

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

SCHEDULE 14A INFORMATION

Proxy Statement Pursuant to Section 14(a) of the
Securities Exchange Act of 1934
(Amendment No. ____)

Filed by the Registrant.

☒

Filed by a Party other than the Registrant

☐

Check the appropriate box:

- ☐ Preliminary Proxy Statement
☐ **Confidential, for Use of the Commission Only** (as permitted by Rule 14a-6(e)(2))
☒ Definitive Proxy Statement
☐ Definitive Additional Materials
☐ Soliciting Material under §240.14a-12

AVENUE THERAPEUTICS, INC.

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- ☒ No fee required
☐ Fee paid previously with preliminary materials.
☐ Fee computed on table in exhibit required by Item 25(b) per Exchange Act Rules 14a6(i)(1) and 0-11
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AVENUE THERAPEUTICS, INC.

**1111 Kane Concourse, Suite 301
Bay Harbor Islands, Florida 33154**

Dear Stockholder:

You are cordially invited to the Annual Meeting of Stockholders (the "Annual Meeting") of Avenue Therapeutics, Inc. ("Avenue" or the "Company"), to be held virtually at 10:00 a.m. Eastern Time, on Tuesday, December 30, 2025. The Annual Meeting can be accessed by visiting www.virtualshareholdermeeting.com/ATXI2025, where you will be able to listen to the meeting live, submit questions and vote online. At the Annual Meeting, the stockholders will be asked to (i) elect six directors for a term of one year until our 2026 Annual Meeting of Stockholders or until their successors are duly elected and qualified in accordance with our Second Amended and Restated Bylaws ("Bylaws"), (ii) ratify the appointment of KPMG LLP as our independent registered public accounting firm for the year ending December 31, 2025, and (iii) transact any other business that may properly come before the Annual Meeting or any postponement or adjournment of the Annual Meeting. You will also have the opportunity to ask questions at the meeting.

Your vote is important. It is important that your stock be represented at the meeting regardless of the number of shares you hold. To be sure your vote counts and assure a quorum, please vote by mobile device or over the Internet, or if you received proxy materials by mail, vote, sign, date and return the proxy card accompanying the printed proxy materials, as soon as possible, regardless of whether you plan to virtually attend the meeting; or if you hold your shares through a bank, brokerage firm or other nominee, please follow the instructions for voting provided by your bank, brokerage firm or other nominee, regardless of whether you plan to attend the Annual Meeting virtually. If you virtually attend the Annual Meeting and wish to vote virtually, you may revoke your earlier proxy by voting at the Annual Meeting.

If you have any questions about the proxy statement or the accompanying Annual Report on Form 10-K for the year ended December 31, 2024, please contact David Jin, our Interim Chief Financial Officer, Chief Operating Officer and Corporate Secretary at (781) 652-4500.

We look forward to virtually seeing you at the Annual Meeting.

Sincerely,

/s/ Alexandra MacLean, M.D.

Alexandra MacLean, M.D.

Chief Executive Officer

December 5, 2025

Bay Harbor Islands, Florida

AVENUE THERAPEUTICS, INC.
1111 Kane Concourse, Suite 301
Bay Harbor Islands, Florida 33154

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

Date: Tuesday, December 30, 2025

Time: 10:00 a.m. Eastern Time

Location: www.virtualshareholdermeeting.com/ATXI2025

At the meeting, stockholders will be asked to:

1. Elect six directors for a term of one year until our 2026 Annual Meeting of Stockholders or until their successors are duly elected and qualified in accordance with our Second Amended and Restated Bylaws;
2. Ratify the appointment of KPMG LLP as our independent registered public accounting firm for the year ending December 31, 2025; and
3. Transact any other business that may properly come before the Annual Meeting or any postponement or adjournment of the Annual Meeting.

We will hold our Annual Meeting in virtual format only, via live audio webcast, at the date and time specified above, instead of holding the meeting at any physical location. Only those stockholders of record as of the close of business on the record date of November 25, 2025, are entitled to vote at the Annual Meeting or any postponements or adjournments thereof. A complete list of stockholders entitled to vote at the Annual Meeting will be available for your inspection beginning December 20, 2025, at our offices located at 1111 Kane Concourse, Suite 301, Bay Harbor Islands, Florida 33154, between the hours of 10:00 a.m. and 5:00 p.m., local time, each business day during the 10 days preceding the Annual Meeting; however, if we determine that a physical in-person inspection is not practicable, such list of stockholders may be made available electronically, upon request. You or your proxyholder may participate, vote, and examine our stockholder list at the Annual Meeting by visiting www.virtualshareholdermeeting.com/ATXI2025 and using your 16-digit control number.

Please note the technical requirements for virtual attendance at the Annual Meeting, as described in the enclosed proxy statement under the heading “*Questions and Answers*.”

IMPORTANT NOTICE REGARDING AVAILABILITY OF PROXY MATERIALS. THIS PROXY STATEMENT AND THE ENCLOSED PROXY CARD ARE BEING MAILED TO OUR STOCKHOLDERS ON OR ABOUT DECEMBER 5, 2025. In accordance with the rules of the Securities and Exchange Commission (the “SEC”), we are advising our stockholders of the availability on the internet of our proxy materials related to our forthcoming Annual Meeting. Because we have elected to utilize the “full set delivery” option, we are delivering to all stockholders paper copies of all of the proxy materials, as well as providing access to those proxy materials on a publicly accessible website. This Notice of Annual Meeting and Proxy Statement are available to holders of our common stock at www.proxyvote.com and on our corporate website www.avenuetx.com.

YOUR VOTE IS IMPORTANT!

Submitting your proxy card or voting over the Internet does not affect your right to vote virtually if you decide to virtually attend the Annual Meeting. You are urged to submit your proxy as soon as possible, regardless of whether or not you expect to virtually attend the Annual Meeting. You may revoke your proxy at any time before it is voted at the Annual Meeting by (i) delivering written notice to our Corporate Secretary, David Jin, at our address above (so long as we receive such notice no later than 5:00 p.m. (Eastern Time) on the day before the Annual Meeting), (ii) submitting a later-dated proxy card or voting over the Internet or mobile device at a later time (so long as it is submitted by 11:59 p.m. (Eastern Time) on the day before the Annual Meeting), or (iii) virtually attending and voting at the Annual Meeting. No revocation under (i) or (ii) will be effective unless written notice or the proxy card or updated vote over the Internet or mobile device is received by our Corporate Secretary at or before the Annual Meeting, prior to your proxy being voted.

When you submit your proxy, you authorize Alexandra MacLean, M.D., our Chief Executive Officer, and David Jin, our Chief Operating Officer and Interim Chief Financial Officer, to vote your shares at the Annual Meeting and on any postponements or adjournments of the Annual Meeting in accordance with your instructions.

By Order of the Board of Directors,

/s/ David Jin

David Jin

Corporate Secretary

December 5, 2025

Bay Harbor Islands, Florida

AVENUE THERAPEUTICS, INC.
1111 Kane Concourse, Suite 301
Bay Harbor Islands, Florida
Phone: (781) 652-4500

PROXY STATEMENT

This proxy statement is being mailed on or about December 5, 2025, to all stockholders of record of Avenue Therapeutics, Inc. (the “Company,” “our,” “we,” or “Avenue”) as of November 25, 2025, in connection with the solicitation of proxies by our Board of Directors for our 2025 Annual Meeting of Stockholders (the “Annual Meeting”).

The Annual Meeting can be accessed by visiting www.virtualshareholdermeeting.com/ATXI2025 on Tuesday, December 30, 2025, at 10:00 a.m., Eastern Time. Our Board of Directors encourages you to read this document thoroughly and take this opportunity to vote, via proxy, on the matters to be decided at the Annual Meeting. This proxy procedure is necessary to permit all stockholders, some of whom may be unable to attend the Annual Meeting virtually, to vote on the matters described in this proxy statement. As discussed below, you may revoke your proxy at any time before your shares are voted at the Annual Meeting.

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QUESTIONS AND ANSWERS

Q: What is the purpose of the Annual Meeting?

- A. At the Annual Meeting, our stockholders will act upon the matters outlined in the Notice of Annual Meeting of Stockholders accompanying this proxy statement, including (i) the election of six directors for a term of one year until our 2026 Annual Meeting of Stockholders or until their successors are duly elected and qualified in accordance with our Second Amended and Restated Bylaws (“Bylaws”), (ii) ratifying the appointment of KPMG LLP as our independent registered public accounting firm for the year ending December 31, 2025, and (iii) transacting any other business that may properly come before the Annual Meeting or any postponement or adjournment thereof.

Q: How can I attend the Annual Meeting and why is the Company holding the Annual Meeting in a virtual only format?

- A. We are holding the Annual Meeting in a virtual format, rather than a meeting at any physical location, in order to encourage attendance and participation by a broader group of stockholders, while also reducing the costs and environmental impact associated with an in-person meeting.

To attend and participate in the Annual Meeting, stockholders will need to access the live audio webcast of the meeting. To do so, stockholders of record will need to visit www.virtualshareholdermeeting.com/ATXI2025 and use their 16-digit Control Number provided in your proxy card to log in to this website, and beneficial owners of shares held in street name will need to follow the instructions provided by the bank, brokerage firm or other nominee that holds their shares. We encourage stockholders to log in to this website and access the webcast before the Annual Meeting’s start time. Further instructions on how to attend, participate in and vote at the Annual Meeting, including how to demonstrate your ownership of our stock as of the Record Date, are available at www.virtualshareholdermeeting.com/ATXI2025. Please note you will only be able to attend and vote in the meeting using this website. All references to attending the Annual Meeting “in person” in this proxy statement mean attending the live webcast at the Annual Meeting.

Q: How do I submit questions at the Annual Meeting?

- A. We are committed to engagement with our stockholders. You will be able to submit questions during our Annual Meeting by visiting www.virtualshareholdermeeting.com/ATXI2025. While we will try to answer stockholder-submitted questions that comply with the meeting rules of conduct as determined by the chair of the meeting, we may not be able to answer any or all questions due to time constraints. However, we reserve the right to edit profanity or other inappropriate language, or to exclude questions that are not pertinent to meeting matters or that are otherwise inappropriate. If we are unable to answer the questions at the Annual Meeting, subject to Delaware law, we will reserve our answers for individual outreach following the Annual Meeting.

Q: Who is entitled to vote at our Annual Meeting?

- A. The record holders of shares of each of our common stock and our Class A Preferred Stock at the close of business on the record date, November 25, 2025 (the “Record Date”), may vote at the Annual Meeting. Each share of common stock entitles the holder thereof to one vote on all matters submitted to stockholders and each share of Class A Preferred Stock has the voting power of 1.1 times (A) the shares of outstanding common stock plus (B) the whole shares of common stock into which the shares of outstanding Class A Preferred Stock are convertible, divided by the number of shares of outstanding Class A Preferred Stock, or 14.0 votes per share on the Record Date. There were 3,183,426 shares of common stock and 250,000 shares of Class A Preferred Stock outstanding on the Record Date and entitled to vote at the Annual Meeting. Throughout this proxy statement, common stock share, per share, and stock award information have been revised for all periods presented to give effect to the 1-for-75 reverse stock split effected on April 26, 2024. A list of stockholders entitled to vote at the Annual Meeting, including the address of and number of shares held by each stockholder of record, will be available for your inspection beginning December 20, 2025, at our offices located at 1111 Kane Concourse, Suite 301, Bay Harbor Islands, Florida 33154, between the hours of 10:00 a.m. and 5:00 p.m., local time, each business day during the 10 days preceding the Annual Meeting; however, if we determine that a physical in-person inspection is not practicable, such list of stockholders may be made available electronically, upon request.

Stockholders of Record: Shares Registered in Your Name. If on the Record Date your shares were registered directly in your name with our transfer agent, VStock Transfer, LLC, then you are a stockholder of record. As a stockholder of record, you may vote virtually at the Annual Meeting or vote by proxy. Whether or not you plan to virtually attend the Annual Meeting, we urge you to vote over the Internet or by mobile device, or if you requested a printed copy of the proxy materials be mailed to you, fill out and return the proxy card enclosed therewith, to ensure your vote is counted.

