 445 E 80th Street, New York, NY 10075.
- (12) Column four of this table consists of (i) 656,419 shares of common stock underlying the Preferred Shares that this selling stockholder would beneficially own without regard to the Maximum percentage, and (ii) the 451,473 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. Eli Fireman, the Managing Member of this selling stockholder, holds voting and dispositive power over the shares of common stock held by this selling stockholder. Mr. Fireman disclaims any beneficial ownership of these shares. The address of this selling stockholder is 1040 1st Ave, Suite 190, New York, NY 10022.
- (13) Column four of this table consists of (i) 496,272 shares of common stock underlying the Preferred Shares that this selling stockholder would beneficially own without regard to the Maximum percentage, and (ii) the 341,178 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. This selling stockholder also holds (i) 600 shares of common stock issuable upon exercise of the January 2023 Warrants, and (ii) 9,481 shares of common stock issuable upon exercise of the April 2023 Warrants. Cavalry Fund I GP LLC, the General Partner of Cavalry Fund I, LP, has discretionary authority to vote and dispose of the shares held by Cavalry Fund I, LP and may be deemed to be the beneficial owner of these shares. Thomas Walsh, in his capacity as CEO of Cavalry Fund I GP LLC, may also be deemed to have investment discretion and voting power over the shares held by Cavalry Fund I, LP. Cavalry Fund I GP LLC and Mr. Walsh each disclaim any beneficial ownership of these shares. The address of this selling stockholder is 1111 Brickell Avenue, Suite 2920, Miami, Florida 33131.
- (14) Column four of this table consists of (i) 349,159 shares of common stock underlying the Preferred Shares that this selling stockholder would beneficially own without regard to the Maximum percentage, and (ii) the 240,642 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. This selling stockholder also holds (i) 19 shares of common stock issuable upon exercise of the January 2023 Warrants, and (ii) 994 shares of common stock issuable upon exercise of the April 2023 Warrants. Kingsbrook Partners LP, or Kingsbrook Partners, is the investment manager of Kingsbrook Opportunities Master Fund LP, or Kingsbrook Opportunities, and consequently has voting control and investment discretion over securities held by Kingsbrook Opportunities. Kingsbrook Partners also holds 6,637 shares of common stock issuable upon exercise of the April 2023 Warrants. Kingsbrook Opportunities GP LLC, or Opportunities GP, is the general partner of Kingsbrook Opportunities and may be considered the beneficial owner of any securities deemed to be beneficially owned by Kingsbrook Opportunities. KB GP LLC, or GP LLC, is the general partner of Kingsbrook Partners and may be considered the beneficial owner of any securities deemed to be beneficially owned by Kingsbrook Partners. Ari J. Storch, Adam J. Chill and Scott M. Wallace are the sole managing members of Opportunities GP and GP LLC and as a result may be considered beneficial owners of any securities deemed beneficially owned by Opportunities GP and GP LLC. Each of Kingsbrook Partners, Opportunities GP, GP LLC and Messrs. Storch, Chill and Wallace disclaim beneficial ownership of these securities. The address of this selling stockholder is 689 Fifth Avenue, 12th Floor, New York, NY 10022.

