

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

SCHEDULE 14A
(Rule 14a-101)
INFORMATION REQUIRED IN PROXY STATEMENT
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

Lyra 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 all boxes that apply):

- No fee required
 - Fee paid previously with preliminary materials
 - Fee computed on table in exhibit required by Item 25(b) per Exchange Act Rules 14a-6(i)(1) and 0-11
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Lyra Therapeutics, Inc.

NOTICE & PROXY STATEMENT

Annual Meeting of Stockholders

May 14, 2025

8:00 a.m. (Eastern time)

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LYRA THERAPEUTICS, INC.
480 ARSENAL WAY
WATERTOWN, MASSACHUSETTS 02472

[●], 2025

To Our Stockholders:

You are cordially invited to attend the 2025 Annual Meeting of Stockholders (the “Annual Meeting”) of Lyra Therapeutics, Inc. at 8:00 a.m. Eastern time, on Wednesday, May 14, 2025. The Annual Meeting will be a completely virtual meeting, which will be conducted via live webcast.

The Notice of Meeting and Proxy Statement on the following pages describe the matters to be presented at the Annual Meeting. Please see the section called “Who can attend the Annual Meeting?” on page [●] of the proxy statement for more information about how to attend the meeting online.

Whether or not you attend the Annual Meeting online, it is important that your shares be represented and voted at the Annual Meeting. Therefore, I urge you to promptly vote and submit your proxy by phone, via the Internet, or, if you received paper copies of these materials, by signing, dating and returning the enclosed proxy card in the enclosed envelope, which requires no postage if mailed in the United States. If you have previously received our Notice of Internet Availability of Proxy Materials, then instructions regarding how you can vote are contained in that notice. If you have received a proxy card, then instructions regarding how you can vote are contained on the proxy card. If you decide to attend the Annual Meeting, you will be able to vote online, even if you have previously submitted your proxy.

Thank you for your support.

Sincerely,

[●]

Maria Palasis, Ph.D.
President and Chief Executive Officer and Director

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LYRA THERAPEUTICS, INC.
480 Arsenal Way
Watertown, Massachusetts 02472

**NOTICE OF ANNUAL MEETING OF STOCKHOLDERS
TO BE HELD WEDNESDAY, MAY 14, 2025**

The Annual Meeting of Stockholders (the “Annual Meeting”) of Lyra Therapeutics, Inc., a Delaware corporation (the “Company”), will be held at 8:00 a.m. Eastern time on Wednesday, May 14, 2025. The Annual Meeting will be a completely virtual meeting, which will be conducted via live webcast.

You will be able to attend the Annual Meeting online and submit your questions during the meeting by visiting www.virtualshareholdermeeting.com/LYRA2025 and entering your 16-digit control number included in your Notice of Internet Availability of Proxy Materials, on your proxy card or on the instructions that accompanied your proxy materials. The Annual Meeting will be held for the following purposes:

- To elect C. Ann Merrifield and Harlan W. Waksal, M.D. as Class II Directors to serve until the Company’s 2028 Annual Meeting of Stockholders, and until their respective successors shall have been duly elected and qualified;
- To ratify the appointment of BDO USA, P.C. as our independent registered public accounting firm for the fiscal year ending December 31, 2025;
- To approve amendments to the Company’s Restated Certificate of Incorporation, as amended, to effect a reverse stock split of our common stock at a ratio ranging from any whole number between 1-for-10 and 1-for-50, as determined by our Board of Directors in its discretion (the “Reverse Stock Split Proposal”);
- To approve an adjournment of the Annual Meeting, if necessary, to solicit additional proxies if there are not sufficient votes at the time of the Annual Meeting to approve the Reverse Stock Split Proposal (the “Adjournment Proposal”); and
- To transact such other business as may properly come before the Annual Meeting or any continuation, postponement, or adjournment of the Annual Meeting.

Holders of record of our common stock as of the close of business on March 18, 2025 are entitled to notice of and to vote at the Annual Meeting, or any continuation, postponement or adjournment of the Annual Meeting. A complete list of such stockholders will be open to the examination of any stockholder for a period of ten days prior to the Annual Meeting for a purpose germane to the meeting by sending an email to Jason Cavalier, Chief Financial Officer and Treasurer, at jcavalier@lyratx.com, stating the purpose of the request and providing proof of ownership of Company stock. The Annual Meeting may be continued or adjourned from time to time without notice other than by announcement at the Annual Meeting.

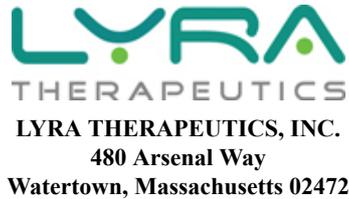
It is important that your shares be represented regardless of the number of shares you may hold. Whether or not you plan to attend the Annual Meeting online, we urge you to vote your shares via the toll-free telephone number or over the Internet, as described in the enclosed materials. If you receive a copy of the proxy card by mail, you may sign, date and mail the proxy card in the enclosed return envelope. Promptly voting your shares will ensure the presence of a quorum at the Annual Meeting and will save us the expense of further solicitation. Submitting your proxy now will not prevent you from voting your shares at the Annual Meeting if you desire to do so, as your proxy is revocable at your option.

By Order of the Board of Directors,

[•]

Jason Cavalier
Chief Financial Officer and Treasurer
Watertown, Massachusetts

[•], 2025



PROXY STATEMENT

This proxy statement is furnished in connection with the solicitation by the Board of Directors of Lyra Therapeutics, Inc. of proxies to be voted at our Annual Meeting of Stockholders to be held on Wednesday, May 14, 2025 (the “Annual Meeting”), at 8:00 a.m. Eastern time, and at any continuation, postponement, or adjournment of the Annual Meeting. The Annual Meeting will be a completely virtual meeting, which will be conducted via live webcast. You will be able to attend the Annual Meeting online and submit your questions during the meeting by visiting www.virtualshareholdermeeting.com/LYRA2025 and entering your 16-digit control number included in your Notice of Internet Availability of Proxy Materials, on your proxy card or on the instructions that accompanied your proxy materials.

Holders of record of shares of our common stock, \$0.001 par value per share, as of the close of business on March 18, 2025 (the “Record Date”), will be entitled to notice of and to vote at the Annual Meeting and any continuation, postponement, or adjournment of the Annual Meeting. As of the Record Date, there were 65,880,145 shares of common stock outstanding and entitled to vote at the Annual Meeting. Each share of common stock is entitled to one vote on any matter presented to stockholders at the Annual Meeting.

This proxy statement and the Company’s Annual Report to Stockholders for the year ended December 31, 2024 (the “2024 Annual Report”) will be released on or about [●], 2025 to our stockholders on the Record Date.

Unless otherwise indicated, in this proxy statement, “Lyra,” “Company,” “we,” “us,” and “our” refer to Lyra Therapeutics, Inc.

IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS FOR THE STOCKHOLDER MEETING TO BE HELD ON WEDNESDAY, MAY 14, 2025

**This Proxy Statement and our 2024 Annual Report to Stockholders are available at
www.proxyvote.com**

Proposals

At the Annual Meeting, our stockholders will be asked:

- To elect C. Ann Merrifield and Harlan W. Waksal, M.D as Class II Directors to serve until the Company’s 2028 Annual Meeting of Stockholders, and until their respective successors shall have been duly elected and qualified;
- To ratify the appointment of BDO USA, P.C. as our independent registered public accounting firm for the fiscal year ending December 31, 2025;
- To approve amendments to the Company’s Restated Certificate of Incorporation, as amended, to effect a reverse stock split of our common stock at a ratio ranging from any whole number between 1-for-10 and 1-for-50, as determined by our Board of Directors in its discretion (the “Reverse Stock Split Proposal”);

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- To approve an adjournment of the Annual Meeting, if necessary, to solicit additional proxies if there are not sufficient votes at the time of the Annual Meeting to approve the Reverse Stock Split Proposal (the “Adjournment Proposal”); and
- To transact such other business as may properly come before the Annual Meeting or any continuation, postponement, or adjournment of the Annual Meeting.

Recommendations of the Board

The Board of Directors (the “Board”) recommends that you vote your shares as indicated below. If you return a properly completed proxy card, or vote your shares by telephone or Internet, your shares of common stock will be voted on your behalf as you direct. If not otherwise specified, the shares of common stock represented by the proxies will be voted, and the Board recommends that you vote:

- FOR the election of C. Ann Merrifield and Harlan W. Waksal, M.D as Class II Directors;
- FOR the ratification of the appointment of BDO USA, P.C. as our independent registered public accounting firm for the fiscal year ending December 31, 2025;
- FOR the Reverse Stock Split Proposal; and
- FOR the Adjournment Proposal.

We know of no other business that will be presented at the Annual Meeting. If any other matter properly comes before the stockholders for a vote at the Annual Meeting, the proxy holders named on the Company’s proxy card will vote your shares in accordance with their best judgment.

Information About This Proxy Statement

Why you received this proxy statement. You are viewing or have received these proxy materials because Lyra’s Board of Directors is soliciting your proxy to vote your shares at the Annual Meeting. This proxy statement includes information that we are required to provide to you under the rules of the Securities and Exchange Commission (“SEC”) and that is designed to assist you in voting your shares.