Beneficial Owner: Shares Registered in the Name of a Bank, Brokerage Firm, Custodian or Other Nominee. If on the Record Date your shares were held in an account at a brokerage firm, bank, custodian or other nominee, then you are the beneficial owner of shares held in “street name” and these proxy materials are being forwarded to you by that organization. The organization holding your account is considered the stockholder of record for purposes of voting at the Annual Meeting. As a beneficial owner, you have the right to direct your bank, brokerage firm or other nominee on how to vote the shares in your account. You are also invited to virtually attend the Annual Meeting.

Q: How do I vote?

A: You may vote during the Annual Meeting by following the instructions posted at www.proxyvote.com and entering your 16-digit control number included with the proxy card, by use of a proxy card or via Internet or by mobile device as indicated in the proxy card.

Whether you hold shares directly as the stockholder of record or indirectly as the beneficial owner of shares held for you by a bank, brokerage firm or other nominee in “street name”, you may direct your vote without attending the Annual Meeting. You may vote by granting a proxy or, for shares you hold in street name, by submitting voting instructions to your bank, brokerage firm or other nominee. In most instances, you will be able to do this by internet, mobile device or by mail. Please refer to the summary instructions below and those included on your Internet Notice, proxy card or, for shares you hold in street name, the voting instruction card provided by your bank, brokerage firm or other nominee.

- **By Internet** – If you have Internet access, you may authorize your proxy from any location in the world as directed in the proxy card.
- **By Mobile Device** – If you choose to vote by mobile device, scan the QR code imprinted on the proxy card using either a smartphone or tablet and you will be taken directly to the Internet Voting site.
- **By Mail (if you received a paper copy of the proxy materials by mail)** – You may authorize your proxy by signing your proxy card and mailing it in the enclosed, postage-prepaid and addressed envelope. For shares you hold in street name, you may sign the voting instruction card included by your bank, brokerage firm or other nominee and mail it in the envelope provided.

Q: What if I have technical difficulties or trouble accessing the virtual Annual Meeting?

A: We will have technicians ready to assist you with any technical difficulties you may have accessing the virtual Annual Meeting. If you encounter any difficulties accessing the virtual Annual Meeting during the check-in or meeting time, please call the technical support number located on the meeting page. Technical support will be available starting at approximately 9:45 a.m., Eastern Time, on December 30, 2025.

Q: What is a proxy?

A: A proxy is a person you appoint to vote your shares on your behalf. If you are unable to virtually attend the Annual Meeting, our Board of Directors is seeking your appointment of a proxy so that your shares may be voted. If you vote by proxy, you will be designating Alexandra MacLean, M.D., our Chief Executive Officer, and David Jin, our Interim Chief Financial Officer and Chief Operating Officer, as your proxies. Dr. MacLean and/or Mr. Jin may act on your behalf and have the authority to appoint a substitute to act as your proxy.

Q: How will my shares be voted if I vote by proxy?

A: Your proxy will be voted according to the instructions you provide. If you complete, sign and submit your proxy but do not otherwise provide instructions on how to vote your shares, your shares will be voted (i) “FOR” the six individuals nominated to serve as members of our Board of Directors and (ii) “FOR” the ratification of KPMG LLP as our independent registered public accounting firm for the year ending December 31, 2025. Presently, our Board does not know of any other matter that may come before the Annual Meeting. However, your proxies are authorized to vote on your behalf, using their discretion, on any other business that properly comes before the Annual Meeting or any postponement or adjournment of the Annual Meeting.

Q: How do I revoke my proxy?

A: You may revoke your proxy at any time before your shares are voted at the Annual Meeting by:

- Sending a written notice that you are revoking your proxy to our Corporate Secretary, David Jin, at our address above (so long as we receive such notice no later than 5:00 p.m. (Eastern Time) on the day before the Annual Meeting);
- Submitting a later-dated proxy card or voting again via the Internet or mobile device (so long as it is submitted by 11:59 p.m. (Eastern Time) on the day before the Annual Meeting); or
- Virtually attending the Annual Meeting and notifying the election officials at the Annual Meeting that you wish to revoke your proxy and vote virtually. Simply attending the Annual Meeting will not, by itself, revoke your proxy.

If your shares are held by your bank, brokerage firm or other nominee, you should follow the instructions provided by such bank, brokerage firm or other nominee.

Q: Is my vote confidential?

A: Yes. All votes remain confidential.

Q: What constitutes a quorum at the Annual Meeting?

A: In accordance with Delaware law (the law under which we are incorporated) and our Bylaws, holders of a majority of the outstanding voting power of the Company, calculated in accordance with our Third Amended and Restated Certificate of Incorporation, as amended, present in person or represented by proxy, constitutes a quorum, thereby permitting the stockholders to conduct business at the Annual Meeting. Abstentions, votes withheld, and broker non-votes will be included in the calculation of the number of shares considered present at the Annual Meeting for purposes of determining the existence of a quorum.

If a quorum is not present at the Annual Meeting, a majority of the stockholders present and by proxy may adjourn the meeting to another date. If a postponement or adjournment is for more than 30 days or a new record date is fixed for the adjourned meeting by our Board, we will provide notice of the adjourned meeting to each stockholder of record entitled to vote at the adjourned meeting. At any adjourned meeting at which a quorum is present, any business may be transacted that might have been transacted at the originally called meeting.

Q: What vote is required to elect our directors for a one-year term?

A: The affirmative vote of a plurality of the votes of the shares present, virtually at the Annual Meeting or by proxy, and entitled to vote at the Annual Meeting is required for the election of each of the nominees for director. “Plurality” means that the six director nominees receiving the most “FOR” votes will be elected. You are not permitted to cumulate your votes for purposes of electing directors. Because this is an uncontested election, so long as each candidate receives at least one “FOR” vote, all director nominees will be elected and votes that are withheld will have no effect on the election of the directors. Broker non-votes occur when shares are held indirectly through a bank, brokerage firm or other nominee or intermediary on behalf of a beneficial owner (referred to as held in “street name”) and the broker submits a proxy, but does not cast a vote on a matter because the broker has not received voting instructions from the beneficial owner, and (i) the broker does not have discretionary voting authority on the matter or (ii) the broker chooses not to vote on a matter for which it has discretionary voting authority. Pursuant to the New York Stock Exchange (“NYSE”) rules, which also govern brokers’ use of discretionary authority for stock of non-NYSE-listed companies, brokers are permitted to exercise discretionary voting authority only on “routine” matters when voting instructions have not been timely received from a beneficial owner. Brokerage firms do not have authority to vote customers’ non-voted shares held by the firms in street name for the election of the directors because this proposal is not considered a “routine” matter under NYSE rules. As a result, any shares not voted by a customer will be treated as a broker non-vote and have no effect on the results of this vote. Abstentions will also have no effect on the results of this vote. Virtual attendance at our Annual Meeting will constitute presence in person for purposes of voting at the Annual Meeting.

Q: What vote is required to ratify KPMG LLP as our independent registered public accounting firm for the year ending December 31, 2025?

A: The affirmative vote of a majority of the shares present, virtually at the Annual Meeting or by proxy, and entitled to vote at the Annual Meeting is required to approve the ratification of KPMG LLP as our independent registered public accounting firm for the year ending December 31, 2025. Abstentions will have the same effect as a vote “AGAINST” this proposal. Because this proposal is considered a routine matter under NYSE rules, discretionary votes by brokers will be counted, and there will be no broker non-votes on this proposal.

Q: What percentage of our outstanding common stock do our directors, executive officers, and 5% beneficial owners own?

A: As of November 25, 2025, our directors, executive officers, and 5% beneficial owners collectively owned, or had the right to acquire, approximately 18.0% of our outstanding common stock and 100% of our Class A Preferred Stock. See the discussion under the heading “*Stock Ownership of Our Directors, Executive Officers, and 5% Beneficial Owners*” on page [25](#) for more details.

Q: Who was our independent public accountant for the year ended December 31, 2024? Will this firm be represented at the Annual Meeting?

A: KPMG LLP is the independent registered public accounting firm that audited our financial statements for the year ended December 31, 2024. We expect a representative of KPMG LLP to be present virtually at the Annual Meeting. The representative will have an opportunity to make a statement and will be available to answer your questions.

Q: How can I obtain a copy of our Annual Report on Form 10-K?

A: We have filed our Annual Report on Form 10-K for the year ended December 31, 2024 with the SEC. The Annual Report on Form 10-K is also available on the website referred to in the “Investors” section our website at avenuetx.com and on the website of the SEC at sec.gov. **You may obtain, free of charge, a copy of our Annual Report on Form 10-K, including financial statements, by writing to our Corporate Secretary, David Jin, or by email at info@avenuetx.com. Upon request, we will also furnish any exhibits to the Annual Report on Form 10-K as filed with the SEC**

Q: Who is paying for this proxy solicitation?

A: We will pay the entire cost of preparing, assembling, printing, mailing, and distributing these proxy materials and soliciting votes. If you choose to vote over the internet, you are responsible for internet access charges you may incur. If you choose to vote by telephone, you are responsible for telephone charges you may incur. In addition to the mailing of these proxy materials, the solicitation of proxies or votes may be made in person, by telephone or by electronic communication by our directors, officers and employees, who will not receive any additional compensation for such solicitation activities. Proxies also may be solicited by employees and our directors by mail, telephone, facsimile, e-mail or in person.

Q: How does the board of directors recommend that I vote my shares?

A: As to the proposals to be voted on at the Annual Meeting, our board of directors unanimously recommends that you vote:

- **“FOR”** the election to the board of directors of each of the six nominees named in Proposal No. 1; and
- **“FOR”** Proposal No. 2, the ratification of the selection of KPMG LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2025.

CORPORATE GOVERNANCE

Our Board of Directors

Our Bylaws provide that our Board of Directors (our “Board”) shall consist of between one to nine directors, and such number of directors within this range may be determined from time to time by resolution of our Board or our stockholders. The Board most recently set the number of directors at six members. The following individuals are being nominated to serve on our Board (See “*Proposal No. 1 — Election of Directors; Nominees*”):

Name	Age	Position	Director Since
Jay Kranzler, M.D., PhD	67	Chairman of the Board of Directors	2017
Faith Charles	64	Director	2022
Neil Herskowitz	68	Director	2015
Alexandra MacLean, M.D.	58	Director	2023
Curtis Oltmans	62	Director	2021
Lindsay A. Rosenwald, M.D.	70	Director	2015

The Board does not have a formal policy regarding the separation of the roles of Chief Executive Officer and Chairman, as the Board believes that it is in the best interests of the Company to make that determination based on the direction of the Company and the current membership of the Board. The Board has determined that, at present, having Dr. Kranzler serve as Chairman and Dr. MacLean serve as our Chief Executive Officer is in the best interest of the Company’s stockholders.

Avenue has a risk management program overseen by our Chief Executive Officer and the Board. Dr. MacLean and management identify material risks and prioritize them for our Board. Our Board regularly reviews information regarding our credit, liquidity, operations, and compliance as well as the risks associated with each.

The following biographies, and the table above, set forth the names of our directors and director nominees, their ages, the year in which they first became directors, their positions with us, their principal occupations and employers for at least the past five years, any other directorships held by them during the past five years in companies that are subject to the reporting requirements of the Securities Exchange Act of 1934 (the “Exchange Act”), or any company registered as an investment company under the Investment Company Act of 1940, as well as additional information, all of which we believe sets forth each director nominee’s qualifications to serve on the Board. There is no family relationship between or among any of our executive officers or directors. There are no arrangements or understandings between any of our executive officers or directors and any other person pursuant to which any of them are elected as an officer or director.

Director Independence and Controlled Company Exemption

Although Avenue’s common stock is not currently listed on The Nasdaq Stock Market, LLC (“Nasdaq”), Avenue continues to adhere to the corporate governance standards adopted by Nasdaq as a matter of good governance practices. Nasdaq rules require Nasdaq-listed companies to make an affirmative determination as to the independence of each director. Consistent with these rules, our Board undertook its annual review of director independence on March 17, 2025. During the review, our Board considered relationships and transactions during 2024, 2023 and since inception between each director or any member of his or her immediate family, on the one hand, and the Company and our subsidiaries and affiliates, on the other hand. The purpose of this review was to determine whether any such relationships or transactions were inconsistent with a determination that the director is independent. Based on this review, our Board determined that Neil Herskowitz, Faith Charles, and Curtis Oltmans are independent under the criteria established by Nasdaq and our Board.