- (15) Column four of this table consists of (i) 198,323 shares of common stock underlying the Preferred Shares that this selling stockholder would beneficially own without regard to the Maximum percentage, and (ii) the 136,008 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. WVP Management, LLC, the Managing Member of WVP Emerging Manager Onshore Fund LLC - Structured Small Cap Lending Series, has discretionary authority to vote and dispose of the shares held by this selling stockholder and may be deemed to be the beneficial owner of these shares. Cavalry Fund I Management LLC and Worth Venture Partners, LLC, in their capacity as advisors to this selling stockholder, may also be deemed to have investment discretion and voting power of the shares held by this selling stockholder. Thomas Walsh, in his capacity as General Partner, CEO, and CIO of Cavalry Fund I Management LLC, may also be deemed to have investment discretion and voting power over the shares held by this selling stockholder. Abby Flamholz, in her capacity as Managing Member of WVP Management, LLC and in her capacity as Managing Member of Worth Venture Partners, LLC, may also be deemed to have investment discretion and voting power of the shares held by this selling stockholder. WVP Management, LLC, Cavalry Fund I Management LLC, Worth Venture Partners, LLC, Mr. Walsh and Ms. Flamholz each disclaim any beneficial ownership of these shares. The business address of this selling stockholder is 1111 Brickell Avenue, Suite 2920, Miami, FL 33131.
- (16) Column four of this table consists of (i) 162,941 shares of common stock underlying the Preferred Shares that this selling stockholder would beneficially own without regard to the Maximum percentage, and (ii) the 112,302 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. This selling stockholder also holds (i) 108 shares of common stock issuable upon exercise of the January 2023 Warrants, and (ii) 3,737 shares of common stock issuable upon exercise of the April 2023 Warrants. Boothbay Absolute Return Strategies, LP, a Delaware limited partnership, or BBARS, is managed by Boothbay Fund Management, LLC, a Delaware limited liability company, or Boothbay. Boothbay, in its capacity as the investment manager of BBARS. Ari Glass is the Managing Member of Boothbay. Each of BBARS, Boothbay and Mr. Glass disclaim beneficial ownership of the securities, except to the extent of any pecuniary interest therein. The address of this selling stockholder is 689 Fifth Avenue, 12th Floor, New York, NY, 10022.
- (17) Column four of this table consists of (i) 164,803 shares of common stock underlying the Preferred Shares, and (ii) the 113,559 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. The address for this selling stockholder is 137 West 83rd St, Apt 5W, New York, NY 10024.
- (18) Column four of this table consists of (i) 69,832 shares of common stock underlying the Preferred Shares that this selling stockholder would beneficially own without regard to the Maximum percentage, and (ii) the 48,129 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. This selling stockholder also holds (i) 55 shares of common stock issuable upon exercise of the January 2023 Warrants, and (ii) 1,905 shares of common stock issuable upon exercise of the April 2023 Warrants. Boothbay Diversified Alpha Master Fund LP, a Cayman Islands limited partnership, or BBDAMF, is managed by Boothbay. Boothbay, in its capacity as the investment manager of BBDAMF, has the power to vote and the power to direct the disposition of all securities held by BBDAMF. Ari Glass is the Managing Member of Boothbay. Each of BBDAMF, Boothbay and Mr. Glass disclaim beneficial ownership of these securities, except to the extent of any pecuniary interest therein. The address of this selling stockholder is 689 Fifth Avenue, 12th Floor, New York, NY, 10022.
- (19) Column four of this table consists of (i) 17,691 shares of common stock underlying the Preferred Shares that this selling stockholder would beneficially own without regard to the Maximum percentage, and (ii) the 12,033 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. This selling stockholder also holds (i) 598 shares of common stock, (ii) 2 shares of common stock issuable upon exercise of the warrants exercisable May 22, 2020, or the May 2020 Warrants, (iii) 2 shares of common stock issuable upon exercise of the warrants exercisable March 25, 2021, or the March 2021 Warrants, (iv) options to purchase 2,290 shares of common stock exercisable within 60 days of August 20, 2024.

The May 2020 Warrants are subject to a 4.99% ownership cap (or, at the election of each holder prior to the date of issuance, 9.99%), except that upon at least sixty-one (61) days' prior notice to us, each holder may increase the ownership cap after exercising such holder's May 2020 Warrants up to 9.99% (or up to 19.99% upon prior written approval by us). The address of this selling stockholder is c/o Windtree Therapeutics, Inc. 2600 Kelly Road, Suite 100, Warrington, PA 18976.