Notice of Internet Availability of Proxy Materials. As permitted by SEC rules, Lyra is making this proxy statement and its 2024 Annual Report available to its stockholders electronically via the Internet. On or about [●], 2025, we will commence mailing to our stockholders a Notice of Internet Availability of Proxy Materials (the “Internet Notice”) containing instructions on how to access this proxy statement and our 2024 Annual Report and vote online. If you received an Internet Notice by mail, you will not receive a printed copy of the proxy materials in the mail unless you specifically request them. Instead, the Internet Notice instructs you on how to access and review all of the important information contained in the proxy statement and 2024 Annual Report. The Internet Notice also instructs you on how you may submit your proxy over the Internet. If you received an Internet Notice by mail and would like to receive a printed copy of our proxy materials, you should follow the instructions for requesting such materials contained on the Internet Notice.

Printed Copies of Our Proxy Materials. If you received printed copies of our proxy materials, then instructions regarding how you can vote are contained on the proxy card included in the materials.

Householding. The SEC’s rules permit us to deliver a single set of proxy materials to one address shared by two or more of our stockholders. This delivery method is referred to as “householding” and can result in significant cost savings. To take advantage of this opportunity, we have delivered only one set of proxy materials to multiple stockholders who share an address, unless we received contrary instructions from the impacted stockholders prior to the mailing date. We agree to deliver promptly, upon written or oral request, a separate copy of the proxy materials, as requested, to any stockholder at the shared address to which a single copy of those documents was delivered. If you

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prefer to receive separate copies of the proxy materials, contact Broadridge Financial Solutions, Inc. at 1-866-540-7095 or in writing at Broadridge, Household Department, 51 Mercedes Way, Edgewood, New York 11717.

If you are currently a stockholder sharing an address with another stockholder and wish to receive only one copy of future proxy materials for your household, please contact Broadridge at the above phone number or address.

QUESTIONS AND ANSWERS ABOUT THE 2025 ANNUAL MEETING OF STOCKHOLDERS

Who is entitled to vote at the Annual Meeting?

The Record Date for the Annual Meeting is March 18, 2025. You are entitled to vote at the Annual Meeting only if you were a stockholder of record at the close of business on that date, or if you hold a valid proxy for the Annual Meeting. Each outstanding share of common stock is entitled to one vote for all matters before the Annual Meeting. At the close of business on the Record Date, there were 65,880,145 shares of common stock outstanding and entitled to vote at the Annual Meeting.

What is the difference between being a “record holder” and holding shares in “street name”?

A record holder holds shares in his or her name. Shares held in “street name” means shares that are held in the name of a bank or broker on a person’s behalf.

Am I entitled to vote if my shares are held in “street name”?

Yes. If your shares are held by a bank or a brokerage firm, you are considered the “beneficial owner” of those shares held in “street name.” If your shares are held in street name, these proxy materials are being provided to you by your bank or brokerage firm, along with a voting instruction card if you received printed copies of our proxy materials. As the beneficial owner, you have the right to direct your bank or brokerage firm how to vote your shares, and the bank or brokerage firm is required to vote your shares in accordance with your instructions. If your shares are held in “street name” and you would like to vote your shares online at the Annual Meeting, you should contact your bank or brokerage firm to obtain your 16-digit control number or otherwise vote through the bank or brokerage firm.

How many shares must be present to hold the Annual Meeting?

A quorum must be present at the Annual Meeting for any business to be conducted. The presence at the Annual Meeting online or by proxy, of the holders of a majority in voting power of the common stock issued and outstanding and entitled to vote on the Record Date will constitute a quorum.

Who can attend the Annual Meeting?

You may attend and participate in the Annual Meeting by visiting the following website: www.virtualshareholdermeeting.com/LYRA2025. To attend and participate in the Annual Meeting, you will need the 16-digit control number included in your Internet Notice, on your proxy card or on the instructions that accompanied your proxy materials. If your shares are held in “street name,” you should contact your bank or broker to obtain your 16-digit control number or otherwise vote through the bank or broker. If you lose your 16-digit control number, you may join the Annual Meeting as a “Guest” but you will not be able to vote, ask questions or access the list of stockholders as of the Record Date. The meeting webcast will begin promptly at 8:00 a.m. Eastern time. We encourage you to access the meeting prior to the start time. Online check-in will begin at 7:45 a.m., Eastern time, and you should allow ample time for the check-in procedures.

What if a quorum is not present at the Annual Meeting?

If a quorum is not present at the scheduled time of the Annual Meeting, the Chairperson of the Annual Meeting is authorized by our Amended and Restated Bylaws to adjourn the meeting, without the vote of stockholders.

What does it mean if I receive more than one Internet Notice or more than one set of proxy materials?

It means that your shares are held in more than one account at the transfer agent and/or with banks or brokers. Please vote all of your shares. To ensure that all of your shares are voted, for each Internet Notice or set of proxy materials, please submit your proxy by phone, via the Internet, or, if you received printed copies of the proxy materials, by signing, dating and returning the enclosed proxy card in the enclosed envelope.

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How do I vote?

Stockholders of Record. If you are a stockholder of record, you may vote:

- By Internet - You can vote over the Internet at www.proxyvote.com by following the instructions on the Internet Notice or proxy card.
- By Telephone - You can vote by telephone by calling 1-800-690-6903 and following the instructions on the proxy card.
- By Mail - You can vote by mail by signing, dating and mailing the proxy card, which you may have received by mail.
- Electronically at the Meeting - If you attend the meeting online, you will need the 16-digit control number included in your Internet Notice, on your proxy card or on the instructions that accompanied your proxy materials to vote electronically during the meeting.

Internet and telephone voting facilities for stockholders of record will be made available 24 hours a day and will close at 11:59 p.m., Eastern time, on Tuesday, May 13, 2025. To participate in the Annual Meeting, including to vote via the Internet or telephone, you will need the 16-digit control number included on your Internet Notice, on your proxy card or on the instructions that accompanied your proxy materials.

Whether or not you expect to attend the Annual Meeting online, we urge you to vote your shares as promptly as possible to ensure your representation and the presence of a quorum at the Annual Meeting. If you submit your proxy, you may still decide to attend the Annual Meeting and vote your shares electronically.

Beneficial Owners of Shares Held in "Street Name." If your shares are held in "street name" through a bank or broker, you will receive instructions on how to vote from the bank or broker. You must follow their instructions in order for your shares to be voted. Internet and telephone voting also may be offered to stockholders owning shares through certain banks and brokers. If your shares are not registered in your own name and you would like to vote your shares online at the Annual Meeting, you should contact your bank or broker to obtain your 16-digit control number or otherwise vote through the bank or broker. If you lose your 16-digit control number, you may join the Annual Meeting as a "Guest" but you will not be able to vote, ask questions or access the list of stockholders as of the Record Date. You will need to obtain your own Internet access if you choose to attend the Annual Meeting online and/or vote over the Internet.

Can I change my vote after I submit my proxy?

Yes.

If you are a registered stockholder, you may revoke your proxy and change your vote:

- by submitting a duly executed proxy bearing a later date;
- by granting a subsequent proxy through the Internet or telephone;
- by giving written notice of revocation to the Secretary of Lyra prior to or at the Annual Meeting; or
- by voting online at the Annual Meeting.

Your most recent proxy card or Internet or telephone proxy is the one that is counted. Your attendance at the Annual Meeting by itself will not revoke your proxy unless you give written notice of revocation to the Secretary before your proxy is voted or you vote online at the Annual Meeting.

If your shares are held in street name, you may change or revoke your voting instructions by following the specific directions provided to you by your bank or broker, or you may vote online at the Annual Meeting using your 16-digit control number or otherwise voting through your bank or broker.

Who will count the votes?

A representative of Broadridge Financial Solutions, Inc., our inspector of election, will tabulate and certify the votes.

What if I do not specify how my shares are to be voted?

If you submit a proxy but do not indicate any voting instructions, the persons named as proxies will vote in accordance with the recommendations of the Board. The Board's recommendations are indicated on page 2 of this proxy statement, as well as with the description of each proposal in this proxy statement.

Will any other business be conducted at the Annual Meeting?

We know of no other business that will be presented at the Annual Meeting. If any other matter properly comes before the stockholders for a vote at the Annual Meeting, however, the proxy holders named on the Company's proxy card will vote your shares in accordance with their best judgment.

What if during the check-in time or during the Annual Meeting I have technical difficulties or trouble accessing the virtual meeting website?

We will have technicians ready to assist you with any technical difficulties you may have accessing the virtual meeting website, and the information for assistance will be located on www.virtualshareholdermeeting.com/LYRA2025.

Will there be a question and answer session during the Annual Meeting?

As part of the Annual Meeting, we will hold a live Q&A session, during which we intend to answer appropriate questions submitted by stockholders during the meeting that are pertinent to the Company and the meeting matters as time permits. The Company will endeavor to answer as many questions submitted by stockholders as time permits. Only stockholders that have accessed the Annual Meeting as a stockholder (rather than as a "Guest") by following the procedures outlined above in "Who can attend the Annual Meeting?" will be permitted to submit questions during the Annual Meeting. Each stockholder is limited to no more than two questions. Questions should be succinct and only cover a single topic. We will not address questions that are, among other things:

- irrelevant to the business of the Company or to the business of the Annual Meeting;
- related to material non-public information of the Company, including the status or results of our business since our last Quarterly Report on Form 10-Q;
- related to any pending, threatened or ongoing litigation;
- related to personal grievances;
- derogatory references to individuals or that are otherwise in bad taste;
- substantially repetitious of questions already made by another stockholder;
- in excess of the two question limit;
- in furtherance of the stockholder's personal or business interests; or
- out of order or not otherwise suitable for the conduct of the Annual Meeting as determined by the Chair or Secretary in their reasonable judgment.