Fortress Biotech, Inc. (“Fortress”) beneficially owns capital stock representing more than 50% of the voting power of our outstanding voting stock eligible to vote in the election of directors. As a result, we qualify as a “controlled company” and continue to avail ourselves of certain “controlled company” exemptions under the Nasdaq corporate governance rules, as if they were applicable to us. As a controlled company, we are not required to have a majority of “independent directors” on our Board as defined under the Nasdaq rules, or have a compensation, nominating or governance committee composed entirely of independent directors. Despite qualifying as a controlled company, our Board nevertheless is comprised of a majority of independent directors, and we have a separately constituted Compensation Committee.

Jay Kranzler, M.D., PhD - Chairman

Dr. Kranzler, 67, joined our Board in February 2017 and was appointed Chairman in March 2023. Dr. Kranzler has been a Founder, Chief Executive Officer, Board Member, and Advisor to leading life science companies for over 30 years. He is currently Chairman and Chief Executive Officer of Urica Therapeutics, Inc., a clinical-stage biopharmaceutical company and subsidiary of Fortress, where he has served since October 2022. Dr. Kranzler started his career at McKinsey & Company where he was instrumental in establishing that firm's pharmaceutical practice. He was a founder of Perception Neuroscience (acquired by ATAI Life Sciences) and also served as CEO of Cytel Corporation, a company focused on the development of immunomodulatory drugs. Following Cytel, Dr. Kranzler became the CEO of Cypress Bioscience, where he was credited for the development of Savella™ (milnacipran) for the treatment of fibromyalgia. Dr. Kranzler was also Vice President, Head of Worldwide External R&D Innovation and Strategic Investments at Pfizer. During his career, Dr. Kranzler has developed drugs, medical devices, as well as diagnostics, and is the inventor on multiple patents. Dr. Kranzler graduated from Yale University School of Medicine with MD and PhD degrees with a focus in psychopharmacology and he currently serves as an Adjunct Professor at the NYU Langone School of Medicine and Stern School of Business. We believe that Dr. Kranzler is qualified to serve on our Board due to his management experience, his service as an executive of biopharmaceutical companies and his knowledge of our business and industry.

Faith Charles

Faith L. Charles, 64, has been a corporate transactions and securities partner at the law firm of Thompson Hine, LLP since 2010. She leads Thompson Hine's Life Sciences practice and co-heads the securities practice, advising public and emerging biotech and pharmaceutical companies in the U.S. and internationally. Ms. Charles negotiates complex private and public financing transactions, mergers and acquisitions, licensing transactions and strategic collaborations. She serves as outside counsel to a myriad of life sciences companies and is known in the industry as an astute business advisor, providing valuable insights into capital markets, corporate governance and strategic development. Since March 2021, Ms. Charles has served on the Board of Directors and various committees of Abeona Therapeutics Inc. (Nasdaq: ABEQ), a clinical-stage biopharmaceutical company developing cell and gene therapies for life-threatening rare genetic diseases whose common stock is listed on Nasdaq. From 2018 until October 2021, Ms. Charles served on the Board of Directors and as a member of the Audit Committee and Chair of the Compensation Committee of Entera Bio Ltd. (Nasdaq: ENTX), a publicly-traded biotechnology company. She has served on the Board of Directors of Conduit Pharmaceuticals, Inc. (Nasdaq: CDT), a publicly traded disease agnostic life sciences company providing an efficient model for compound development, since September 2023, and as Chair of the Board of Directors of CNS Pharmaceuticals, Inc. (Nasdaq: CNSP), a publicly traded clinical stage pharmaceutical company developing anti-cancer drug candidates for the treatment of primary and metastatic cancers of the brain and central nervous system, since December 2022. Ms. Charles founded the Women in Bio Metro New York chapter and chaired the chapter for five years and served on the national board of Women in Bio. Ms. Charles is also a member of the board of Red Door Community (formerly Gilda's Club New York City). She has been recognized as a Life Sciences Star by Euromoney's LMG Life Sciences, has been named a BTI Client Service All-Star, and was named by Crain's New York Business to the list of 2020 Notable Women in the Law. Ms. Charles holds a J.D. degree from The George Washington University Law School and a B.A. in Psychology from Barnard College, Columbia University. Ms. Charles is a graduate of Women in Bio's Boardroom Ready Program, an Executive Education Program taught by The George Washington University School of Business. We believe that Ms. Charles is qualified to serve on our Board due to her expertise in legal matters relevant to our business, including in the life sciences industries.

Neil Herskowitz

Mr. Herskowitz, 68, joined our Board in August 2015 and has served as the Chairman of our Audit Committee since September 2016. Mr. Herskowitz has served as the managing member of the ReGen Group of companies, located in New York, since 1998, which include ReGen Capital Investments LLC and Riverside Claims Investments LLC. He has also served as the President of its affiliate, Riverside Claims LLC, since June 2004. Additionally, Mr. Herskowitz served as a Board member of National Holdings, Inc. from 2016 to 2019 and Checkpoint Therapeutics, Inc. (Nasdaq: CKPT) from 2015 until May 2025, and serves as a Board member of Mustang Bio, Inc. (Nasdaq: MBIO) and Journey Medical Corporation (Nasdaq: DERM), each of which are subsidiaries of Fortress. Mr. Herskowitz received a B.B.A. in Finance from Bernard M. Baruch College in 1978. The Board believes, based on Mr. Herskowitz's over 15 years of Audit Committee and Board experience in the biotech industry, that Mr. Herskowitz is qualified to serve as a member of our Board and as the Chairman of our Audit Committee.

Alexandra MacLean, M.D.

Dr. MacLean, 58, joined our Board in March 2023 and has served as Chief Executive Officer of the Company since August 2022. She previously served as Entrepreneur in Residence at Fortress, (Nasdaq: FBIO), the Company's parent company, from November 2021 through July 2022. She previously served as General Partner and Principal at TVM Capital GmbH, an international life sciences venture capital firm, from January 2020 through October 2021; as Head of Licensing and Business Development at Imbrium Therapeutics L.P., a clinical-stage biopharmaceutical company and a subsidiary of Purdue Pharma, L.P. ("Purdue"), from January 2019 through January 2020; and in various roles at Purdue, a privately held pharmaceutical company, from 2015 to January 2019. Prior to joining Purdue, she served at Plasma Surgical, a medical device company, from 2014 to 2015, and Covidien, a medical devices and supplies manufacturer later acquired by Medtronic plc (NYSE: MDT), from 2010 to 2013. She began her career in the pharmaceutical industry at Merck & Co. (NYSE: MRK), a pharmaceutical company, where she worked from 2008 to 2010. Dr. MacLean holds an M.D. degree from Columbia University, Vagelos College of Physicians and Surgeons, an MBA from the University of Colorado – Boulder, and an M.Phil. from the University of Cambridge in History of Science. She obtained a B.Sc. in Physiology from McGill University. The Board believes, based on Dr. MacLean's pharmaceutical industry experience and medical training, that Dr. MacLean has the appropriate set of skills to serve as a member of the Board.

Curtis Oltmans

Mr. Oltmans, 62, joined our Board in April 2021 and is currently Chief Legal Officer of Fulcrum Therapeutics, Inc. (Nasdaq: FULC), where he has served since November 2020, and has over 30 years of experience in corporate law including senior management positions in legal departments at several leading pharmaceutical and biotechnology companies. Prior to Fulcrum Therapeutics, Inc. he served as Vice President, Head of Litigation at DaVita Kidney Care, Inc. where he was responsible for all litigation, workers' compensation and employee safety matters. Prior to DaVita Kidney Care, Mr. Oltmans was Executive Vice President, General Counsel and Corporate Secretary at Array BioPharma, Inc. (Nasdaq: ARRY), where he oversaw all legal, corporate governance, patent and compliance matters. He previously served as Corporate Vice President and General Counsel for Novo Nordisk, Inc. (NYSE: NVO), North America. He was responsible for strategic support in areas including market access, government affairs, communications and product marketing. He has also served as Assistant General Counsel for Eli Lilly and Company after beginning his legal career supporting clients in pharmaceutical and medical device litigation matters. Mr. Oltmans has received a certification from the National Association of Corporate Directors for Oversight of Cybersecurity. He served on the Board of Trustees for the Mercer County Boy's and Girl's Club. Mr. Oltmans has completed the CERT National Association of Corporate Directors certificate for Cybersecurity Oversight. Mr. Oltmans received a B.A. in political science from the University of Nebraska and his J.D. from the University of Nebraska College of Law. Based on Mr. Oltmans' pharmaceutical industry experience, the Board believes that Mr. Oltmans has the appropriate set of skills to serve as a member of the Board.

Lindsay A. Rosenwald, M.D.

Dr. Rosenwald, 70, has served on our Board since inception and served as our Executive Chairman of the Board until March 2023. Dr. Rosenwald has also served as Chairman, President and Chief Executive Officer of Fortress (Nasdaq: FBIO), the Company's parent company, since December 2013, and as a member of Fortress' board since October 2009. Additionally, Dr. Rosenwald serves as a member of the board of directors of each of Fortress' private subsidiaries (and has so served in each case since company inception). He has served as the Chairman of Journey Medical Corporation (Nasdaq: DERM), a subsidiary of Fortress, since October 2014, a director of Mustang Bio, Inc. (Nasdaq: MBIO), a subsidiary of Fortress, since March 2015, and a director of Checkpoint Therapeutics, Inc. (Nasdaq: CKPT), a subsidiary of Fortress, since March 2015 until May 2025. From 1991 to 2008, Dr. Rosenwald served as the Chairman of Paramount BioCapital, Inc. The Board believes that Dr. Rosenwald's extensive experience over the last 35 years in founding, capitalizing and managing numerous public and private biopharmaceutical companies qualifies him uniquely to serve on the Company's Board. Dr. Rosenwald received his B.S. in finance from Pennsylvania State University and his M.D. from Temple University School of Medicine.

Meetings

During the fiscal year ended December 31, 2024, our Board held five meetings and took action by unanimous written consent nine times. Each regularly scheduled meeting of the Board includes an executive session of only independent directors. Each incumbent director attended at least 75% of the total number of meetings of the board of directors and the committees on which he or she served during the fiscal year ended December 31, 2024. The permanent committees established by our Board are the Audit Committee and the Compensation Committee, descriptions of which are set forth in more detail below. Our directors are expected to attend each Annual Meeting of Stockholders, and it is our expectation that all of the directors standing for election will attend this year's Annual Meeting. Each of our directors attended the 2024 annual meeting of stockholders by teleconference. This will be our seventh Annual Meeting of Stockholders since we became a public reporting company in June 2017.

Communicating with the Board of Directors

Our Board has established a process by which stockholders can send communications to the Board. You may communicate with the Board as a group, or to specific directors, by writing to David Jin, our Corporate Secretary, at our offices located 1111 Kane Concourse, Suite 301, Bay Harbor Islands, Florida 33154. The Corporate Secretary will review all such correspondence and regularly forward to our Board a summary of all correspondence and copies of all correspondence that, in the opinion of the Corporate Secretary, deals with the functions of the Board or committees thereof or that he otherwise determines requires their attention. Directors may at any time review a log of all correspondence we receive that is addressed to members of our Board and request copies of any such correspondence. Concerns relating to accounting, internal controls, or auditing matters may be communicated in this manner, or may be submitted on an anonymous basis via e-mail at BOD@avenuetx.com. These concerns will be immediately brought to the attention of our Board and handled in accordance with procedures established by our Board.

Audit Committee

The Audit Committee currently consists of Neil Herskowitz, Curtis Oltmans, and Faith Charles. Mr. Herskowitz serves as the Chairperson of the Audit Committee.