- (20) Column four of this table consists of (i) 12,105 shares of common stock underlying the Preferred Shares that this selling stockholder would beneficially own without regard to the Maximum percentage, and (ii) the 8,022 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. This selling stockholder also holds (i) 60 shares of common stock, (ii) 1 share of common stock issuable upon exercise of the May 2020 Warrants (iii) 2 shares of common stock issuable upon exercise of the March 2021 Warrants, and (iv) options to purchase 935 shares of common stock exercisable within 60 days of August 20, 2024.
- The May 2020 Warrants are subject to a 4.99% ownership cap (or, at the election of each holder prior to the date of issuance, 9.99%), except that upon at least sixty-one (61) days' prior notice to us, each holder may increase the ownership cap after exercising such holder's May 2020 Warrants up to 9.99% (or up to 19.99% upon prior written approval by us). The address of this selling stockholder is c/o Windtree Therapeutics, Inc. 2600 Kelly Road, Suite 100, Warrington, PA 18976.
- (21) Column four of this table consists of (i) 177,839 shares of common stock underlying the Preferred Shares that this selling stockholder would beneficially own without regard to the Maximum percentage, and (ii) the 152,580 shares of common stock issuable upon exercise of the Warrants that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. The Preferred Shares and Warrants were issued to this selling stockholder as compensation for certain placement agent fees and expenses. This selling securityholder is, or is an affiliate of, a registered broker-dealer. The selling securityholder has represented to us that the shares held by it were issued in the ordinary course of business and that at the time of issuance, it did not have any agreements or understandings, directly or indirectly, with any person to distribute such shares. To the extent that we become aware that such persons or entities did not acquire their shares in the ordinary course of business, or did have such an agreement or understanding, we will file a supplement to the prospectus to designate such affiliate as an "underwriter" within the meaning of the Securities Act. The address for this selling stockholder is 640 Fifth Avenue, 4th floor, New York, New York 10019.
- (22) The shares of common stock to be offered pursuant to this prospectus includes 18,000 shares of common stock issuable upon exercise of the Warrants, which were issued to this selling stockholder as compensation for advisory services, that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. This selling securityholder is, or is an affiliate of, a registered broker-dealer. The selling securityholder has represented to us that the shares held by it were issued in the ordinary course of business and that at the time of issuance, it did not have any agreements or understandings, directly or indirectly, with any person to distribute such shares. To the extent that we become aware that such persons or entities did not acquire their shares in the ordinary course of business, or did have such an agreement or understanding, we will file a supplement to the prospectus to designate such affiliate as an "underwriter" within the meaning of the Securities Act. The address for this selling stockholder is 126 E 56 St, New York, NY 10022.
- (23) The shares of common stock to be offered pursuant to this prospectus includes 42,162 shares of common stock issuable upon exercise of the Warrants, which were issued to this selling stockholder as compensation for advisory services, that will not be exercisable until on or after January 23, 2025 and, as such, are excluded from such holder's beneficial ownership. This selling securityholder is, or is an affiliate of, a registered broker-dealer. The selling securityholder has represented to us that the shares held by it were issued in the ordinary course of business and that at the time of issuance, it did not have any agreements or understandings, directly or indirectly, with any person to distribute such shares. To the extent that we become aware that such persons or entities did not acquire their shares in the ordinary course of business, or did have such an agreement or understanding, we will file a supplement to the prospectus to designate such affiliate as an "underwriter" within the meaning of the Securities Act. The address for this selling stockholder is c/o Kingswood Capital Partners LLC, 126 E 56 St, New York, NY 10022.
- (24) Lists the number of shares of common stock beneficially owned by the selling stockholders, based on their respective ownership of shares of common stock, Preferred Shares and Warrants, as of August 20, 2024, assuming conversion of the Preferred Shares and exercise of the Warrants held by each such selling stockholder on that date but taking account of any limitations on conversion and exercise set forth therein.
- (25) Applicable percentage ownership is based on 591,909 shares of our common stock outstanding as of August 20, 2024, and based on 28,260,015 shares of our common stock outstanding after the offering.
- (26) For the purposes of the calculations of our common stock to be sold pursuant to the prospectus we are assuming (i) the issuance of 300% of the shares of our common stock underlying the Preferred Shares, including payment of 10% dividends on the Preferred Shares through the applicable Maturity Date, converted in full at the Conversion Price of \$3.74 per share without regard to any limitations set forth therein, and (ii) the issuance of 300% of the shares of our common stock underlying the Warrants, exercised in full at an exercise price of \$4.11 without regard to any limitations set forth therein.
- (27) Represents the amount of shares that will be held by the applicable selling stockholder after completion of this offering based on the assumptions that (a) all common stock underlying the Preferred Shares and the Warrants registered for sale by the registration statement of which this prospectus is part of will be sold, and (b) no other shares of common stock are acquired or sold by such selling stockholder prior to completion of this offering. However, such selling shareholder is not obligated to sell all or any portion of the shares of our common stock offered pursuant to this prospectus.

Material Relationship Between Certain Selling Stockholders and Windtree

Seven Knots

On June 26, 2024, we entered into a Common Stock Purchase Agreement, or the ELOC Purchase Agreement, with Seven Knots, LLC, as an equity line investor, or the Purchaser, whereby we have the right, but not the obligation, to sell to the Purchaser, and the Purchaser is obligated to (a) purchase from us up to the lesser of (i) \$35 million of newly issued shares of common stock and (ii) the Exchange Cap (as defined below).