Additional information regarding the Q&A session will be available in the "Rules of Conduct" available on the Annual Meeting webpage for stockholders that have accessed the Annual Meeting as a stockholder (rather than as a "Guest") by following the procedures outlined above in "Who can attend the Annual Meeting?".

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How many votes are required for the approval of the proposals to be voted upon and how will abstentions and broker non-votes be treated?

Proposal	Votes required	Effect of Votes Withheld / Abstentions and Broker Non-Votes
<u>Proposal 1:</u> Election of Directors	The plurality of the votes cast. This means that the two nominees receiving the highest number of affirmative “FOR” votes will be elected as Class II Directors.	Votes withheld and broker non-votes will have no effect.
<u>Proposal 2:</u> Ratification of Appointment of Independent Registered Public Accounting Firm	The affirmative vote of the holders of a majority in voting power of the votes cast affirmatively or negatively.	Abstentions and broker non-votes will have no effect. We do not expect any broker non-votes on this proposal.
<u>Proposal 3:</u> Approval of the Reverse Stock Split Proposal	The affirmative vote of the holders of a majority of the votes cast affirmatively or negatively.	Abstentions and broker non-votes will have no effect. We do not expect any broker non-votes on this proposal.
<u>Proposal 4:</u> Approval of the Adjournment Proposal	The affirmative vote of the holders of a majority in voting power of the votes cast affirmatively or negatively.	Abstentions and broker non-votes will have no effect. We do not expect any broker non-votes on this proposal.

What is a “vote withheld” and an “abstention” and how will votes withheld and abstentions be treated?

A “vote withheld,” in the case of the proposal regarding the election of directors, or an “abstention,” in the case of the proposal regarding the ratification of the appointment of BDO USA, P.C. as our independent registered public accounting firm, the Reverse Stock Split Proposal and the Adjournment Proposal, represents a stockholder’s affirmative choice to decline to vote on a proposal. Votes withheld and abstentions are counted as present and entitled to vote for purposes of determining a quorum. Votes withheld have no effect on the election of directors. Abstentions have no effect on the ratification of the appointment of BDO USA, P.C. as our independent registered public accounting firm, the Reverse Stock Split Proposal, or the Adjournment Proposal.

What are broker non-votes and do they count for determining a quorum?

Generally, broker non-votes occur when shares held by a broker in “street name” for a beneficial owner are not voted with respect to a particular proposal because the broker (1) has not received voting instructions from the beneficial owner and (2) lacks discretionary voting power to vote those shares. A broker is entitled to vote shares held for a beneficial owner on routine matters, such as the ratification of the appointment of BDO USA, P.C. as our independent registered public accounting firm, the Reverse Stock Split Proposal and the Adjournment Proposal, without instructions from the beneficial owner of those shares. On the other hand, absent instructions from the beneficial owner of such shares, a broker is not entitled to vote shares held for a beneficial owner on non-routine matters, such as the proposal regarding the election of directors. Broker non-votes count for purposes of determining whether a quorum is present.

Where can I find the voting results of the Annual Meeting?

We plan to announce preliminary voting results at the Annual Meeting and we will report the final results in a Current Report on Form 8-K, which we intend to file with the SEC after the Annual Meeting.

PROPOSALS TO BE VOTED ON

Proposal 1: Election of Directors

At the Annual Meeting, two (2) Class II Directors are to be elected to hold office until our annual meeting of stockholders to be held in 2028 and until each such director's respective successor is elected and qualified or until each such director's earlier death, resignation or removal.

We currently have six (6) directors on our Board, including two (2) Class II Directors. Our current Class II Directors are C. Ann Merrifield and Harlan W. Waksal who have served on our Board since September 2019 and February 2022, respectively, each of whom has been nominated by the Board for election as Class II Directors at the Annual Meeting.

The proposal regarding the election of directors requires the approval of a plurality of the votes cast. This means that the two nominees receiving the highest number of affirmative "FOR" votes will be elected as Class II Directors. Votes withheld and broker non-votes are not considered to be votes cast and, accordingly, will have no effect on the outcome of the vote on this proposal.

As set forth in our Restated Certificate of Incorporation, as amended (the "Restated Certificate of Incorporation"), the Board of Directors is divided into three classes with staggered, three-year terms. At each annual meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. The current class structure is as follows: Class II, whose current term will expire at the 2025 Annual Meeting of Stockholders and, if elected at the 2025 Annual Meeting of Stockholders, whose subsequent term will expire at the 2028 Annual Meeting of Stockholders; Class III, whose current term will expire at the 2026 Annual Meeting of Stockholders; and Class I, whose current term will expire at the 2027 Annual Meeting of Stockholders.

The current Class I Directors are Maria Palasis, Ph.D. and Nancy L. Snyderman, M.D., FACS; the current Class II Directors are C. Ann Merrifield and Harlan W. Waksal, M.D.; and the current Class III Directors are W. Bradford Smith and James R. Tobin.

Our Restated Certificate of Incorporation and our Amended and Restated Bylaws provide that the authorized number of directors may be changed from time to time by the Board. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. The division of our Board into three classes with staggered three-year terms may delay or prevent a change of our management or a change in control of our Company. Our directors may be removed only for cause by the affirmative vote of the holders of at least two-thirds of our outstanding voting stock entitled to vote in the election of directors.

If you submit a proxy but do not indicate any voting instructions, the persons named as proxies will vote the shares of common stock represented thereby for the election as Class II Directors of the persons whose names and biographies appear below. In the event that any of Ms. Merrifield and Dr. Waksal should become unable to serve, or for good cause will not serve, as a director, it is intended that votes will be cast for a substitute nominee designated by the Board or the Board may elect to reduce its size. The Board has no reason to believe that any of Ms. Merrifield and Dr. Waksal will be unable to serve if elected. Each of Ms. Merrifield and Dr. Waksal has consented to being named in this proxy statement and to serve if elected.

Vote required

The proposal regarding the election of directors requires the approval of a plurality of the votes cast. This means that the two nominees receiving the highest number of affirmative "FOR" votes will be elected as Class II Directors.

Votes withheld and broker non-votes are not considered to be votes cast and, accordingly, will have no effect on the outcome of the vote on this proposal.

Recommendation of the Board of Directors



The Board of Directors unanimously recommends a vote FOR the election of each of the below Class II Director nominees.

Nominees for Class II Director (terms to expire at the 2025 Annual Meeting of Stockholders)

The current members of the Board who are also nominees for election to the Board as Class II Directors are as follows:

Name	Age	Served as a Director Since	Position with Lyra
C. Ann Merrifield	73	2019	Director
Harlan Waksal, M.D.	71	2022	Executive Chair and Chairperson of the Board

The principal occupations and business experience, for at least the past five years, of each Class II Director nominee are as follows:

C. Ann Merrifield

C. Ann Merrifield has served as a member of our Board since September 2019. Ms. Merrifield has also served as a member of the boards of directors for a portfolio of public and private companies in the life sciences sector, which include InVivo Therapeutics Holdings Corp., from November 2014 until January 2025, and Flexion Therapeutics, Inc., from June 2014 to November 2021 until it was acquired by Pacira BioSciences. From July 2015 to August 2018, she served as a director of Juniper Pharmaceuticals, Inc., a healthcare company, until it was acquired by Catalent, Inc. and from December 2016 to January 2019, she served as a director of Veritas Genetics, Inc. Ms. Merrifield also serves as a Trustee for MassMutual Premier, Select and MML Series Investment Funds, the Huntington Theatre Company, the YMCA of Greater Boston, and the International Institute of New England. From November 2012 to July 2014, Ms. Merrifield served as President, Chief Executive Officer and director of PathoGenetix Inc., a genomics company, which voluntarily filed for Chapter 7 bankruptcy in July 2014. Before that, Ms. Merrifield spent 18 years at Genzyme Corporation, serving in several leadership roles, including President of Genzyme Biosurgery, President of Genzyme Genetics and Senior Vice President, Business Excellence. Ms. Merrifield holds a B.A. in Zoology and a Master of Education from the University of Maine and an M.B.A. from the Tuck School of Business at Dartmouth College. We believe that Ms. Merrifield's extensive industry experience qualifies her to serve on our Board of Directors.

Harlan W. Waksal, M.D.

Harlan W. Waksal, M.D. has served as our Executive Chair since February 2022 and was elected to our Board in February 2022. Prior to his role with us as Executive Chair, Dr. Waksal served as President and Chief Executive Officer of Kadmon Holdings, Inc., or Kadmon, a biopharmaceutical company, from August 2014 and a director since 2013 until its acquisition by Sanofi in November 2021. Prior to joining Kadmon as an employee, Dr. Waksal served as President and Sole Proprietor of Waksal Consulting LLC from 2003 to 2014. From 2011 to 2014, Dr. Waksal served as Executive Vice President, Business and Scientific Affairs at Acasti Pharma, Inc., a publicly traded biopharmaceutical company, and as a consultant to Neptune Technologies & Bioresources, Inc., a publicly traded life sciences company and the parent company of Acasti. Dr. Waksal co founded ImClone Systems ("ImClone") in 1987, a publicly traded biopharmaceutical company acquired by Eli Lilly and Company in 2008. Dr. Waksal served in senior roles at ImClone, including: President (1987 to 1994); Executive Vice President and Chief Operating Officer (1994 to 2002); and President, Chief Executive Officer and Chief Operating Officer (2002 to 2003). Dr. Waksal also served as a Director of ImClone from 1987 to 2005. Dr. Waksal served on the boards of Oberlin College and Sevion Therapeutics through March 2016 and the boards of Acasti and Neptune through February 2016 and July 2015, respectively. Since April 2024, Dr. Waksal has served as a member of the board of directors of Perceptive Capital Solutions Corp. Dr. Waksal's additional roles

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include serving as a member of the board of directors of Perceptive Discovery Fund and as a member of the Technology Advisory Board at the New Jersey Edison Innovation Fund. Dr. Waksal received his B.A. from Oberlin College and his M.D. from Tufts University School of Medicine. He completed his training in internal medicine at New England Medical Center and in pathology at Kings County Hospital Center in Brooklyn. We believe Dr. Waksal's extensive management experience in the life science industry and drug development experience provides him with the qualifications and skills to serve on our Board of Directors.