The Audit Committee was formed on May 15, 2017 and held four meetings during the fiscal year ended December 31, 2024 and took action by unanimous written consent one time. The duties and responsibilities of the Audit Committee are set forth in the Charter of the Audit Committee which was recently reviewed by our Audit Committee and which is reviewed annually by our Audit Committee. A copy of the Charter of the Audit Committee is available on our website, located at www.avenuetx.com. Among other matters, the duties and responsibilities of the Audit Committee include reviewing and monitoring our financial statements and internal accounting procedures, the selection of our independent registered public accounting firm and consulting with and reviewing the services provided by our independent registered public accounting firm. Our Audit Committee has sole discretion over the retention, compensation, evaluation, and oversight of our independent registered public accounting firm.

The SEC and Nasdaq (to which standards we strive to voluntarily adhere) have established rules and regulations regarding the composition of audit committees and the qualifications of audit committee members. Our Board has examined the composition of our Audit Committee and the qualifications of our Audit Committee members in light of the current rules and regulations governing audit committees. Based upon this examination, our Board has determined that each member of our Audit Committee is independent and is otherwise qualified to be a member of our Audit Committee in accordance with the rules of the SEC and Nasdaq.

Additionally, the SEC requires that at least one member of the Audit Committee have a "heightened" level of financial and accounting sophistication. Such a person is known as the "audit committee financial expert" under the SEC's rules. Our Board has determined that Neil Herskowitz is an "audit committee financial expert," as the SEC defines that term, and is an independent member of our Board and our Audit Committee. Please see Neil Herskowitz's biography on page [7](#) for a description of his relevant experience.

The report of the Audit Committee can be found on page [14](#) of this proxy statement.

Compensation Committee

The Compensation Committee was formed on May 15, 2017. The Compensation Committee held two meetings during the fiscal year ended December 31, 2024 and took action by unanimous written consent one time. The Compensation Committee currently consists of Neil Herskowitz and Curtis Oltmans, with Mr. Herskowitz serving as Chairperson. The duties and responsibilities of the Compensation Committee are set forth in the Charter of the Compensation Committee. A copy of the Charter of the Compensation Committee is available on our website, located at www.avenuetx.com, and is reviewed annually by the Compensation Committee. As discussed in its charter, among other things, the duties and responsibilities of the Compensation Committee include annually reviewing and approving corporate goals and objectives relevant to the compensation of our Chief Executive Officer, reviewing and approving, or making recommendations to our Board with respect to, the compensation of our Chief Executive Officer and our other executive officers, overseeing an the evaluation of our senior executives, and overseeing and administering our cash and equity incentive plans. The Compensation Committee applies discretion in the determination of individual executive compensation packages to ensure compliance with the Company's compensation philosophy. The Chief Executive Officer makes recommendations to the Compensation Committee with respect to the compensation packages for officers other than herself. The Compensation Committee may delegate its authority to grant awards to certain employees, and within specified parameters under the Avenue Therapeutics, Inc. 2015 Incentive Plan (the "2015 Plan"), to a special committee consisting of one or more directors who may but need not be officers of the Company. As of the date of this proxy statement, however, the Compensation Committee had not delegated any such authority. The Board may engage a compensation consultant to conduct a review of its executive compensation programs in 2025. The Committee did not engage a compensation consultant in 2024.

Nasdaq (to which standards we strive to voluntarily adhere) has established rules and regulations regarding the composition of compensation committees and the qualifications of compensation committee members. As a controlled company, we are not required to have a compensation committee composed entirely of independent directors. However, our Board has examined the composition of our Compensation Committee and the qualifications of our Compensation Committee members in light of the current rules and regulations governing compensation committees. Based upon this examination, our Board has determined that each member of our Compensation Committee is independent and is otherwise qualified to be a member of our Compensation Committee in accordance with such rules.

Nominating Process

We do not currently have a nominating committee or any other committee serving a similar function. Director nominations are approved by a vote of a majority of our independent directors. Although we do not have a written charter in place to select director nominees, our Board has adopted resolutions regarding the director nomination process. We believe that the current process in place functions effectively to select director nominees who will be valuable members of our Board.

We identify potential nominees to serve as directors through a variety of business contacts, including current executive officers, directors, community leaders and stockholders. We may, to the extent the Board deems appropriate, retain a professional search firm and other advisors to identify potential nominees.

We will also consider candidates recommended by stockholders for nomination to our Board. A stockholder who wishes to recommend a candidate for nomination to our Board must submit such recommendation to our Corporate Secretary, David Jin, at our offices located at 1111 Kane Concourse, Suite 301, Bay Harbor Islands, Florida 33154. Any recommendation must be received not less than 50 calendar days nor more than 90 calendar days before the anniversary date of the previous year's annual meeting. All stockholder recommendations of candidates for nomination for election to our Board must be in writing and must set forth the following: (i) the candidate's name, age, business address, and other contact information, (ii) the number of shares of common stock, par value \$0.0001 per share ("Common Stock"), beneficially owned by the candidate, (iii) a complete description of the candidate's qualifications, experience, background and affiliations, as would be required to be disclosed in the proxy statement pursuant to Schedule 14A under the Exchange Act, (iv) a sworn or certified statement by the candidate in which he or she consents to being named in the proxy statement as a nominee and to serve as director if elected, and (v) the name and address of the stockholder(s) of record making such a recommendation.

We believe that our Board as a whole should encompass a range of talent, skill, and expertise enabling it to provide sound guidance with respect to our operations and interests. Our independent directors evaluate all candidates for our Board by reviewing their biographical information and qualifications. If the independent directors determine that a candidate is qualified to serve on our Board, such candidate is interviewed by at least one of the independent directors and our Chief Executive Officer. Other members of the Board also have an opportunity to interview qualified candidates. The independent directors then determine, based on the background information and the information obtained in the interviews, whether to recommend to the Board that the candidate be nominated for approval by the stockholders to fill a directorship. With respect to an incumbent director whom the independent directors are considering as a potential nominee for re-election, the independent directors review and consider the incumbent director's service during his or her term, including the number of meetings attended, level of participation, and overall contribution to the Board. The manner in which the independent directors evaluate a potential nominee will not differ based on whether the candidate is recommended by our directors or stockholders.

We consider the following qualifications, among others, when making a determination as to whether a person should be nominated to our Board: the independence of the director nominee; the nominee's character and integrity; financial literacy; level of education and business experience, including experience relating to biopharmaceutical companies; whether the nominee has sufficient time to devote to our Board; and the nominee's commitment to represent the long-term interests of our stockholders. We review candidates in the context of the current composition of the Board and the evolving needs of our business. We believe that each of the current members of our Board (who are also our director nominees) has the requisite business, biopharmaceutical, financial or managerial experience to serve as a member of the Board, as described above in their biographies under the heading "*Our Board of Directors*." We also believe that each of the current members of our Board has other key attributes that are important to an effective board, including integrity, high ethical standards, sound judgment, analytical skills, and the commitment to devote significant time and energy to service on the Board and its committees.

We do not have a formal policy in place with regard to diversity in considering candidates for our Board, but the Board strives to nominate candidates with a variety of backgrounds and complementary skills so that, as a group, the Board will possess the appropriate talent, skills and expertise to oversee our business.

Code of Business Conduct and Ethics

We have adopted a Code of Ethics (the "Code"), which applies to all of our directors, officers and employees. The Code includes guidelines dealing with the ethical handling of conflicts of interest, compliance with federal and state laws, financial reporting, and our proprietary information. The Code also contains procedures for dealing with and reporting violations of the Code. We have posted our Code on our website, located at www.avenuetx.com.

Insider Trading Policy; Policy Prohibiting Hedging and Speculative Trading

We have adopted an Insider Trading Policy that governs the purchase, sale, and other dispositions of our securities on the basis of material non-public information by directors, officers, employees, consultants and contractors. We believe these policies and procedures are reasonably designed to promote compliance with insider trading laws, rules and regulations, and applicable listing standards. A copy of our Insider Trading Policy is filed as an exhibit to our Annual Report on Form 10-K for the fiscal year ended December 31, 2024.

Pursuant to our Insider Trading Policy, our officers, directors, and employees are prohibited from engaging in speculative trading, including hedging transactions or short sale transactions with respect to Company securities.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FEES AND OTHER MATTERS

KPMG LLP, the independent registered public accounting firm that audited our financial statements for the year ended December 31, 2024 and 2023, has served as our independent registered public accounting firm since 2023. We expect a representative of KPMG LLP to be present at the Annual Meeting. The representative will have an opportunity to make a statement and will be available to answer your questions (see “*Questions and Answers*” for more information regarding submitting questions).

Our Board has asked the stockholders to ratify the selection of KPMG LLP as our independent registered public accounting firm for the year ending December 31, 2025. See “*Proposal No. 2: Ratification of Appointment of KPMG LLP as Our Independent Registered Public Accounting Firm*” on page 28 of this proxy statement. The Board has reviewed the fees described below and concluded that the payment of such fees is compatible with maintaining KPMG LLP’s independence. All proposed engagements of KPMG LLP in 2024 and 2023, whether for audit services, audit-related services, tax services, or permissible non-audit services, were pre-approved by our Audit Committee.

Audit Fees

For the fiscal years ended December 31, 2024 and 2023, KPMG LLP billed us an aggregate of \$627,000 and \$649,500, respectively, in fees for the professional services rendered in connection with the audit of our annual financial statements included in our Annual Report on Form 10-K for such fiscal years, the reviews of our financial statements included in our Quarterly Reports on Form 10-Q during the four fiscal quarters of the fiscal year ended December 31, 2024, and other services provided in connection with registration statements.

For the fiscal year ended December 31, 2023, BDO USA, LLP (“BDO”), our prior independent registered public accounting firm, billed us an aggregate of \$220,940 for professional services rendered in connection with consents and comfort letters.

Audit-Related Fees

During the fiscal years ended December 31, 2024 and 2023, we incurred no costs from KPMG LLP for audit-related services reasonably related to the performance of the audits and reviews for that respective fiscal year.

Tax Fees

During the fiscal years ended December 31, 2024 and 2023, we were billed by KPMG LLP \$23,693 and \$36,543, respectively, for professional services rendered for tax compliance, tax advice, and tax planning services.

All Other Fees

During the fiscal years ended December 31, 2024 and 2023, we were not billed by KPMG LLP for any fees for services, other than those described above, rendered to us for those two fiscal years.

Pre-Approval of Services

Our Audit Committee has established a policy setting forth the procedures under which services provided by our independent registered public accounting firm will be pre-approved by our Audit Committee. The potential services that might be provided by our independent registered public accounting firm fall into two categories:

- Services that are permitted, including the audit of our annual financial statements, the review of our quarterly financial statements, related attestations, benefit plan audits and similar audit reports, financial and other due diligence on acquisitions, and federal, state, and non-US tax services; and
- Services that may be permitted, subject to individual pre-approval, including compliance and internal-control reviews, indirect tax services such as transfer pricing and customs and duties, and forensic auditing.

Services that our independent registered public accounting firm are prohibited from providing include such services as bookkeeping, certain human resources services, internal audit outsourcing, and investment or investment banking advice.

All proposed engagements of our independent registered public accounting firm, whether for audit services or permissible non-audit services, are pre-approved by the Audit Committee. We jointly prepare a schedule with our independent registered public accounting firm that outlines services which we reasonably expect we will need from our independent registered public accounting firm and categorize them according to the classifications described above. Each service identified is reviewed and approved or rejected by the Audit Committee.

REPORT OF THE AUDIT COMMITTEE

In monitoring the preparation of our financial statements, the Audit Committee met with both management and KPMG LLP, our independent registered public accounting firm for the year ended December 31, 2024, to review and discuss all audited financial statements prior to their issuance and to discuss any and all significant accounting issues. Management and our independent registered public accounting firm advised the Audit Committee that each of the financial statements were prepared in accordance with generally accepted accounting principles. The Audit Committee's review included a discussion of the matters required to be discussed pursuant to the applicable requirements of the Public Company Accounting Oversight Board (the "PCAOB") and the SEC including, among other things, the following:

- Methods used to account for significant or unusual transactions;
- The effect of any accounting policies in controversial or emerging areas for which there is a lack of authoritative guidance or consensus;
- The process used by management to formulate sensitive accounting estimates and the basis for the independent registered public accounting firm's conclusion regarding the reasonableness of any such estimates; and
- Any disagreements with management over the application of accounting principles, the basis for management's accounting estimates and the disclosures necessary in the financial statements.