We do not have a right to commence any sales of our common stock to the Purchaser under the ELOC Purchase Agreement until the time when all of the conditions to our right to commence sales of common stock to the Purchaser set forth in the ELOC Purchase Agreement have been satisfied, including that a registration statement covering the resale of such shares is declared effective by the SEC and the final form of prospectus contained therein is filed with the SEC, or the Commencement Date. Over the 36-month period from and after the Commencement Date, we will control the timing and amount of any sales of Common Stock to the Purchaser. Actual sales of shares of our common stock to the Purchaser under the ELOC Purchase Agreement will depend on a variety of factors to be determined by us from time to time, including, among others, market conditions, the trading price of our common stock and determinations by us as to the appropriate sources of funding and our operations.

In no event can we issue to the Purchaser under the ELOC Purchase Agreement more than 19.99% of the total number of shares of our common stock outstanding immediately prior to the execution of the ELOC Purchase Agreement, or the Exchange Cap, unless (i) we obtain the stockholder approval of the issuance of such shares in accordance with the applicable stock exchange rules or (ii) the average price of all applicable sales of our common stock are made at a price equal to or in excess of the lower of (A) the closing price on the Nasdaq Capital Market on June 26, 2024 and (B) the average of the closing prices of our common stock for the five business days immediately preceding June 26, 2024, such that the sales of such our common stock to the Purchaser would not count toward the Exchange Cap because they are “at market” under applicable stock exchange rules

Craig Fraser

Mr. Fraser has served as our President and Chief Executive Officer and a member of our Board of Directors since February 2016. He has also served as our Chairman since June 2023.

Steven Simonson, M.D.

Dr. Simonson has served as our Senior Vice President and Chief Medical Officer since April 2017.

Ladenburg

In January 2023, we engaged Ladenburg Thalmann & Co. Inc., or Ladenburg, as our exclusive placement agent in connection with warrant exercise inducement offer letters with certain holders of (i) our warrants issued in December 2019, (ii) our warrants issued in May 2020 and (iii) our warrants issued in March 2021. We agreed to pay Ladenburg a fee equal to 8% of its gross proceeds from the exercise of such warrants. We also agreed to pay Ladenburg a management fee equal to 1% of the gross proceeds from the exercise of such warrants.

In February 2023, we engaged Ladenburg as our exclusive placement agent in connection with warrant exercise inducement offer letters with certain holders of (i) our warrants issued in July 2018, (ii) our warrants issued in December 2018, (iii) our warrants issued in December 2019 and (iv) our warrants issued in May 2020. We agreed to pay Ladenburg a fee equal to 8% of its gross proceeds from the exercise of such warrants. We also agreed to pay Ladenburg a management fee equal to 1% of the gross proceeds from the exercise of such warrants.

In April 2023, we entered into an underwriting agreement with Ladenburg as the sole underwriter, relating to the issuance and sale in a public offering of 204,779 shares of our common stock, and accompanying warrants exercisable for an aggregate of 204,779 shares of common stock. The public offering closed on April 24, 2023, which included Ladenburg’s exercise in full of its option to purchase an additional 30,717 shares of common stock and warrants to purchase up to an additional 30,717 shares of common stock.

On November 9, 2023, we entered into an At The Market Program, or the 2023 ATM Program, with Ladenburg, as agent. We are not obligated to make any sales under the 2023 ATM Program. When we issue sale notices to Ladenburg, we designate the maximum amount of shares to be sold by Ladenburg daily and the minimum price per share at which shares may be sold. Ladenburg may sell shares by any method permitted by law deemed to be an “at-the-market offering” as defined in Rule 415(a)(4) under the Securities Act of 1933, as amended, or in privately negotiated transactions.

PLAN OF DISTRIBUTION

We are registering the shares of common stock issuable upon conversion of the Preferred Shares and exercise of the Warrants to permit the resale of the shares of common stock by the holders of the Preferred Shares and Warrants from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the selling stockholders of the shares of common stock, although we will receive the exercise price of any Warrants not exercised by the selling stockholders on a cashless exercise basis. We will bear all fees and expenses incident to our obligation to register the shares of common stock.