Class III Directors (terms to expire at the 2026 Annual Meeting of Stockholders)

The current members of the Board of Directors who are Class III Directors are as follows:

Name	Age	Served as a Director Since	Position with Lyra
W. Bradford Smith	69	2019	Director
James R. Tobin	80	2022	Director

The principal occupations and business experience, for at least the past five years, of each Class III Director are as follows:

W. Bradford Smith

W. Bradford Smith has served as a member of our Board since November 2019. Since December 2024, Mr. Smith has served as the Chief Financial Officer of Incendia Therapeutics, Inc. From November 2023 to March 2024, Mr. Smith served as a consultant to Homology Medicines, Inc. (NASDAQ: FIXX), where he served as Chief Financial Officer, Chief Business Officer and Treasurer from March 2022 until November 2023, when the company announced it signed a merger agreement with Q32 Bio, Inc. He also served as Homology's Chief Financial Officer and Treasurer from April 2017 to March 2022 and as Secretary from July 2017 to June 2020. From March 2014 to April 2017, Mr. Smith was Chief Financial Officer of Ocular Therapeutix, Inc., a biopharmaceutical company, where he led the company's strategic financings, including an IPO and subsequent follow-on offerings, and completed a development and commercialization deal with a major biopharmaceutical company. Prior to joining Ocular Therapeutix, Mr. Smith served as Chief Financial Officer of OmniGuide, Inc., a medical device company, from July 2008 to March 2014. Since May 2021, Mr. Smith has served on the board of directors of eGenesis, a private gene editing company. Mr. Smith holds a B.S. in Biology from Tufts University and an M.B.A. from the Whittemore School of Business and Economics at the University of New Hampshire. We believe that Mr. Smith's extensive financial and industry experience qualify him to serve on our Board of Directors.

James R. Tobin

James R. Tobin has served as a member of our Board since March 2022. Mr. Tobin is the retired President and CEO of Boston Scientific Corporation, a medical device company, where he served from 1999 to 2009. Prior to Boston Scientific, Mr. Tobin was the President and CEO of Biogen Inc., and, from 1994 to 1997, its President and Chief Operating Officer. Before Biogen, Mr. Tobin spent 22 years with Baxter International Inc., rising from Financial Analyst to President and Chief Operating Officer. Mr. Tobin currently serves as Chairman of the Board at TransMedics, Inc. and as a director of Globus Medical Inc., each of which are public companies, and as a director at Xenter, Inc., a private company. Mr. Tobin has also served on the boards of Oxford Immunotec, Inc., from 2014 to 2021, Corindus Vascular Robotics, from 2018 to 2019, Curis, Inc., from 1995 to 2015, Medical Simulation Corp, from 2012 to 2018, CardioDX, Inc., from 2014 to 2017, Chiasma, Inc., from 2015 to 2016, and Aptus Endosystems, Inc. from 2011 to 2015. Mr. Tobin holds an AB from Harvard College and an M.B.A. from Harvard Business School. Mr. Tobin also served as a Lieutenant in the U.S. Navy. We believe Mr. Tobin is qualified to serve on our Board of Directors because of his decades of experience as President and Chief Executive Officer or Chief Operating Officer of three large biotechnology and medical device companies.

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Class I Directors (terms to expire at the 2027 Annual Meeting of Stockholders)

The current members of the Board of Directors who are Class I Directors are as follows:

<u>Name</u>	<u>Age</u>	<u>Served as a Director Since</u>	<u>Position with Lyra</u>
Maria Palasis, Ph.D.	60	2015	Director
Nancy L. Snyderman, M.D., FACS	72	2020	Director

The principal occupations and business experience, for at least the past five years, of each Class I Director are as follows:

Maria Palasis, Ph.D.

Maria Palasis, Ph.D. has served as our President and Chief Executive Officer and a member of our Board of Directors since January 2015. Prior to her role with us as President and Chief Executive Officer, Dr. Palasis held positions of increasing responsibility, the most recent of which was Executive Vice President and Chief Technology Officer from 2011 to 2015. Before that, in 2008, Dr. Palasis joined Arsenal Medical, Inc., a biotechnology company, as Executive Vice President and subsequently served as President and Chief Executive Officer and a member of the board of directors of Arsenal Medical from January 2015 to June 2018. Before that, from November 1995 to January 2008, Dr. Palasis was employed with the title of Director at Boston Scientific Corporation, a medical device company, where she managed a portfolio of external biotech and medical device investments and led the development of several combination therapies. Dr. Palasis has also served as a member of the board of directors of Beta Bionics, Inc. since January 2025. Dr. Palasis holds a B.S. and Ph.D. in Chemical Engineering from the University of Cincinnati, and she held a postdoctoral fellowship in molecular biology at the University of Cincinnati School of Medicine. We believe that Dr. Palasis' experience in the industry and knowledge of our Company qualifies her to serve on our Board of Directors.

Nancy L. Snyderman, M.D., FACS

Nancy L. Snyderman, M.D., FACS has served as a member of our Board since October 2020. Dr. Snyderman has also served on the boards of directors of Axonics Inc., a medical device company, since April 2019 and Alkermes plc, a biopharmaceutical company, since May 2016. From 2006 to 2018, Dr. Snyderman served as an advisory board member to GE's Healthymagination, General Electric Company's healthcare initiative. From 2003 to 2008, Dr. Snyderman also served as a senior vice president for corporate communications at Johnson & Johnson. Dr. Snyderman is a board-certified Otolaryngologist-Head and Neck surgeon and clinical researcher and has had academic appointments at the University of Pennsylvania and the University of California-San Francisco. From 2016 to 2018, she served as a consulting professor at the Center for Innovation for Global Health at Stanford University. Dr. Snyderman is an Emmy award winning medical correspondent, having worked at ABC News from 1987 to 2003 and later as chief medical editor at NBC News from 2004 to 2015. Dr. Snyderman holds a B.A. in Microbiology from Indiana University and a M.D. from the University of Nebraska Medical Center and has completed residencies in Pediatrics and Otolaryngology Head and Neck Surgery at the University of Pittsburgh. We believe that Dr. Snyderman's extensive experience as an executive at a pharmaceutical company, as well as her roles in academia and as an advisor to policy organizations, qualifies her to serve on our Board.

Proposal 2: Ratification of Appointment of Independent Registered Public Accounting Firm

Our Audit Committee has appointed BDO USA, P.C. as our independent registered public accounting firm for the fiscal year ending December 31, 2025. Our Board has directed that this appointment be submitted to our stockholders for ratification at the Annual Meeting. Although ratification of our appointment of BDO USA, P.C. is not required, we value the opinions of our stockholders and believe that stockholder ratification of our appointment is a good corporate governance practice.

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BDO USA, P.C. also served as our independent registered public accounting firm for the fiscal year ended December 31, 2024. Neither the accounting firm nor any of its members has any direct or indirect financial interest in or any connection with us in any capacity other than as our auditors, providing audit and non-audit related services. A representative of BDO USA, P.C. is expected to attend the 2025 Annual Meeting and to have an opportunity to make a statement and be available to respond to appropriate questions from stockholders.

In the event that the appointment of BDO USA, P.C. is not ratified by the stockholders, the Audit Committee will consider this fact when it appoints the independent registered public accounting firm for the fiscal year ending December 31, 2026. Even if the appointment of BDO USA, P.C. is ratified, the Audit Committee retains the discretion to appoint a different independent auditor at any time if it determines that such a change is in the interest of the Company.

Vote Required

This proposal requires the affirmative vote of the holders of a majority in voting power of the votes cast affirmatively or negatively. Abstentions and broker non-votes are not considered to be votes cast and, accordingly, will have no effect on the outcome of the vote on this proposal. Because brokers have discretionary authority to vote on the ratification of the appointment of BDO USA, P.C., we do not expect any broker non-votes in connection with this proposal.

Recommendation of the Board of Directors



The Board of Directors unanimously recommends a vote FOR the ratification of the appointment of BDO USA, P.C. as our independent registered public accounting firm for the fiscal year ending December 31, 2025.

REPORT OF THE AUDIT COMMITTEE OF THE BOARD OF DIRECTORS

The Audit Committee has reviewed the audited consolidated financial statements of Lyra Therapeutics, Inc., a Delaware corporation (the “Company”), for the fiscal year ended December 31, 2024 and has discussed these financial statements with management and the Company’s independent registered public accounting firm. The Audit Committee has also received from, and discussed with, the Company’s independent registered public accounting firm the matters that they are required to provide to the Audit Committee, including the matters required to be discussed by the Public Company Accounting Oversight Board (“PCAOB”) and the Securities and Exchange Commission.

The Company’s independent registered public accounting firm also provided the Audit Committee with a formal written statement required by the applicable requirements of the PCAOB describing all relationships between the independent registered public accounting firm and the Company, including the disclosures required by the applicable requirements of the PCAOB regarding the independent registered public accounting firm’s communications with the Audit Committee concerning independence. In addition, the Audit Committee discussed with the independent registered public accounting firm its independence from the Company.