The Audit Committee has received the written disclosures and the letter from KPMG LLP, our independent registered public accounting firm for the year ended December 31, 2024, regarding KPMG LLP's communications with the Audit Committee concerning independence, and has discussed with KPMG LLP its independence, as required by the applicable requirements of the PCAOB.

Finally, the Audit Committee continues to monitor the scope and adequacy of our internal controls and other procedures, including any and all proposals for adequate staffing and for strengthening internal procedures and controls where appropriate and necessary.

On the basis of these reviews and discussions, the Audit Committee recommended to the Board that it approve the inclusion of our audited financial statements in our Annual Report on Form 10-K for the fiscal year ended December 31, 2024, for filing with the SEC.

The Audit Committee reviewed its written charter previously adopted by our Board. Following this review, the Audit Committee determined that no changes needed to be made with respect to the Audit Committee charter at this time.

By the Audit Committee,

Neil Herskowitz
Curtis Oltmans
Faith Charles

December 5, 2025
Bay Harbor Islands, Florida

OUR EXECUTIVE OFFICERS

Executive Officers

Our current executive officers are as follows:

Name	Age	Position	Executive Officer Since
Alexandra MacLean, M.D.	58	Chief Executive Officer	2022
David Jin	35	Interim Chief Financial Officer and Chief Operating Officer	2022

No executive officer is related by blood, marriage or adoption to any director or other executive officer.

Alexandra MacLean, M.D. — Chief Executive Officer

See the section titled “*Corporate Governance – Our Board of Directors.*”

David Jin — Interim Chief Financial Officer and Chief Operating Officer

Mr. Jin has served as Interim Chief Financial Officer of the Company since May 2022 and as the Company’s Chief Operating Officer since March 2022. He previously served as the Interim Chief Executive Officer of the Company from March 2022 until August 2022. He also serves as Chief Financial Officer and Head of Corporate Development at Fortress (Nasdaq: FBIO), the Company’s parent company and as a member of the board of directors of Mustang Bio and Crystalys Therapeutics. Previously, he was a member of the Private Equity group at Barings focused on control equity and asset-based investments in pharma and biotech. Before that, he was Director of Corporate Development at Sorrento Therapeutics, Inc., Vice President of Healthcare Investment Banking at FBR & Co., and began his career in management consulting at IMS Health (now IQVIA). Mr. Jin has a Bachelor of Science degree in Industrial Engineering & Management Sciences with a double-major in Mathematical Methods in the Social Sciences from Northwestern University.

EXECUTIVE COMPENSATION

Summary Compensation Table

As determined in accordance with SEC rules, our “named executive officers” for purposes of this proxy statement are the two individuals set forth below. The following table sets forth information concerning compensation paid by the Company to its named executive officers for services rendered to it in all capacities during the years ended December 31, 2024, and December 31, 2023. All share figures in this section give effect to the 1-for-75 reverse stock split effected on April 26, 2024.

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Stock Awards (\$)	Option Awards (\$) (1)	Non-equity Incentive Plan Compensation (\$)	All Other Compensation (\$) (2)	Total (\$)
Alexandra MacLean	2024	420,000	—	406,300	—	—	13,800	840,100
Chief Executive Officer	2023	400,000	—	—	800,000	—	13,200	1,213,200
David Jin	2024	—	—	155,350	—	—	—	155,350
Interim Chief Financial Officer and Chief Operating Officer	2023	—	—	—	260,000	—	—	260,000

(1) Reflects the aggregate grant date fair value of options granted during the fiscal year calculated in accordance with FASB ASC Topic 718. The Company estimates fair value of options granted using the Black-Scholes options pricing model on the date of the grant, using the assumptions described in Note 7 to the Company's Annual Report on Form 10-K for the year ended December 31, 2024.

(2) Reflects employer contributions to the 401(k) retirement plan.

Narrative to Summary Compensation Table

Terms of Employment with Dr. MacLean

On August 1, 2022, the Board of Directors of the Company appointed Alexandra MacLean, M.D. to serve as the Company's Chief Executive Officer. Dr. MacLean is employed on an at-will basis and has no written contract of employment. Her salary was increased from \$400,000 to \$420,000, in March 2024. In 2024, Dr. MacLean was eligible for an annual discretionary bonus of 40%, however, the Compensation Committee determined not to grant any bonus to her for 2024 due to the overall economic and business conditions of the Company.

Terms of Employment with Mr. Jin

Mr. Jin is employed by the Company on an at-will basis and has no written contract of employment. He currently receives no salary and would be eligible for bonus only on a discretionary basis based upon corporate factors and individual performance as determined by the Board. No such discretionary bonus was awarded in 2024.

Equity Awards

The Compensation Committee has granted each of Dr. MacLean and Mr. Jin the following equity awards under our 2015 Plan. In 2024, Dr. MacLean received an award of 170,000 RSUs, and Mr. Jin received an award of 65,000 RSUs and, in 2023, Dr. MacLean received an award of 10,668 options, and Mr. Jin received an award of 3,334 options, each of which vests as described in Footnote 1 to the Outstanding Equity Awards Table below.

Outstanding Equity Awards at 2024 Fiscal Year End

The following awards that were previously granted under our 2015 Plan were outstanding as of December 31, 2024:

Name	Number of securities underlying unexercised options (#) exercisable	Number of securities underlying unexercised options (#) unexercisable	Option Exercise Price (\$)	Option Expiration Date	Number of Shares of Units of Stock that Have Not Vested	Market Value of Shares or Units of Stock that Have Not Vested (\$)(1)
Alexandra MacLean	5,336 ⁽²⁾	5,332	85.50	6/29/2033	85,000 ⁽³⁾	170,000
David Jin	1,667 ⁽²⁾	1,667	85.50	6/30/2033	32,500 ⁽⁴⁾	65,000

(1) Based on the closing stock price on the Nasdaq Capital Market on the last trading day of the fiscal year of \$2.00.

(2) Represents options vesting annually in equal installments on August 1, 2023 - 2026.

(3) Represents the unvested portion of an award of 170,000 deferred Restricted Stock Units that will vest or has vested with respect to 42,500 RSUs on each of the following dates: September 30, 2024, December 31, 2024, September 23, 2025 and September 23, 2026.

(4) Represents the unvested portion of an award of 65,000 Restricted Stock Units that will vest or has vested with respect to 16,250 RSUs on each of the following dates: September 30, 2024, December 31, 2024, September 23, 2025 and September 23, 2026.

401(k) Plan

Our named executive officers are eligible to participate in a defined contribution retirement plan that provides eligible U.S. employees with an opportunity to save for retirement on a tax advantaged basis. Eligible employees may defer eligible compensation on a pre-tax or after-tax (Roth) basis, up to the statutorily prescribed annual limits on contributions under the Internal Revenue Code of 1986, as amended (the "Internal Revenue Code"). Contributions are allocated to each participant's individual account and are then invested in selected investment alternatives according to the participant's directions. We make matching contributions into the 401(k) plan on behalf of participants equal to 100% on participant contributions up to 4% of their eligible compensation. Participants are immediately and fully vested in all contributions. The 401(k) plan is intended to be qualified under Section 401(a) of the Internal Revenue Code with the 401(k) plan's related trust intended to be tax exempt under Section 501(a) of the Internal Revenue Code. Our Board may elect to adopt additional qualified or nonqualified benefit plans in the future, if it determines that doing so is in our best interest.

Clawback Policy

We have adopted a policy providing for the recovery of erroneously awarded incentive-based compensation received by executive officers employed by the Company or a subsidiary of the Company during an applicable recovery period (the "Clawback Policy"), effective as of October 2, 2023. Under the Clawback Policy, in the event that financial results upon which a cash or equity-based incentive award was based become the subject of a financial restatement that is required because of material non-compliance with financial reporting requirements, the Compensation Committee will conduct a review of awards covered by the Clawback Policy and recoup any erroneously awarded incentive-based compensation to ensure that the ultimate award reflects the financial results as restated. The Clawback Policy covers any cash or equity-based incentive compensation award that was paid, earned or granted to covered executive officers during the last completed three fiscal years immediately preceding the date on which the Company is required to prepare the accounting restatement.

Timing of Equity Awards

We did not grant stock options or similar instruments to our named executive officers in 2024. While we have no set policy or practice regarding the timing of stock option awards or similar instruments in relation to the disclosure of material nonpublic information, we do not time the release of material information to affect the value of stock options. In general, the timing of stock option awards is dictated by the event or circumstance giving rise to the award and the schedules of the directors responsible for approving the award. If, in the future, a stock option grant is made at a time that material nonpublic information exists, the directors approving the award would be responsible for considering the anticipated effect of that information on our stock price and would take such effect into account when sizing and pricing the award.

DIRECTOR COMPENSATION

Director Compensation Program

Our directors set compensation for non-employee directors on an annual basis in accordance with our 2015 Plan. Our non-employee directors received the following compensation for service to the Board during 2024:

Cash Compensation:

- \$50,000 annual retainer;
- \$10,000 additional annual retainer for the Chairman of the Board; and
- \$10,000 additional annual retainer for the Audit Committee Chair.

Equity Compensation:

- Options Award Grant: 30,000 options, which shall vest annually in equal installments over 3 years starting on January 1 following the year they were granted, subject to the director's continued service on the Board on such date.

In addition, each non-employee director receives reimbursement for reasonable travel expenses incurred in attending meetings of our Board and meetings of committees of our Board.

Director Compensation Table

The following table sets forth the cash and other compensation we paid to the non-employee members of our Board for all services in all capacities during 2024.

Name	Fees Earned or Paid in Cash(\$)(1)	Option Awards (\$)(2)	All Other Compensation (\$)	Total (\$)(3)
Lindsay A. Rosenwald	—	64,530	—	64,530
Jay Kranzler, M.D., PhD	60,000	64,530	50,000(4)	174,530
Faith Charles	50,000	64,530	—	114,530
Neil Herskowitz	60,000	64,530	—	124,530
Curtis Oltmans	50,000	64,530	—	114,530

(1) Represents cash retainer for serving on our Board and committees of the Board, as applicable.

(2) Reflects the aggregate grant date fair value of options granted during the fiscal year calculated in accordance with FASB ASC Topic 718. The Company estimates the fair value of options granted using the Black-Scholes options pricing model on the date of the grant, using the assumption described in Note 7 to the Company's Annual Report on Form 10-K for the year ended December 31, 2024. The options vest annually in equal installments on January 1, 2025 - 2027.

(3) As of December 31, 2024, the aggregate number of options issued to each non-employee director that remains unvested was as follows: Dr. Rosenwald, 30,890 options; Dr. Kranzler, 30,890 options; Ms. Charles, 30,890 options; Mr. Herskowitz, 30,890 options; Mr. Oltmans, 30,890 options.

(4) Reflects quarterly consulting fees of \$12,500 paid by Baergic, pursuant to a consulting agreement between Dr. Kranzler and Baergic, effective December 1, 2020, whereby Dr. Kranzler provides consulting and advisory services related to his expertise in neuroscience to Baergic in exchange for this quarterly fee. This agreement was terminated in October 2025.

As an employee director of the Company, Dr. MacLean does not receive compensation for her service as a director. Information regarding Dr. MacLean's compensation is provided above under "Summary Compensation Table."

PAY VERSUS PERFORMANCE DISCLOSURE

The following table shows the past three fiscal years' total compensation for our named executive officers as set forth in the Summary Compensation Table for each applicable year, the "compensation actually paid" to our named executive officers (as determined under SEC rules), our total shareholder return ("TSR"), and our net income.

SEC rules require certain adjustments be made to the Summary Compensation Table totals to determine Compensation Actually Paid as reported in the Pay Versus Performance Table. Compensation Actually Paid does not necessarily represent cash and/or equity value transferred to the applicable named executive officer without restriction, but rather is a valuation calculated under applicable SEC rules. In general, Compensation Actually Paid is calculated as Summary Compensation Table total compensation adjusted to include the fair market value of equity awards as of December 31, 2024 or, if earlier, the vesting date (rather than the grant date).