The selling stockholders may sell all or a portion of the shares of common stock held by them and offered hereby from time to time directly or through one or more underwriters, broker-dealers or agents. If the shares of common stock are sold through underwriters or broker-dealers, the selling stockholders will be responsible for underwriting discounts or commissions or agent’s commissions. The shares of common stock may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale or at negotiated prices. These sales may be effected in transactions, which may involve crosses or block transactions, pursuant to one or more of the following methods:

- on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;
- in the over-the-counter market;
- in transactions otherwise than on these exchanges or systems or in the over-the-counter market;
- through the writing or settlement of options, whether such options are listed on an options exchange or otherwise;
- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales made after the date the Registration Statement is declared effective by the SEC;
- broker-dealers may agree with a selling security holder to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell the shares of common stock under Rule 144 promulgated under the Securities Act of 1933, as amended, if available, rather than under this prospectus. In addition, the selling stockholders may transfer the shares of common stock by other means not described in this prospectus. If the selling stockholders effect such transactions by selling the shares of common stock to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the selling stockholders or commissions from purchasers of the shares of common stock for whom they may act as agent or to whom they may sell as principal (which discounts, concessions or commissions as to particular underwriters, broker-dealers or agents may be in excess of those customary in the types of transactions involved). In connection with sales of the shares of common stock or otherwise, the selling stockholders may enter into hedging transactions with broker-dealers, which may in turn engage in short sales of the shares of common stock in the course of hedging in positions they assume. The selling stockholders may also sell the shares of common stock short and deliver the shares of common stock covered by this prospectus to close out short positions and to return borrowed shares in connection with such short sales. The selling stockholders may also loan or pledge the shares of common stock to broker-dealers that in turn may sell such shares.

The selling stockholders may pledge or grant a security interest in some or all of the Preferred Shares, Warrants or shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock from time to time pursuant to this prospectus or any amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending, if necessary, the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer and donate the shares of common stock in other circumstances in which case the transferees, donees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

To the extent required by the Securities Act and the rules and regulations thereunder, the selling stockholders and any broker-dealer participating in the distribution of the shares of common stock may be deemed to be “underwriters” within the meaning of the Securities Act, and any commission paid, or any discounts or concessions allowed to, any such broker-dealer may be deemed to be underwriting commissions or discounts under the Securities Act. At the time a particular offering of the shares of common stock is made, a prospectus supplement, if required, will be distributed, which will set forth the aggregate amount of shares of common stock being offered and the terms of the offering, including the name or names of any broker-dealers or agents, any discounts, commissions and other terms constituting compensation from the selling stockholders and any discounts, commissions or concessions allowed or re-allowed or paid to broker-dealers.

Under the securities laws of some states, the shares of common stock may be sold in such states only through registered or licensed brokers or dealers. In addition, in some states the shares of common stock may not be sold unless such shares have been registered or qualified for sale in such state or an exemption from registration or qualification is available and is complied with.

There can be no assurance that any selling stockholder will sell any or all of the shares of common stock registered pursuant to the registration statement, of which this prospectus forms a part.

The selling stockholders and any other person participating in such distribution will be subject to applicable provisions of the Exchange Act, and the rules and regulations thereunder, including, without limitation, to the extent applicable, Regulation M of the Exchange Act, which may limit the timing of purchases and sales of any of the shares of common stock by the selling stockholders and any other participating person. To the extent applicable, Regulation M may also restrict the ability of any person engaged in the distribution of the shares of common stock to engage in market-making activities with respect to the shares of common stock. All of the foregoing may affect the marketability of the shares of common stock and the ability of any person or entity to engage in market-making activities with respect to the shares of common stock.

We will pay all expenses of the registration of the shares of common stock pursuant to the registration rights agreement, estimated to be \$44,186.86 in total, including, without limitation, Securities and Exchange Commission filing fees and expenses of compliance with state securities or “blue sky” laws; provided, however, a selling stockholder will pay all underwriting discounts and selling commissions, if any. We will indemnify the selling stockholders against liabilities, including some liabilities under the Securities Act in accordance with the registration rights agreements or the selling stockholders will be entitled to contribution. We may be indemnified by the selling stockholders against civil liabilities, including liabilities under the Securities Act that may arise from any written information furnished to us by the selling stockholder specifically for use in this prospectus, in accordance with the related registration rights agreements or we may be entitled to contribution.

Once sold under the registration statement, of which this prospectus forms a part, the shares of common stock will be freely tradable in the hands of persons other than our affiliates.