Based on its discussions with management and the independent registered public accounting firm, and its review of the representations and information provided by management and the independent registered public accounting firm, the Audit Committee recommended to the Board of Directors that the audited consolidated financial statements be included in the Company’s Annual Report on Form 10-K for the fiscal year ended December 31, 2024.

W. Bradford Smith (Chair)
Nancy L. Snyderman, M.D., FACS
James R. Tobin

The Audit Committee Report does not constitute soliciting material, and shall not be deemed to be filed or incorporated by reference into any other filing under the Securities Act of 1933, as amended, or the Exchange Act, except to the extent that the Company specifically incorporates the Audit Committee Report by reference therein.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FEES AND OTHER MATTERS

The following table summarizes the fees of BDO USA, P.C., our independent registered public accounting firm, billed to us for each of the last two fiscal years.

<u>Fee Category</u>	<u>2024</u>	<u>2023</u>
Audit Fees ⁽¹⁾	\$484,250	\$520,770
Total Fees	<u>\$484,250</u>	<u>\$520,770</u>

(1) For 2024 and 2023, audit fees consist of fees for the audit of our financial statements, the review of the interim financial statements included in our quarterly reports on Form 10-Q, and other professional services provided in connection with statutory and regulatory filings or engagements.

Audit Committee Pre-Approval Policy and Procedures

The Audit Committee has adopted a policy (the “Pre-Approval Policy”) that sets forth the procedures and conditions pursuant to which audit and non-audit services proposed to be performed by the independent auditor may be pre-approved. The Pre-Approval Policy generally provides that we will not engage our independent auditor, BDO USA, P.C. to render any audit, audit-related, tax or permissible non-audit services unless the service is either (i) explicitly approved by the Audit Committee (“specific pre-approval”) or (ii) entered into pursuant to the pre-approval policies and procedures described in the Pre-Approval Policy (“general pre-approval”). Unless a type of service to be provided by BDO USA, P.C. has received general pre-approval under the Pre-Approval Policy, it requires specific pre-approval by the Audit Committee or by a designated member of the Audit Committee to whom the committee has delegated the authority to grant pre-approvals. Any proposed services exceeding pre-approved cost levels or budgeted amounts will also require specific pre-approval. For both types of pre-approval, the Audit Committee will consider whether such services are consistent with the SEC’s rules on auditor independence. The Audit Committee will also consider whether the independent auditor is best positioned to provide the most effective and efficient service, for reasons such as its familiarity with the Company’s business, people, culture, accounting systems, risk profile and other factors, and whether the service might enhance the Company’s ability to manage or control risk or improve audit quality. All such factors will be considered as a whole, and no one factor should necessarily be determinative. The Audit Committee periodically reviews and generally pre-approves any services (and related fee levels or budgeted amounts) that may be provided by BDO USA, P.C. without first obtaining specific pre-approvals from the Audit Committee or the Chair of the Audit Committee. The Audit Committee may revise the list of general pre-approved services from time to time, based on subsequent determinations.

Proposal 3: Approval of Amendment to our Restated Certificate of Incorporation to effect a Reverse Stock Split**General**

Our Board has adopted and is recommending that our stockholders approve amendments to our Restated Certificate of Incorporation to effect a reverse stock split of our common stock, par value \$0.001 per share (the “Common Stock”) at a ratio ranging from any whole number between 1-for-10 and 1-for-50, with the exact ratio within such range to be determined by the Board in its discretion (the “Reverse Stock Split”), subject to the Board’s authority to determine when to file the amendment and to abandon the other amendments notwithstanding prior stockholder approval of such amendments. Pursuant to the law of the State of Delaware, our state of incorporation, the Board must adopt any amendment to our Restated Certificate of Incorporation and submit the amendment to stockholders for their approval. The form of the proposed amendments to our Restated Certificate of Incorporation, one of which would be filed with the Secretary of State of the State of Delaware, are attached to this proxy statement as [Appendix A](#).

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By approving this proposal, stockholders will approve alternative amendments to our Restated Certificate of Incorporation pursuant to which a whole number of outstanding shares of our Common Stock between 10 and 50, inclusive, would be combined into one share of our Common Stock. Upon receiving stockholder approval, the Board will have the authority, in its sole discretion, but not the obligation, to elect, without further action on the part of the stockholders, whether to effect the Reverse Stock Split and, if so, to determine the Reverse Stock Split ratio from among the approved range described above and to effect the Reverse Stock Split by filing a Certificate of Amendment with the Secretary of State of the State of Delaware. In this case, all other amendments will be abandoned. The Board may also elect not to effect any Reverse Stock Split.

The Board's decision as to whether and when to effect the Reverse Stock Split will be based on a number of factors, including market conditions, the historical, then-existing and expected trading price of our Common Stock, the anticipated impact of the Reverse Stock Split on the trading price of our Common Stock and on the number of holders of our Common Stock, and the continued listing requirements of The Nasdaq Capital Market. Although our stockholders may approve the Reverse Stock Split, we will not effect the Reverse Stock Split if the Board does not deem it to be in the best interests of the Company and its stockholders.

Because the Reverse Stock Split will decrease the number of outstanding shares of our Common Stock by a ratio in the range of 1-for-10 to 1-for-50 but would not effect a decrease to the number of shares of Common Stock that the Company will be authorized to issue, the proposed amendments to the Restated Certificate of Incorporation to effect the Reverse Stock Split (the "Reverse Stock Split Amendments") would result in a relative increase in the number of authorized and unissued shares of our Common Stock. For more information on the relative increase in the number of authorized shares of our Common Stock, see "Principal Effects of the Reverse Stock Split-Relative Increase in Number of Authorized Shares of Common Stock for Issuance" below.

Purpose and Background of the Reverse Stock Split

On March 13, 2025, the Board approved the proposed amendments to our Restated Certificate of Incorporation to effect the Reverse Stock Split for the following reasons:

- the Board believes that implementing the Reverse Stock Split could be an effective means of maintaining compliance with the minimum bid price requirement for continued listing of our Common Stock on The Nasdaq Capital Market;
- the Board believes that continued listing on The Nasdaq Capital Market provides overall credibility to an investment in our stock, given the stringent listing and disclosure requirements of The Nasdaq Capital Market. Notably, some trading firms discourage investors from investing in lower priced stocks that are traded in the over-the-counter market because they are not held to the same stringent standards; and
- the Board believes that a higher stock price, which may be achieved through a Reverse Stock Split, could help facilitate the Company's ability to raise new equity capital either through private fund-raising transactions or by accessing the equity capital markets, generally stimulate investor interest in the Company and help attract, retain, and motivate employees.

Nasdaq Requirements for Continued Listing

Our Common Stock is quoted on The Nasdaq Capital Market under the symbol "LYRA." One of the requirements for continued listing on The Nasdaq Capital Market pursuant to Nasdaq Listing Rule 5550(a)(2) is maintenance of a minimum closing bid price of \$1.00 per share. On March 18, 2025, the closing market price per share of our Common Stock was \$0.16, as reported by The Nasdaq Capital Market.

On July 19, 2024, we received a written notice from the Listing Qualifications Department of The Nasdaq Stock Market LLC notifying us that for the last 30 consecutive business days the bid price for the Common Stock had closed below the \$1.00 per share minimum bid price requirement for continued inclusion on The Nasdaq Global Market, on which we used to trade, as set forth in Nasdaq Listing Rule 5450(a)(1) (the "Minimum Bid Price Requirement").

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Under Nasdaq Listing Rule 5810(c)(3)(A), the Company was granted an initial 180 calendar day grace period, or until January 15, 2025, to regain compliance with the Minimum Bid Price Requirement, which required our Common Stock to have a minimum closing bid price of at least \$1.00 per share for a minimum of 10 consecutive business days during the 180 calendar-day grace period. We were unable to gain compliance with the Minimum Bid price Requirement by January 15, 2025 and we, therefore, applied to transfer our listing to the Nasdaq Capital Market and for an extension of an additional 180 calendar days, or until July 14, 2025, to regain compliance with the Minimum Bid Price Requirement. On January 31, 2025, Nasdaq notified us that our application for listing on the Nasdaq Capital Market was approved and that Nasdaq approved the Company's extension request.

If we fail to regain compliance by July 14, 2025, Nasdaq will provide written notification that the Company's securities will be delisted. At that time, the Company may appeal Nasdaq's determination to a Hearings Panel. If the Company appeals, the Hearings Panel will request a plan to regain compliance. Hearings Panels have generally viewed a reverse stock split as the only definitive plan to resolve a bid price deficiency. There can be no assurance that such an appeal would be successful.

If our Common Stock is delisted from Nasdaq, the Board believes that the trading market for our Common Stock could become significantly less liquid, which could reduce the trading price of our Common Stock and increase the transaction costs of trading in shares of our Common Stock. Such delisting from The Nasdaq Capital Market and continued or further decline in our stock price could also impair our ability to raise additional necessary capital through equity or debt financing.

If the Reverse Stock Split is effected, it would cause a decrease in the total number of shares of our Common Stock outstanding and increase the market price of our Common Stock. The Board intends to effect the Reverse Stock Split only if it believes that a decrease in the number of shares outstanding is in the best interests of the Company and its stockholders.