Year	Summary Compensation Table Total for PEO (Alexandra MacLean)(1)	Compensation Actually Paid to PEO (Alexandra MacLean)(1)(5)	Summary Compensation Table Total for PEO (Lucy Lu)(2)	Compensation Actually Paid to PEO (Lucy Lu)(2)	Summary Compensation Table Total for PEO (David Jin)(3)	Compensation Actually Paid to PEO (David Jin)(3)	Average Summary Compensation Table Total for Non-PEO Named Executive Officers ("NEOs")(4)	Average Compensation Actually Paid to Non-PEO NEOs(4)	Value of Initial Fixed \$100 Investment Based on Total Shareholder Return ("TSR")	Net Income (Loss) (millions)
2024	\$ 840,100	\$ 728,602	\$ —	\$ —	\$ 155,350	\$ 115,870	\$ 155,350	\$ 115,870	0.03	\$ (11.7)
2023	1,213,200	659,200	—	—	—	—	260,000	76,875	0.18	(10.4)
2022	300,543	300,543	570,859	830,801	—	—	10,668	58,707	1.30	(3.6)

(1) Dr. MacLean was the Company's PEO starting August 2022.

(2) Dr. Lu was the Company's PEO through March 2022.

(3) Mr. Jin was the Company's PEO from March 2022 to August 2022, and remained a Non-PEO NEO through the end of 2022. Mr. Jin received no cash or equity compensation for serving as PEO in 2022.

(4) For the 2024 fiscal year, our only Non-PEO NEO was David Jin. For the 2023 fiscal year, our only Non-PEO NEO was David Jin. For the 2022 fiscal year, our Non-PEO NEOs were: David Jin after August 2022 and Joseph Vazzano until January 2022. Mr. Jin received no cash or equity compensation for serving as Non-PEO NEO in 2022.

(5) The amounts disclosed reflect the adjustments listed in the table below to the amounts reported in the Summary Compensation Table for PEOs and Non-PEO NEOs:

Year	Executive(s)	Less: Grant Date Value of Current Equity Awards	Plus: Value of Current Unvested Awards at Year-End	Plus: Vesting Date Value of Awards that Vested During the Year	Plus: Year-Over-Year Change in Fair Value of Unvested Awards	Plus: Change in Value of Awards Vesting During the Current Year	Dividends on Unvested Awards	Total Adjustments
2024	Alexandra MacLean	\$ (406,300)	\$ 345,919	\$ 4,482	\$ (38,070)	\$ (17,529)	\$ —	\$ (111,498)
	David Jin	(155,350)	131,850	1,401	(11,902)	(5,479)	—	(39,480)

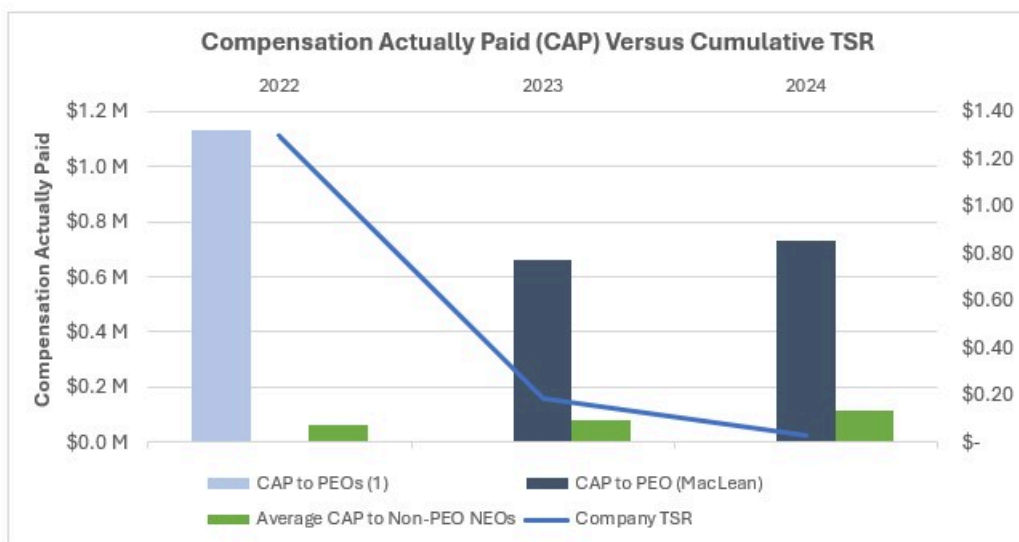
Analysis of the Information Presented in the Pay Versus Performance Table

Compensation Actually Paid and Net Income (Loss)

Due to the (1) nature of our Company's primary focus on research and development of therapies for the treatment of neurologic diseases, our company has not historically utilized net income (loss) as a performance measure for our executive compensation program, and (2) significant turnover in our PEO and non-PEO NEO roles in the period from 2022-2024, accordingly, there is little correlation between the Compensation Actually Paid to our NEOs and our net income (loss).

PEO and Non-PEO NEO Compensation Actually Paid and Company TSR

The following chart sets forth the relationship between Compensation Actually Paid to our PEO(s), the average of Compensation Actually Paid to our Non-PEO NEO(s), and the Company's TSR over the period covering fiscal years 2022, 2023 and 2024.



(1) Sum of all PEO compensation in 2022.

All information provided above under the "Pay Versus Performance" heading will not be deemed to be incorporated by reference in any filing of our company under the Securities Act of 1933, as amended, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

RELATED-PERSON TRANSACTIONS

The written charter of the Audit Committee authorizes, and the Nasdaq Stock Market listing rules require, the Audit Committee to review and approve related-party transactions. In reviewing related-party transactions, the Audit Committee applies the basic standard that transactions with affiliates should be made on terms no less favorable to the Company than could have been obtained from unaffiliated parties. Therefore, the Audit Committee reviews the benefits of the transactions, terms of the transactions and the terms available from unrelated third parties, as applicable. All transactions other than compensatory arrangements between the Company and its officers, directors, principal stockholders and their affiliates will be approved by the Audit Committee or a majority of the disinterested directors, and will continue to be on terms no less favorable to the Company than could be obtained from unaffiliated third parties. All share figures in this section give effect to the 1-for-75 reverse stock split effected on April 26, 2024.

The following is a summary of each transaction or series of similar transactions since January 1, 2023 to which Avenue was or is a party and that:

- the amount involved exceeded or exceeds the lesser of \$120,000 or 1% of the average of our total assets at year-end for the last two completed fiscal years; and
- any of our directors or executive officers, any holder of 5% of our capital stock or any member of their immediate family had or will have a direct or indirect material interest.

Founders Agreement with Fortress

Fortress entered into a Founders Agreement with the Company in February 2015, pursuant to which Fortress assigned to the Company all of its rights and interest under Fortress's license agreement with Revogenex Ireland Ltd. for IV tramadol (the "License Agreement"). As consideration therefor, the Company assumed \$3.0 million in debt that Fortress had accumulated for expenses and costs of forming the Company and obtaining the IV tramadol license. This debt was repaid to Fortress in 2017. As additional consideration for the transfer of rights under the Founders Agreement, the Company also agreed to: (i) issue annually to Fortress, on the anniversary date of the Founders Agreement, shares of Common Stock equal to two and one half percent (2.5%) of the fully-diluted outstanding equity of the Company at the time of issuance (the "Annual Equity Fee"); (ii) pay an equity fee in shares of the Company Common Stock, payable within five (5) business days of the closing of any equity or debt financing for the Company or any of its respective subsidiaries that occurs after the effective date of the Founders Agreement and ending on the date when Fortress no longer has majority voting control in the Company's voting equity, equal to two and one half percent (2.5%) of the gross amount of any such equity or debt financing (the "Financing Equity Fee"); and (iii) pay a cash fee equal to four and one half percent (4.5%) of the Company's annual net sales, payable on an annual basis, within ninety (90) days of the end of each calendar year. In the event of a change in control (as it is defined in the Founders Agreement), Fortress is to be paid a one-time change in control fee equal to five (5x) times the product of (x) net sales for the twelve (12) months immediately preceding the change in control and (y) four and one-half percent (4.5%).

On September 13, 2016, the Company entered into an Amended and Restated the Founders Agreement, ("A&R Founders Agreement") with Fortress. The A&R Founders Agreement removed the Annual Equity Fee (though that mechanism was concurrently added as a feature of the Class A Preferred Stock, per the below) and added a term of 15 years, which upon expiration automatically renews for successive one-year periods unless terminated by Fortress or a Change in Control (as defined therein) occurs. Concurrently with the A&R Founders Agreement, the Company entered into an Exchange Agreement whereby the Company exchanged Fortress' 153,333 Class A common shares for approximately 2,223 shares of Common Stock and 250,000 shares of Class A Preferred Stock. Pursuant to the terms of the Class A Preferred Stock held exclusively by Fortress, Fortress is entitled to cast, for each share of Class A Preferred Stock held by Fortress, the number of votes that is equal to 1.1 times a fraction, the numerator of which is the sum of (A) the aggregate number of shares of outstanding Common Stock and (B) the whole shares of Common Stock into which the shares of outstanding the Class A Preferred Stock are convertible and the denominator of which is the aggregate number of shares of outstanding Class A Preferred Stock. Thus, Fortress will at all times have voting control of us. Further, for a period of ten years from the date of the first issuance of shares of Class A Preferred Stock, the holders of record of the shares of Class A Preferred Stock (or other capital stock or securities issued upon conversion of or in exchange for the Class A Preferred Stock), exclusively and as a separate class, are entitled to appoint or elect the majority of our directors; however, the Company and Fortress waived application of this provision of the certificate of incorporation, and the holders of the Common Stock voted together with the holders of the Class A Preferred Stock for all directors at our most recent annual meeting of stockholders, with the holders of the Class A Preferred Stock utilizing the supervoting rights described above. In addition, the holders of the Class A Preferred Stock (currently, only Fortress) are entitled to receive the Annual Equity Fee.

Pursuant to the Founders Agreement, for the year ended December 31, 2024, we issued common stock to Fortress of 43,772 shares as a Financing Equity Fee. Additionally, we issued common stock to Fortress of 699 shares as a Financing Equity Fee for the year ended December 31, 2023.

Management Services Agreement with Fortress

Effective as of February 17, 2015, Fortress entered into a Management Services Agreement (the “MSA”) with the Company to provide services to the Company pursuant to the terms of the MSA. Pursuant to the terms of the MSA, for an initial term of five (5) years (which initial term is subject to automatic five-year extensions unless terminated in certain cases), Fortress will render advisory and consulting services to the Company. Services provided under the MSA may include, without limitation, (i) advice and assistance concerning any and all aspects of the Company’s operations, clinical trials, financial planning and strategic transactions and financings and (ii) conducting relations on behalf of the Company with accountants, attorneys, financial advisors and other professionals (collectively, the “Services”). The Company is obligated to utilize clinical research services, medical education, communication and marketing services and investor relations/public relation services of companies or individuals designated by Fortress, provided those services are offered at market prices. However, the Company is not obligated to take or act upon any advice rendered from Fortress, and Fortress shall not be liable for any of the Company’s actions or inactions based upon Fortress’ guidance. Fortress and its affiliates have been contractually exempt from fiduciary duties to the Company relating to corporate opportunities. In consideration for the Services, the Company will pay Fortress an annual consulting fee of \$0.5 million (the “Annual Consulting Fee”), payable in advance in equal quarterly installments on the first business day of each calendar quarter in each year, provided, however, that such Annual Consulting Fee shall be increased to \$1.0 million for each calendar year in which the Company has net assets in excess of \$100.0 million at the beginning of the calendar year.

In connection with the Company’s execution of that certain Stock Purchase and Merger Agreement, dated as of November 12, 2018, by and among, *inter alia*, the Company, Fortress and InvaGen Pharmaceuticals Inc. (“InvaGen”) (such Stock Purchase and Merger Agreement, the “SPMA”), Fortress agreed, under a separate Waiver and Termination Agreement (the “Waiver Agreement”) to contractually suspend: (i) all of its entitlements under the A&R Founders Agreement and the MSA and (ii) certain of its rights as a shareholder of the Class A Preferred Stock (including receipt of the Annual Equity Fee). The Waiver Agreement (together with all other extant SPMA-related agreements between the Company and InvaGen) was terminated in October 2022, meaning that all features of the A&R Founders Agreement, MSA and Class A Preferred Stock have been restored to full effect.