LEGAL MATTERS

The validity of the issuance of the common stock offered by this prospectus will be passed upon for us by Goodwin Procter LLP, Philadelphia, Pennsylvania.

EXPERTS

The consolidated balance sheets of Windtree Therapeutics, Inc. and Subsidiaries as of December 31, 2023 and 2022, and the related consolidated statements of operations, changes in mezzanine equity and stockholders' equity, and cash flows for each of the years then ended have been audited by EisnerAmper LLP, independent registered public accounting firm, as stated in their report, which is incorporated herein by reference, which report includes an explanatory paragraph about the existence of substantial doubt concerning our ability to continue as a going concern. Such financial statements have been incorporated herein by reference in reliance on the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus forms part of a registration statement on Form S-3 that we filed with the SEC. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement or the documents incorporated by reference herein and therein. For further information with respect to us and the securities that we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement and the documents incorporated by reference herein and therein. You should rely only on the information contained in this prospectus or incorporated by reference herein or therein. We have not authorized anyone else to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date on the front page of this prospectus, regardless of the time of delivery of this prospectus or any sale of the securities offered hereby. We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains a website that contains reports, proxy statements and other information regarding issuers that file electronically with the SEC, including Windtree. The address of the SEC website is www.sec.gov.

We also maintain a website at <https://ir.windtreetx.com/filings/sec-filings>, at which you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on or accessible through our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only.

INCORPORATION OF DOCUMENTS BY REFERENCE

The SEC allows us to “incorporate by reference” information from other documents that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus. We incorporate by reference into this prospectus and the registration statement of which this prospectus is a part the information or documents listed below that we filed with the SEC:

- our Annual Report on Form 10-K for the year ended December 31, 2023, filed with the SEC on [April 16, 2024](#);
- our Quarterly Reports on Form 10-Q for the quarters ended March 30, 2024 and June 30, 2024, filed with the SEC on [May 15, 2024](#) and [August 19, 2024](#), respectively;
- our Current Reports on Form 8-K, filed with the SEC on [January 17, 2024](#), [January 22, 2024](#), [January 25, 2024](#), [January 31, 2024](#), [February 16, 2024](#), [April 8, 2024](#), [April 10, 2024](#), [April 19, 2024](#), [April 23, 2024](#), [July 1, 2024](#), [July 10, 2024](#), [July 22, 2024](#), [July 29, 2024](#), and [August 14, 2024](#); and
- the description of our common stock contained in Exhibit 4.18 our 2023 Annual Report on [Form 10-K](#), including any amendments or reports filed for the purposes of updating this description.

Notwithstanding the statements in the preceding paragraphs, no document, report or exhibit (or portion of any of the foregoing) or any other information that we have “furnished” to the SEC pursuant to the Exchange Act shall be incorporated by reference into this prospectus.

We also incorporate by reference into this prospectus all documents (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus but prior to the termination of the offering. These documents include periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as proxy statements on Schedule 14A.

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, without charge upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus but not delivered with the prospectus, including exhibits that are specifically incorporated by reference into such documents. You should direct any requests for documents to Windtree Therapeutics, Inc., 2600 Kelly Road, Suite 100., Warrington, Pennsylvania 18976, Attn: Corporate Secretary.

You also may access these filings on our website at <https://ir.windtreex.com/filings/sec-filings>. We do not incorporate the information on our website into this prospectus or any supplement to this prospectus and you should not consider any information on, or that can be accessed through, our website as part of this prospectus or any supplement to this prospectus (other than those filings with the SEC that we specifically incorporate by reference into this prospectus or any supplement to this prospectus). You may also access these filings at the SEC’s website at www.sec.gov.

Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus will be deemed modified, superseded or replaced for purposes of this prospectus to the extent that a statement contained in this prospectus modifies, supersedes or replaces such statement.



WINDTREE
THERAPEUTICS™

Up to 27,668,106 Shares of Common Stock

PROSPECTUS

Neither we nor the selling stockholders authorized any dealer, salesperson, or other person to give you written information other than this prospectus or to make representations as to matters not stated in this prospectus. You must not rely on unauthorized information. This prospectus is not an offer to sell these securities or our solicitation of your offer to buy these securities in any jurisdiction where that would not be permitted or legal. Neither the delivery of this prospectus nor any sales made hereunder after the date of this prospectus shall create an implication that the information contained herein or the affairs of the Company have not changed since the date of this prospectus.

September 3, 2024