If our Common Stock is delisted from The Nasdaq Capital Market, we cannot assure you that our Common Stock would be listed on another national securities exchange, a national quotation service, the over-the-counter markets or the pink sheets. Delisting from The Nasdaq Capital Market, or even the issuance of a notice of potential delisting, would also result in negative publicity, make it more difficult for us to raise additional capital, adversely affect the market liquidity of our securities, decrease securities analysts' coverage of us or diminish investor, supplier and employee confidence.

Facilitation of Future Capital Raising

The Board believes it is critically important for the Company to maintain its flexibility in accessing the equity capital markets. As disclosed in the Company's Annual Report on Form 10-K for the year ended December 31, 2024, there is substantial doubt regarding our ability to continue as a going concern.

Such additional financing could take a variety of forms, including a private investment in Common Stock or preferred equity securities, convertible debt securities or other debt financing, an at-the-market offering of our Common Stock, rights offering or other public offering of equity or debt securities. The availability of additional equity or debt financing will depend on our ability to demonstrate a path to long-term profitable growth, as well as market conditions. There can be no assurance that such equity or debt financing will be available in amounts or on terms acceptable to us, if at all, or that we will be able to raise capital to fund our operations and to continue as a going concern.

The sale of additional equity would result in significant dilution to our stockholders. The incurrence of debt financing would result in additional debt service obligations and the instruments governing such debt could provide for restrictive operating and financial covenants, security interests on our assets, and other terms that could be adverse to our current stakeholders.

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Failure to raise additional capital through equity or debt financing would have a material adverse effect on our ability to meet our short and long-term liquidity needs and achieve our business objectives. The Board believes that the Reverse Stock Split would facilitate the Company's ability to raise additional equity capital in particular, including due to the expected resulting increase in the per share price of our Common Stock, as described under "Potential Increased Investor Interest" below. The Board believes that an increased price per share of Common Stock following a Reverse Stock Split would enhance the Company's ability to raise capital to fund its current operations, and to otherwise take advantage of favorable opportunities as they arise.

Potential Increased Investor Interest

In addition, in approving the proposed Reverse Stock Split Amendments, the Board considered that the Reverse Stock Split and the expected resulting increase in the per share price of our Common Stock could improve the perception of our Common Stock as an investment security, reset our stock price to more normalized trading levels in the face of potentially extended market dislocation and decrease price volatility for our Common Stock, as small price movements currently may cause relatively large percentage changes in our stock price.

Our Board also considered that the Reverse Stock Split and the resulting increase in the per share price of our Common Stock could encourage increased investor interest in our Common Stock and promote greater liquidity for our stockholders. Many brokerage houses and institutional investors have internal policies and practices that prohibit them from investing in low-priced stocks or tend to discourage individual brokers from recommending low-priced stocks to their customers, further limiting the liquidity of our Common Stock. These factors could result in lower prices and larger spreads in the bid and ask prices for our Common Stock. Additionally, investors may be dissuaded from purchasing lower priced stocks because the brokerage commissions, as a percentage of the total transaction, tend to be higher for such stocks. Moreover, the analysts at many brokerage firms do not monitor the trading activity or otherwise provide coverage of lower priced stocks. A greater price per share of our Common Stock could allow a broader range of institutions to invest in our Common Stock.

In the event that our Common Stock were to be delisted from The Nasdaq Capital Market, our Common Stock would likely trade in the over-the-counter market. If our Common Stock were to trade on the over-the-counter market, selling our Common Stock could be more difficult because smaller quantities of shares would likely be bought and sold, and transactions could be delayed. For all of these reasons, we believe the Reverse Stock Split could potentially increase the marketability, trading volume, and liquidity of our Common Stock.

Employee Retention

The Board believes that the Company's employees and directors who are compensated in the form of our equity-based securities may be less incentivized and invested in the Company if we are no longer listed on Nasdaq. Accordingly, the Board believes that maintaining Nasdaq listing qualifications for our Common Stock, can help attract, retain, and motivate employees and members of our Board.

In light of the factors mentioned above, our Board unanimously approved the proposed amendments to our Restated Certificate of Incorporation to effect the Reverse Stock Split as a potential means of increasing and maintaining the price of our Common Stock to above \$1.00 per share in compliance with Nasdaq requirements.

Board Discretion to Implement the Reverse Stock Split

The Board believes that stockholder approval of a range of ratios (as opposed to a single Reverse Stock Split ratio) is in the best interests of our Company and stockholders because it is not possible to predict market conditions at the time that the Reverse Stock Split would be effected. We believe that a range of Reverse Stock Split ratios provides us with the most flexibility to achieve the desired results of the Reverse Stock Split. The Reverse Stock Split ratio to be

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selected by our Board will be a whole number in a range of 1-for-10 to 1-for-50. The Board can only authorize the filing of one Reverse Stock Split Amendment and all other Reverse Stock Split amendments will be abandoned. The Board also has the authority to abandon all Reverse Stock Split Amendments.

In determining the Reverse Stock Split ratio and whether and when to effect the Reverse Stock Split following the receipt of stockholder approval, the Board will consider a number of factors, including, without limitation:

- our ability to maintain the listing of our Common Stock on The Nasdaq Capital Market;
- the historical trading price and trading volume of our Common Stock;
- the number of shares of our Common Stock outstanding immediately before and after the Reverse Stock Split;
- the then-prevailing trading price and trading volume of our Common Stock and the anticipated impact of the Reverse Stock Split on the trading price and trading volume of our Common Stock;
- the anticipated impact of a particular ratio on the number of holders of our Common Stock; and
- prevailing general market conditions.

We believe that granting the Board the authority to set the ratio for the Reverse Stock Split is essential because it allows us to take these factors into consideration and to react to changing market conditions. If our Board chooses to implement the Reverse Stock Split, we will make a public announcement regarding the determination of the Reverse Stock Split ratio.

Risks Associated with the Reverse Stock Split

There are risks associated with the Reverse Stock Split, including that the Reverse Stock Split may not result in a sustained increase in the per share price of our Common Stock. There is no assurance that:

- the market price per share of our Common Stock after the Reverse Stock Split will rise in proportion to the reduction in the number of shares of our Common Stock outstanding before the Reverse Stock Split;
- the Reverse Stock Split will facilitate the Company's access to the equity capital markets;
- the Reverse Stock Split will result in a per share price that will increase the level of investment in our Common Stock by institutional investors or increase analyst and broker interest in our Company;
- the Reverse Stock Split will result in a per share price that will increase our ability to attract, retain and motivate employees and other service providers; or
- the market price per share will either exceed or remain in excess of the \$1.00 minimum bid price as required by Nasdaq, or that we will otherwise meet the requirements of Nasdaq for continued inclusion for trading on The Nasdaq Capital Market.

Stockholders should note that the effect of the Reverse Stock Split, if any, upon the market price of our Common Stock cannot be accurately predicted. Furthermore, even if the market price of our Common Stock does rise following the Reverse Stock Split, we cannot assure you that the market price of our Common Stock immediately after the Reverse Stock Split will be maintained for any period of time. Even if an increased per-share price can be maintained, the Reverse Stock Split may not achieve the desired results that have been outlined above.

Moreover, because some investors may view the Reverse Stock Split negatively, we cannot assure you that the Reverse Stock Split will not adversely impact the market price of our Common Stock.

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While we aim that the Reverse Stock Split will be sufficient to satisfy the Minimum Bid Requirement, it is possible that, even if the Reverse Stock Split results in a bid price for our Common Stock that exceeds \$1.00 per share, we may not be able to continue to satisfy Nasdaq's additional criteria for continued listing of our Common Stock on The Nasdaq Capital Market.

We believe that the Reverse Stock Split may result in greater liquidity for our stockholders. However, it is also possible that such liquidity could be adversely affected by the reduced number of shares outstanding after the Reverse Stock Split, particularly if the price of our Common Stock does not increase as a result of the Reverse Stock Split.

Principal Effects of the Reverse Stock Split

Issued and Outstanding Shares of Common Stock

If the Reverse Stock Split is approved and effected, each holder of our Common Stock outstanding immediately prior to the effectiveness of the Reverse Stock Split will own a reduced number of shares of our Common Stock upon effectiveness of the Reverse Stock Split. The Reverse Stock Split will be effected simultaneously for all issued and outstanding shares of Common Stock and the Reverse Stock Split ratio will be the same for all issued and outstanding shares of Common Stock. The Reverse Stock Split will affect all of our stockholders uniformly and will not affect any stockholder's percentage ownership interests in the Company, except to the extent that the Reverse Stock Split results in any of our stockholders owning a fractional share. After the Reverse Stock Split, the shares of our Common Stock will have the same voting rights and rights to dividends and distributions and will be identical in all other respects to our Common Stock now authorized. Common Stock issued pursuant to the Reverse Stock Split will remain fully paid and non-assessable. The Reverse Stock Split will not affect the Company continuing to be subject to the periodic reporting requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act").

The Reverse Stock Split may result in some stockholders owning "odd-lots" of less than 100 shares of our Common Stock. Brokerage commissions and other costs of transactions in odd-lots are generally higher than the costs of transactions in "round-lots" of even multiples of 100 shares.

Relative Increase in Number of Authorized Shares of Common Stock for Issuance

The Reverse Stock Split will not affect the number of authorized shares or the par value of our capital stock, which will remain at 200,000,000 authorized shares of Common Stock and 10,000,000 authorized shares of preferred stock, par value \$0.001 per share ("Preferred Stock," and together with the Common Stock, the "Capital Stock"). Although the number of authorized shares of our Capital Stock will not change as a result of the Reverse Stock Split, the number of shares of our Common Stock issued and outstanding will be reduced in proportion to the ratio selected by the Board. Thus, the Reverse Stock Split will effectively increase the number of authorized and unissued shares of our Common Stock available for future issuance by the amount of the reduction effected by the Reverse Stock Split.