For the years ended December 31, 2024 and 2023, we had expenses related to the MSA of \$250,000 and \$500,000, respectively. The MSA expenses are split between research and development and general and administrative expense in the consolidated statements of operations. \$125,000 and \$250,000 of expenses related to the MSA were recognized in research and development and general and administrative for the years ended December 31, 2024 and 2023, respectively. On November 13, 2024, we entered into a Subscription and Forgiveness Agreement with Fortress, whereby Fortress agreed to convert 50% of a total of \$0.5 million owed by us under the MSA into newly issued common stock of ours and forgive the remaining 50% of the accrued balance. Therefore, the Company issued a total of 122,850 shares based on the closing price of \$2.035 on the day prior to the execution of the agreement and reduced its liabilities associated with accounts payable and accrued expenses by \$0.5 million.

Acquisition of Baergic

In November 2022, we completed a Share Contribution Agreement, dated May 11, 2022 (the “Share Contribution Agreement”) with Fortress to acquire the shares in Baergic Bio, Inc. (“Baergic”), which is developing BAER-101, a novel $\alpha 2/3$ -subtype-selective GABA A positive allosteric modulator (“PAM”). At the closing of the Share Contribution Agreement, Fortress transferred ownership of 100% of its shares (common and preferred) in Baergic, which was then a privately held subsidiary of Fortress. Under the Share Contribution Agreement, Fortress also agreed to assign to us certain intercompany agreements existing between Fortress and Baergic, including a Founders Agreement and Management Services Agreement. As a result of the transaction, Baergic is a majority-controlled and owned subsidiary of the Company. We did not pay any cash or issue any securities to Fortress in consideration of its shares of Baergic.

Founders Agreement and Management Services Agreement with Baergic

Pursuant to the Share Contribution Agreement between Avenue and Fortress, the Founders Agreement and Management Services Agreement that had previously been existing between Fortress and Baergic were assigned to Avenue, such that they now exist between Avenue and Baergic; those agreements are referred to herein as the Avenue-Baergic Founders Agreement and the Avenue-Baergic MSA, as applicable. The Annual Stock Dividend payable to the Company is 2.5% of common stock calculated as a percentage of fully diluted outstanding capital and became effective as of *November 8, 2022*.

The Avenue-Baergic Founders Agreement has an effective date of *March 9, 2017*, and a term of *15* years, which upon expiration automatically renews for successive *one*-year periods unless terminated by Avenue and Baergic or a Change in Control (as defined in the Avenue-Baergic Founders Agreement) occurs.

As additional consideration under the Avenue-Baergic Founders Agreement, Baergic will also: (i) pay an equity fee in shares of common stock, payable within *five* (5) business days of the closing of any equity or debt financing for Baergic that occurs after the effective date of the Avenue-Baergic Founders Agreement and ends on the date when Avenue *no* longer has majority voting control in the Baergic’s voting equity, equal to *two* and *one-half* (2.5%) of the gross amount of any such equity or debt financing; and (ii) pay a cash fee equal to *four* and *one-half* percent (4.5%) of the Baergic’s annual net sales, payable on an annual basis, within *ninety* (90) days of the end of each calendar year. In the event of a Change in Control, Baergic will pay a *one-time* change in control fee equal to *five* (5x) times the product of (A) net sales for the *twelve* (12) months immediately preceding the change in control and (B) *four* and *one-half* percent (4.5%).

The Avenue-Baergic MSA has an effective date of *March 9, 2017*, pursuant to which Avenue renders management, advisory and consulting services to the Company. The Avenue-Baergic MSA has an initial term of five years and is automatically renewed for successive five-year terms unless terminated in accordance with its provisions. Services provided under the Avenue-Baergic MSA *may* include, without limitation, (i) advice and assistance concerning any and all aspects of the Baergic’s operations, clinical trials, financial planning and strategic transactions and financings and (ii) conducting relations on behalf of the Baergic with accountants, attorneys, financial advisors and other professionals (collectively, the “Avenue Services”). Baergic is obligated to utilize clinical research services, medical education, communication and marketing services and investor relations/public relation services of companies or individuals designated by Avenue, provided those services are offered at market prices. However, Baergic is *not* obligated to take or act upon any advice rendered from Avenue and Avenue shall *not* be liable for any of its actions or inactions based upon their advice. Pursuant to the Avenue-Baergic MSA and Baergic’s Certificate of Incorporation, Avenue and its affiliates, including all members of Baergic’s Board of Directors, will have *no* fiduciary or other duty to communicate or present any corporate opportunities to Baergic or to refrain from engaging in business that is similar to that of Baergic. In consideration for the Avenue Services, Baergic will pay Avenue an annual consulting fee of \$0.5 million (the “Avenue-Baergic Annual Consulting Fee”), payable in advance in equal quarterly installments on the *first* business day of each calendar quarter in each year, provided, however, that such Avenue-Baergic Annual Consulting Fee shall be increased to \$1.0 million for each calendar year in which Baergic has net assets in excess of \$100 million at the beginning of the calendar year.

The Avenue-Baergic Founders Agreement and Avenue-Baergic MSA were terminated on November 5, 2025 due to the sale of Baergic.

License Agreement with AnnJi Pharmaceutical

On February 28, 2023, we entered into a license agreement with AnnJi Pharmaceutical Co. Ltd., a Taiwanese company (“AnnJi”), whereby we obtained an exclusive license (the “License Agreement”) from AnnJi to intellectual property rights pertaining to the molecule known as JM17, which activates Nrf1 and Nrf2, enhances androgen receptor degradation and underlies AJ201, a clinical product candidate currently in a Phase 1b/2a clinical trial in the U.S. for the treatment of spinal and bulbar muscular atrophy (“SBMA”), also known as Kennedy’s Disease. Under the AnnJi License Agreement, in exchange for exclusive rights to the intellectual property underlying the AJ201 product candidates, Avenue paid \$3.0 million, issued shares of Avenue stock in two tranches, and agreed to make additional payments including: reimbursement of payments up to \$10.8 million in connection with the product’s Phase 1b/2a clinical trial, up to \$14.5 million in connection with certain development milestones pertaining to the first indication in the U.S., up to \$27.5 million in connection with certain drug development milestones pertaining to additional indications and development outside the U.S., up to \$165 million upon the achievement of certain net sales milestones ranging from \$75 million to \$750 million in annual net sales, and royalty payments based on a percentage of net sales ranging from mid-single digits to the low-double digits, which were subject to potential diminution in certain circumstances. On March 3, 2025, Avenue received a notice of AnnJi’s intent to terminate the AnnJi License Agreement, in which AnnJi asserted several bases for its right to terminate the AnnJi License Agreement.

On April 24, 2025 (the “Termination Effective Date”), Avenue and AnnJi entered into a License Termination and Program Transfer Agreement (the “Termination and Transfer Agreement”), pursuant to which: (i) the AnnJi License Agreement and related agreements were terminated with immediate effect; (ii) the parties dismissed all pending dispute resolution proceedings and provided mutual releases of claims; (iii) Avenue transferred to AnnJi all of its rights, title and interest to and under the assets arising under the AnnJi License Agreement and otherwise related to AJ201 and (iv) Avenue agreed not to, for 48 months following the date of the Termination and Transfer Agreement, develop, commercialize, manufacture or sell any product competing with AJ201 in the US, Canada, the European Union, Great Britain or Israel. Under the Termination and Transfer Agreement, Avenue will repurchase all shares of common stock held by AnnJi for an aggregate payment of \$1.00, and Avenue also made a payment of \$0.2 million to AnnJi as consideration for legal expenses, which was accounted for as consideration payable to a customer and reduced the amount of revenue recognized under the agreement.

AnnJi agreed to make payments to Avenue of \$1.6 million net of 20% tax withholding, with \$0.8 million having been collected in May 2025 and \$0.8 million collected in July 2025. The \$1.6 million, less the \$0.2 million as consideration for legal expenses, was recognized as other revenue as the performance obligations related to rights transferred to AnnJi were satisfied during the quarter ended June 30, 2025. Additionally, Avenue will be eligible to receive from AnnJi:

- payments totaling up to \$5 million in the aggregate upon the occurrence of certain development and regulatory milestone events pertaining to AJ201;
- payments totaling up to \$17 million in the aggregate upon AJ201 experiencing certain commercial sales milestone events;
- a 1.75% royalty on net sales of AJ201, which royalty percentage is subject to potential diminution in certain circumstances; and
- in the event that AnnJi enters into one or more subsequent licenses of rights to AJ201 with third party licensee(s), 15% of payments received by AnnJi from such licensee(s), up to a cap of \$7.5 million, and with a minimum of \$4 million owing under certain mechanism in the event of an approval of a New Drug Application in the U.S. with respect to AJ201.

September 2023 Private Placement

On September 8, 2023, we entered into an unwritten agreement with Fortress and Dr. Lindsay A. Rosenwald, a director on the Board (Dr. Rosenwald and Fortress, together, the “Private Placement Investors”), pursuant to which we agreed to issue and sell 10,227 shares (the “September 2023 Private Placement Shares”) of our common stock (the “September 2023 Private Placement”). The September 2023 Private Placement Shares were purchased by the September 2023 Private Placement Investors at a price per share of \$53.775, which was the “consolidated closing bid price” of the common stock on Nasdaq as of September 7, 2023, in compliance with Nasdaq Listing Rule 5365(c). The net proceeds to us from the September 2023 Private Placement, after deducting offering expenses, were approximately \$0.6 million.

STOCK OWNERSHIP OF OUR DIRECTORS, EXECUTIVE OFFICERS, AND 5% BENEFICIAL OWNERS

The following table shows information, as of November 25, 2025 (the “Determination Date”), concerning the beneficial ownership of our Common Stock by:

- each person we know to be the beneficial owner of more than 5% of our Common Stock;
- each of our current directors;
- each of our NEOs shown in our Summary Compensation Table; and
- all current directors and executive officers as a group.

As of the Determination Date, there were 3,183,426 shares of our Common Stock outstanding. Beneficial ownership is determined according to the rules of the SEC and generally means that a person has beneficial ownership of a security if he, she or it possesses sole or shared voting or investment power of that security, including options and warrants that are currently exercisable or exercisable within 60 days of the Determination Date. Shares of our Common Stock issuable pursuant to stock options are deemed outstanding for computing the percentage of the person holding such options and the percentage of any group of which the person is a member but are not deemed outstanding for computing the percentage of any other person. Except as indicated by the footnotes below, we believe, based on the information furnished to us, that the persons named in the table below have sole voting and investment power with respect to all shares of Common Stock shown that they beneficially own, subject to community property laws where applicable. The information does not necessarily indicate beneficial ownership for any other purpose, including for purposes of Section 13(d) and 13(g) of the Exchange Act. All share figures in this section give effect to the 1-for-75 reverse stock split that became effective on April 26, 2024.

Unless otherwise indicated, the address for each director and executive officer listed is: c/o Avenue Therapeutics, Inc., 1111 Kane Concourse, Suite 301, Bay Harbor Islands, Florida 33154.

Name of Beneficial Owner	Number of Shares Owned	Shares Under Exercisable Options and Unvested Restricted Stock Units (1)	Percentage of Shares Beneficially Owned
Jay Kranzler, M.D., PhD, <i>Chairman of the Board of Directors</i>	559	21,334	*%
Alexandra MacLean, M.D., <i>Chief Executive Officer and Director</i>	—	135,504(2)	4.2%
David Jin, <i>Chief Operating Officer and Interim Chief Financial Officer</i>	—	51,251(3)	1.6%
Faith Charles, <i>Director</i>	—	21,334	*%
Neil Herskowitz, <i>Director</i>	97	21,334	*%
Curtis Oltmans, <i>Director</i>	44	21,334	*%
Lindsay A. Rosenwald, M.D., <i>Director</i>	4,820(4)	21,334	*%
All Executive officers and directors as a group (7 persons)	5,520	293,422	8.6%
5% or Greater Stockholders:			
Fortress Biotech, Inc.	328,524(5)	—	10.3%
1111 Kane Concourse, Suite 301 Bay Harbor Islands, Florida 33154			

*Less than 1% of our common stock outstanding

(1) Includes the rights to acquire beneficial ownership of common stock within 60 days of the Determination Date pursuant to currently vested and exercisable stock options.