If the proposed Reverse Stock Split Amendments are approved, all or any of the authorized and unissued shares of our Common Stock may be issued in the future for such corporate purposes and such consideration as the Board deems advisable from time to time, without further action by the stockholders of our Company and without first offering such shares to our stockholders. When and if additional shares of our Common Stock are issued, these new shares would have the same voting and other rights and privileges as the currently issued and outstanding shares of Common Stock, including the right to cast one vote per share.

Because our stockholders have no preemptive rights to purchase or subscribe for any of our unissued shares of Common Stock, the future issuance of additional shares of Common Stock will reduce our current stockholders' percentage ownership interest in the total outstanding shares of Common Stock. In the absence of a proportionate

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increase in our future earnings and book value, an increase in the number of our outstanding shares of Common Stock would dilute our projected future earnings per share, if any, and book value per share of all our outstanding shares of Common Stock. If these factors were reflected in the price per share of our Common Stock, the potential realizable value of a stockholder's investment could be adversely affected. An issuance of additional shares could therefore have an adverse effect on the potential realizable value of a stockholder's investment.

Effect on Outstanding Equity Incentive Plans

The Company maintains the 2005 Equity Incentive Plan, the 2016 Equity Incentive Plan, the 2020 Incentive Award Plan, the 2020 Employee Stock Purchase Plan, and the 2022 Employment Inducement Award Plan (all together, the "Plans"), which are designed primarily to provide stock-based incentives to employees and directors of the Company. As of March 18, 2025, options to purchase 4,513,986 shares of our Common Stock were outstanding under the Plans. As of March 18, 2025, 4,352,430 restricted stock units which were subject solely to time-based vesting conditions and 385,000 restricted stock units which were subject to performance-based vesting conditions (with performance-based awards counted assuming "target" performance) were outstanding under the Plans. In the event of a Reverse Stock Split, our Board generally has the discretion to determine the appropriate adjustment to awards granted and share-based limits under the Plans. Accordingly, if the Reverse Stock Split is approved by our stockholders and our Board decides to implement the Reverse Stock Split, as of the Effective Time (as defined below) the number of shares issuable upon exercise and the exercise price of all outstanding options, and the number of shares underlying all outstanding restricted stock units will be proportionately adjusted (and rounded down to the nearest whole share in the case of shares and up to the nearest whole cent in the case of exercise prices, as applicable) based on the Reverse Stock Split ratio selected by our Board, subject to the terms of such Plans, options, and restricted stock units, as applicable. In addition, the number of shares available for future issuance and any share-based award limits under the Plans will be proportionately reduced based on the Reverse Stock Split ratio selected by our Board.

Our Board has also authorized the Company to effect any other changes necessary, desirable or appropriate to give effect to the Reverse Stock Split, including any applicable technical, conforming changes.

Effects of the Amendment on our Common Stock

After the Effective Time, each stockholder will own fewer shares of our Common Stock as a result of the Reverse Stock Split. Because the Reverse Stock Split will decrease the number of outstanding shares of our Common Stock, the proposed amendments will result in a relative increase in the number of authorized and unissued shares of our Common Stock. All outstanding options to purchase shares of our Common Stock, including any held by our officers and directors, would be adjusted as a result of the Reverse Stock Split. In particular, the number of shares issuable upon the exercise of each instrument would be reduced, and the exercise price per share, if applicable, would be increased, in accordance with the terms of each instrument and based on the ratio of the Reverse Stock Split. In addition, all restricted stock units covering shares of our Common Stock, including any held by our officers and directors, would be adjusted as a result of the Reverse Stock Split to reduce the number of shares issuable upon vesting of the restricted stock units. In particular, the number of shares underlying each instrument would be reduced in accordance with the terms of each instrument and based on the ratio of the Reverse Stock Split.

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The chart below outlines the capital structure as described in this proposal and prior to and immediately following a possible Reverse Stock Split if the Reverse Stock Split is effected at a ratio between 1-for-10 and 1-for-50 based on share information as of the close of business on March 18, 2025, but does not give effect to any other changes, including any issuance of securities after March 18, 2025.

	Number of Shares of common stock before Reverse Stock Split	1-for-10	1-for-20	1-for-30	1-for-40	1-for-50
Authorized	200,000,000	200,000,000	200,000,000	200,000,000	200,000,000	200,000,000
Issued and Outstanding	65,880,145	6,588,014	3,294,007	2,196,004	1,647,003	1,317,602
Issuable under Outstanding Warrants (1)	8,606,303	860,630	430,315	286,876	215,157	172,126
Issuable under Outstanding Equity Awards (2)	9,251,416	925,141	462,570	308,380	231,285	185,028
Reserved for Future Issuance under the Plans (3)	4,008,851	400,885	200,442	133,628	100,221	80,177
Authorized but Unissued and Unreserved (4)	112,253,285	191,225,330	195,612,666	197,075,112	197,806,334	198,245,067

- (1) Consists of shares reserved for issuance upon exercise of outstanding warrants.
- (2) Consists of shares reserved for issuance pursuant to outstanding stock options and restricted stock units (with performance-based restricted stock units counted assuming "target" performance).
- (3) Consists of shares reserved for future issuance under the Plans, excluding shares issuable under outstanding stock options and restricted stock units.
- (4) Consists of shares authorized but unissued and unreserved for future issuance.

Procedure for Effecting Reverse Stock Split and Exchange of Stock Certificates, if Applicable

If the proposed amendments to our Restated Certificate of Incorporation are approved by the Company's stockholders and the Board determines to effect the Reverse Stock Split, the Reverse Stock Split will become effective at 5:00 p.m. Eastern time, on the date the certificate of amendment is filed with the Secretary of State of the State of Delaware (the "Effective Time"). At the Effective Time, shares of Common Stock issued and outstanding immediately prior thereto will be combined, automatically and without any action on the part of the stockholders, into new shares of Common Stock in accordance with the Reverse Stock Split ratio contained in the certificate of amendment.

As soon as practicable after the Effective Time, stockholders will be notified by our transfer agent that the Reverse Stock Split has been effected. If you hold shares of Common Stock in book-entry form, you will not need to take any action to receive post-Reverse Stock Split shares of our Common Stock. As soon as practicable after the Effective Time, the Company's transfer agent will send to your registered address a statement of ownership indicating the number of post-Reverse Stock Split shares of Common Stock you hold. If applicable, a check representing a cash payment in lieu of fractional shares will also be mailed to your registered address as soon as practicable after the Effective Time (see "Fractional Shares" below).

Some stockholders may hold their shares of Common Stock in certificate form. Our transfer agent will act as exchange agent for purposes of implementing the exchange of stock certificates, if applicable. If you are a stockholder holding pre-Reverse Stock Split shares in certificate form, you will receive a transmittal letter from the Company's transfer agent as soon as practicable after the Effective Time. The transmittal letter will be accompanied by instructions specifying how you can exchange your certificate or certificates representing the pre-Reverse Stock Split shares of our Common Stock for a statement of ownership. When you submit your certificate or certificates representing the pre-Reverse Stock Split shares of our Common Stock, your post-Reverse Stock Split shares of our Common Stock will be held electronically in book-entry form in the Direct Registration System. This means that, instead of receiving a new stock certificate representing the aggregate number of post-Reverse Stock Split shares you own, you will receive a statement indicating the number of post-Reverse Stock Split shares you own in book-entry form. We will no longer issue physical stock certificates.

STOCKHOLDERS SHOULD NOT DESTROY ANY STOCK CERTIFICATE(S) AND SHOULD NOT SUBMIT ANY CERTIFICATE(S) UNTIL REQUESTED TO DO SO.

Beginning at the Effective Time, each certificate representing pre-Reverse Stock Split shares will be deemed for all corporate purposes to evidence ownership of post-Reverse Stock Split shares.

Fractional Shares

No scrip or fractional shares would be issued if, as a result of the Reverse Stock Split, a stockholder would otherwise become entitled to a fractional share because the number of shares of Common Stock they hold before the Reverse Stock Split is not evenly divisible by the split ratio ultimately determined by the Board. Instead, each stockholder will be entitled to receive a cash payment in lieu of such fractional share. The cash payment to be paid will be equal to the fraction of a share to which such stockholder would otherwise be entitled multiplied by the closing price per share as reported by The Nasdaq Capital Market (as adjusted to give effect to the Reverse Stock Split) on the date of the Effective Time. The Company will not assess any transaction costs to stockholders for the cash payment. Stockholders would not be entitled to receive interest for their fractional shares for the period of time between the Effective Time and the date payment is received.

After the Reverse Stock Split, then-current stockholders would have no further interest in our Company with respect to their fractional shares. A person entitled to only a fractional share would not have any voting, dividend or other rights in respect of their fractional share except to receive the cash payment as described above. Such cash payments would reduce the number of post-Reverse Stock Split stockholders to the extent that there are stockholders holding fewer than that number of pre-Reverse Stock Split shares within the Reverse Stock Split ratio that is determined by the Board as described above. Reducing the number of post-Reverse Stock Split stockholders, however, is not the purpose of this proposal.

Stockholders should be aware that, under the escheat laws of the various jurisdictions where stockholders reside, where we are domiciled and where the funds for fractional shares would be deposited, sums due to stockholders in payment for fractional shares that are not timely claimed after the Effective Time may be required to be paid to the designated agent for each such jurisdiction. Thereafter, stockholders otherwise entitled to receive such funds may have to seek to obtain them directly from the state to which they were paid.