(2) Includes 127,500 deferred restricted stock units and 8,001 stock options.

(3) Includes 48,750 deferred restricted stock units and 2,501 stock options.

(4) Includes 149 shares of common stock issuable upon exercise of warrants held by Dr. Rosenwald. The warrants were issued by Fortress and are currently exercisable for shares of our common stock that are owned by Fortress. These do not represent equity compensation by us to Dr. Rosenwald.

(5) Includes 222 shares of common stock into which Fortress’ 250,000 shares of Class A Preferred Stock may be converted at any time.

For purposes of the above table, a person is deemed to be the beneficial owner of any shares of Common Stock (i) over which the person has or shares, directly or indirectly, voting or investment power, or (ii) of which the person has a right to acquire beneficial ownership at any time within 60 days after the date of this report. “Voting power” is the power to vote or direct the voting of shares and “investment power” includes the power to dispose or direct the disposition of shares.

The following table shows information, as of the Determination Date, concerning the beneficial ownership of our Class A Preferred Stock:

Name and Address of Beneficial Owner ⁽¹⁾	Class A Preferred Stock Beneficially Owned	
	Number of Shares and Nature of Beneficial Ownership ⁽²⁾	Percentage of Total Class A Preferred Stock
Fortress Biotech, Inc.	250,000	100%

(1) The address of Fortress Biotech, Inc. is c/o Fortress Biotech, Inc., 1111 Kane Concourse Suite 301 Bay Harbor Islands, FL 33154.

(2) Converts into 222 shares of common stock.

EQUITY COMPENSATION PLAN INFORMATION

The following table sets forth the indicated information as of December 31, 2024 with respect to our equity compensation plans:

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights (a)(1)	Weighted- Average Exercise Price of Outstanding Options, Warrants and Rights (2)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column(a))
Equity compensation plan approved by shareholders	492,502	\$ 9.74	4,575,701
Equity compensation plan not approved by shareholders	—	—	—
Total	492,502	\$ 9.74	4,575,701

(1) Includes 177 RSAs, 235,851 RSUs and 256,474 stock options.

(2) Stock options only. RSUs do not have exercise prices and are therefore excluded.

Our equity compensation plan consists of the 2015 Plan, as amended, which was approved by our stockholders. We do not have any equity compensation plans or arrangements that have not been approved by our stockholders.

PROPOSAL NO. 1

ELECTION OF DIRECTORS; NOMINEES

Our Bylaws provide that the Board shall consist of not more than nine nor less than one member, as determined from time to time by resolution of the Board. Our Board currently consists of six members. The persons nominated for election as director are: Faith Charles, Neil Herskowitz, Jay Kranzler, M.D., PhD, Alexandra MacLean, M.D., Curtis Oltmans and Lindsay A. Rosenwald, M.D. For information about each of the nominees and our Board generally, please see “*Corporate Governance — Our Board of Directors*” beginning on page 6. If elected, the nominees will hold office until the next Annual Meeting of Stockholders and until a respective successor is elected and has been qualified, or until such director dies, resigns, or is removed from office. Each nominee listed above has consented to being named in this proxy statement and has agreed to serve if elected. Management expects that each of the nominees will be available for election, but if any of them is unable to serve at the time the election occurs, your proxy will be voted for the election of another nominee to be designated by a majority of the independent directors serving on our Board.

If a choice is specified on the proxy card, in an Internet vote or in a mobile device vote by the stockholder, the shares will be voted as specified. If no specification is made, the shares will be voted “FOR” all of the nominees. The affirmative vote of the holders of a plurality of the shares of our Common Stock and our preferred stock, voting together as a single class, present virtually or represented by proxy and entitled to vote on the election of directors at the annual meeting at which a quorum is present is required for the election of the nominees.

The Board unanimously recommends a vote “FOR” the election of all of the nominees for director.

PROPOSAL NO. 2

**RATIFICATION OF APPOINTMENT OF KPMG LLP AS OUR INDEPENDENT
REGISTERED PUBLIC ACCOUNTING FIRM**

The Board is submitting the selection KPMG LLP as our independent registered public accounting firm for the year ending December 31, 2025 to the stockholders for ratification at our Annual Meeting. Stockholder ratification of our independent registered public accounting firm is not required by our Bylaws or otherwise. If KPMG LLP is not ratified as our independent registered public accounting firm by a majority of the shares present or represented by proxy, the Audit Committee will review its future selection of an independent registered public accounting firm. KPMG LLP will still serve as our independent registered public accounting firm for the year ending December 31, 2025, even if it is not ratified by our stockholders.

The affirmative vote of the majority of shares present virtually or represented by proxy at the Annual Meeting and entitled to vote on the subject matter is required for the ratification of the appointment of KPMG LLP as the Company's independent registered public accounting firm for the year ending December 31, 2025.

The Board unanimously recommends a vote “FOR” ratification of the appointment of KPMG LLP as the Company’s independent registered public accounting firm for the year ending December 31, 2025.

ADDITIONAL INFORMATION

Householding of Annual Meeting Materials

Some banks, brokerage firms or other nominee record holders may be participating in the practice of “householding” proxy materials and annual reports. This means that only a single set of the proxy statement and Annual Report on Form 10-K for the fiscal year ended December 31, 2024, may have been sent to multiple stockholders in your household. We will promptly deliver a separate copy of any document to you if you contact us at: Avenue Therapeutics, Inc., 1111 Kane Concourse, Suite 301, Bay Harbor Islands, Florida 33154, Attn: David Jin. You may also contact us at (781) 652-4500.

If you want to receive separate copies of the proxy materials and annual report in the future, or if you are receiving multiple copies and would like to receive only one copy for your household, you should contact your bank, brokerage firm or other nominee record holder, or you may contact us at the above address or phone number

Stockholder Proposals for Our 2026 Annual Meeting

Only proper proposals under Rule 14a-8 of the Exchange Act which are timely received will be included in the proxy materials for our next annual meeting. In order to be considered timely, such proposal must be received by our Corporate Secretary, David Jin, at 1111 Kane Concourse, Suite 301, Bay Harbor Islands, Florida 33154, no later than August 7, 2026, which is 120 calendar days prior to the anniversary of the date of this year’s proxy statement. We suggest that stockholders submit any stockholder proposal by certified mail, return receipt requested.

Our Bylaws require stockholders to provide advance notice to the Company of any stockholder director nomination(s) and any other matter a stockholder wishes to present for action at an annual meeting of stockholders (other than matters to be included in our proxy statement, which are discussed in the previous paragraph). In order to properly bring business before an annual meeting, our Bylaws require, among other things, that the stockholder submit written notice thereof complying with our Bylaws to David Jin, our Corporate Secretary, at the above address, not less than 50 days nor more than 90 days prior to the anniversary of the preceding year’s annual meeting. Therefore, the Company must receive notice of a stockholder proposal submitted other than pursuant to Rule 14a-8 (as discussed above) no sooner than November 10, 2026, and no later than October 1, 2026. If a stockholder fails to provide timely notice of a proposal to be presented at our 2026 Annual Meeting of Stockholders, the proxy designated by our Board will have discretionary authority to vote on any such proposal that may come before the meeting. Stockholders are advised to review our Bylaws, which contain additional requirements about advance notice of stockholder proposals.

In addition to satisfying the foregoing requirements under our Bylaws, to comply with the universal proxy rules, stockholders who intend to solicit proxies in support of director nominees other than the Company’s nominees must provide notice that sets forth the information required by Rule 14a-19 of the Exchange Act no later than November 2, 2026.

Other Matters

Our Board does not know of any other matters that may come before the Annual Meeting. However, if any other matters are properly presented to the Annual Meeting, it is the intention of the person named in the accompanying proxy card to vote, or otherwise act, in accordance with their judgment on such matters.

Solicitation of Proxies

We will bear the cost of solicitation of proxies. In addition to the solicitation of proxies by mail, our officers and employees may solicit proxies in person or by telephone. We may reimburse brokers or persons holding stock in their names, or in the names of their nominees, for their expenses in sending proxies and proxy material to beneficial owners.

Incorporation of Information by Reference

The Audit Committee Report contained in this proxy statement is not deemed filed with the SEC and shall not be deemed incorporated by reference into any prior or future filings made by us under the Securities Act of 1933, as amended or the Exchange Act, except to the extent that we specifically incorporate such information by reference. Our Annual Report on Form 10-K for the year ended December 31, 2024, delivered to you together with this proxy statement, is hereby incorporated by reference.

AVENUE THERAPEUTICS, INC.
1111 KANE CONCOURSE, SUITE 301
BAY HARBOR ISLANDS, FLORIDA 33154



SCAN TO
VIEW MATERIALS & VOTE

VOTE BY INTERNET

Before The Meeting - Go to www.proxyvote.com or scan the QR Barcode above

Use the Internet to transmit your voting instructions and for electronic delivery of information. Vote by 11:59 PM, Eastern Time on December 29, 2025. Have your proxy card in hand when you access the web site and follow the instructions to obtain your records and to create an electronic voting instruction form.

During The Meeting - Go to www.virtualshareholdermeeting.com/ATXI2025

You may attend the meeting via the Internet and vote during the meeting. Have the information that is printed in the box marked by the arrow available and follow the instructions.

VOTE BY MOBILE DEVICE

Use any smartphone or tablet to scan the QR Barcode above using the QR Reader, and you will be taken directly to the Internet voting website. Vote by 11:59 PM, Eastern Time on December 29, 2025. Have your proxy card in hand when you visit the Internet voting website and then follow the instructions.

VOTE BY MAIL

Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.

TO VOTE, MARK BLOCKS BELOW IN BLUE OR BLACK INK AS FOLLOWS:

V81632-P41598

KEEP THIS PORTION FOR YOUR RECORDS
DETACH AND RETURN THIS PORTION ONLY

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

AVENUE THERAPEUTICS, INC.

The Board of Directors recommends you vote **FOR ALL** the following:

1. Election of Directors

Nominees:

01) Jay Kranzler	04) Alexandra MacLean
02) Faith Charles	05) Curtis Oltmans
03) Neil Herskowitz	06) Lindsay A. Rosenwald

For All Withhold For All
All All Except

☐ ☐ ☐

To withhold authority to vote for any individual nominee(s), mark "For All Except" and write the number(s) of the nominee(s) on the line below.

The Board of Directors recommends you vote **FOR** the following proposal:

2. Ratify the appointment of KPMG LLP as our independent registered public accounting firm for the year ending December 31, 2025.

For Against Abstain

☐ ☐ ☐

NOTE: The proxies are authorized to act upon such other business as may properly come before the meeting or any adjournment or postponement thereof.

Please sign exactly as your name(s) appear(s) hereon. When signing as attorney, executor, administrator, or other fiduciary, please give full title as such. Joint owners should each sign personally. All holders must sign. If a corporation or partnership, please sign in full corporate or partnership name by authorized officer.

Signature [PLEASE SIGN WITHIN BOX] Date

Signature (Joint Owners) Date

Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting:
The Notice and Proxy Statement and Annual Report are available at www.proxyvote.com.

V81633-P41598

**AVENUE THERAPEUTICS, INC.
Annual Meeting of Stockholders
December 30, 2025 10:00 AM Eastern Time
This proxy is solicited by the Board of Directors**

The stockholder(s) hereby appoint(s) Alexandra MacLean, M.D. and David Jin, or either of them, as proxies, each with the power to appoint his or her substitute, and hereby authorize(s) them to represent and to vote, as designated on the reverse side of this ballot, all of the shares of (Common/Preferred) stock of AVENUE THERAPEUTICS, INC. that the stockholder(s) is/are entitled to vote at the Annual Meeting of Stockholders to be held at 10:00 AM, Eastern Time on December 30, 2025, live via the internet at www.virtualshareholdermeeting.com/ATXI2025, and at any adjournment or postponement thereof.

This proxy, when properly executed, will be voted in the manner directed herein. If no such direction is made, this proxy will be voted in accordance with the Board of Directors' recommendations.

Continued and to be signed on reverse side