No Appraisal Rights

Under the Delaware General Corporation Law, the Company's stockholders will not be entitled to appraisal rights with respect to the Reverse Stock Split, and we do not intend to independently provide stockholders with any such right.

No Going Private Transaction

Notwithstanding the decrease in the number of outstanding shares following the Reverse Stock Split, the Board does not intend for this transaction to be the first step in a series of plans or proposals of a "going private transaction" within the meaning of Rule 13e-3 of the Exchange Act.

Interests of Certain Persons in the Proposal

Certain of our officers and directors have an interest in this proposal as a result of their ownership of shares of our Common Stock, as set forth in the section entitled "Stock Ownership of Certain Beneficial Owners and Management" below. However, we do not believe that our officers or directors have interests in this proposal that are different from or greater than those of any of our other stockholders.

Anti-takeover Effects of Proposed Amendments

Release No. 34-15230 of the staff of the SEC requires disclosure and discussion of the effects of any action, including the proposed amendments to our Restated Certificate of Incorporation discussed herein, that may be used as an anti-takeover mechanism. An additional effect of the Reverse Stock Split would be to increase the relative amount of authorized but unissued shares of our Common Stock, which may, under certain circumstances, be construed as having an anti-takeover effect. Although not intended for such purposes, the effect of the increased available shares could be to render more difficult or discourage an attempt to take over or otherwise obtain control of the Company (for example, by permitting issuances that would dilute the stock ownership of a person or entity seeking to effect a change in the composition of the Board or contemplating a tender offer or other change in control transaction). In addition, our Restated Certificate of Incorporation and our Bylaws include provisions that may have an anti-takeover effect. These provisions, among things, permit the Board to issue preferred stock with rights senior to those of the Common Stock without any further vote or action by the stockholders and do not provide for cumulative voting rights, which could make it more difficult for stockholders to effect certain corporate actions and may delay or discourage a change in control.

Our Board is not presently aware of any attempt to acquire control of the Company, and the Reverse Stock Split proposal is not part of any plan by our Board to recommend or implement a series of anti-takeover measures.

Accounting Treatment of the Reverse Stock Split

If the Reverse Stock Split is effected, the par value per share of our Common Stock will remain unchanged at \$0.001. Accordingly, at the Effective Time, the stated capital on the Company's consolidated balance sheets attributable to our Common Stock will be reduced in proportion to the size of the Reverse Stock Split ratio, and the additional paid-in-capital account will be increased by the amount by which the stated capital is reduced. Our stockholders' equity, in the aggregate, will remain unchanged as a result of the Reverse Stock Split. Per share net income or loss will be increased because there will be fewer shares of Common Stock outstanding. The Company does not anticipate that any other accounting consequences, including changes to the amount of stock-based compensation expense to be recognized in any period, will arise as a result of the Reverse Stock Split.

Certain U.S. Federal Income Tax Consequences of the Reverse Stock Split

The following is a summary of certain U.S. federal income tax consequences of the Reverse Stock Split to U.S. Holders (as defined below) that hold their shares of Common Stock as capital assets for U.S. federal income tax purposes. This summary is based upon the provisions of the U.S. Internal Revenue Code of 1986, as amended (the "Code"), Treasury regulations promulgated thereunder, administrative rulings and judicial decisions, all as in effect as of the date hereof, and all of which are subject to change and differing interpretations, possibly with retroactive effect. Changes in these authorities or their interpretation may result in the U.S. federal income tax consequences of the Reverse Stock Split differing substantially from the consequences summarized below.

This summary is for general information purposes only and does not address all aspects of U.S. federal income taxation that may be relevant to U.S. Holders in light of their particular circumstances or to U.S. Holders that may be subject to special tax rules, including, without limitation: (i) persons subject to any alternative minimum tax; (ii) banks, insurance companies, or other financial institutions; (iii) tax-exempt organizations, qualified retirement plans, individual retirement accounts or other tax deferred accounts, or governmental organizations; (iv) dealers in securities or commodities; (v) regulated investment companies or real estate investment trusts; (vi) partnerships (including entities or arrangements treated as partnerships for U.S. federal income tax purposes and their partners or members); (vii) brokers, dealers, or traders in securities; (viii) persons whose "functional currency" is not the U.S. dollar; (ix) persons holding our Common Stock in a hedging transaction, "straddle," "conversion transaction" or other risk reduction transaction; (x) persons who acquired our Common Stock in connection with employment or the performance of services; (xi) persons deemed to sell our Common Stock under the constructive sale provisions of the Code; (xii) corporations that accumulate earnings to avoid U.S. federal income tax; or (xiii) certain former citizens or long-term residents of the United States.

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In addition, this summary of certain U.S. federal income tax consequences does not address the tax consequences arising under the laws of any foreign, state or local jurisdiction or any U.S. federal tax consequences other than U.S. federal income taxation (such as U.S. federal estate and gift tax consequences). Furthermore, the following discussion does not address any tax consequences of transactions effectuated before, after or at the same time as the Reverse Stock Split, whether or not they are in connection with the Reverse Stock Split.

If a partnership (including any entity or arrangement treated as a partnership for U.S. federal income tax purposes) holds shares of our Common Stock, the tax treatment of a partner in the partnership generally will depend upon the status of the partner, the activities of the partnership, and certain determinations made at the partner level. Partnerships holding our Common Stock and the partners in such partnerships should consult their tax advisors regarding the tax consequences to them of the Reverse Stock Split.

We have not sought, and will not seek, an opinion of counsel or a ruling from the Internal Revenue Service (the “IRS”), regarding the U.S. federal income tax consequences of the Reverse Stock Split, and there can be no assurance that the IRS will not challenge the statements and conclusions set forth below or that a court would not sustain any such challenge.

EACH STOCKHOLDER SHOULD CONSULT ITS TAX ADVISORS WITH RESPECT TO THE PARTICULAR TAX CONSEQUENCES OF THE REVERSE STOCK SPLIT TO SUCH STOCKHOLDER.

This summary addresses only stockholders that are U.S. Holders. For purposes of this discussion, a “U.S. Holder” is any beneficial owner of our Common Stock that, for U.S. federal income tax purposes, is or is treated as any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation created or organized under the laws of the United States, any state thereof or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust that (i) is subject to the primary supervision of a U.S. court and all substantial decisions of which are subject to the control of one or more “United States persons” (within the meaning of Section 7701(a)(30) of the Code) or (ii) has a valid election in effect to be treated as a United States person for U.S. federal income tax purposes.

The Reverse Stock Split should constitute a “recapitalization” for U.S. federal income tax purposes. As a recapitalization, except as described below with respect to cash received in lieu of fractional shares, a U.S. Holder should not recognize gain or loss as a result of the Reverse Stock Split. A U.S. Holder’s aggregate tax basis in the shares of the Common Stock received pursuant to the Reverse Stock Split should equal the U.S. Holder’s aggregate tax basis in the shares of the Common Stock surrendered (excluding any portion of such basis that is allocated to any fractional share of our Common Stock), and such U.S. Holder’s holding period in the shares of the Common Stock received should include the holding period of the shares of the Common Stock surrendered.

Treasury regulations promulgated under the Code provide detailed rules for allocating the tax basis and holding period of the shares of Common Stock surrendered pursuant to the Reverse Stock Split to the shares of Common Stock received pursuant to the Reverse Stock Split. U.S. Holders holding shares of Common Stock that were acquired on different dates and at different prices should consult their tax advisors regarding the allocation of the tax basis and holding period of such shares.

A U.S. Holder who receives cash in lieu of a fractional share of Common Stock should be treated as first receiving such fractional share and then receiving cash in redemption of such fractional share. A U.S. Holder

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who receives cash in lieu of a fractional share in the Reverse Stock Split should recognize capital gain or loss in an amount equal to the difference between the amount of the cash received in lieu of the fractional share and the portion of the U.S. Holder's adjusted tax basis allocable to the fractional share. U.S. Holders should consult their tax advisors regarding the tax effects to them of receiving cash in lieu of fractional shares based on their particular circumstances. Such capital gain or loss should be long-term capital gain or loss if the U.S. Holder's holding period for the Common Stock surrendered exceeded one year at the Effective Time of the Reverse Stock Split. The deductibility of capital losses is subject to limitations and to the rules applicable to U.S. Holders holding shares of common stock acquired on different dates (as mentioned above).

Under certain circumstances, cash received by a U.S. Holder in lieu of fractional shares could be treated as a dividend for U.S. federal income tax purposes instead of capital gain. U.S. Holders should consult their tax advisors regarding the tax effects to them of receiving cash in lieu of fractional shares based on their particular circumstances.

U.S. Holders (other than corporations and certain other exempt recipients) may be subject to information reporting with respect to any cash received in exchange for a fractional share interest in a new share in the Reverse Stock Split. U.S. Holders who are subject to information reporting and who do not provide a correct taxpayer identification number and other required information (such as by submitting a properly completed IRS Form W-9) may also be subject to backup withholding at the applicable rate. Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be refunded or credited against the U.S. Holder's U.S. federal income tax liability; provided that the required information is properly furnished in a timely manner to the IRS. U.S. Holders should consult their tax advisors regarding their qualification for an exemption from backup withholding and the procedures for obtaining such an exemption.

Vote Required

This proposal requires the affirmative vote of the holders of a majority of the votes cast affirmatively or negatively. Abstentions and broker non-votes will have no effect on this proposal. If your shares are held by your bank, broker or other nominee in street name and you do not vote your shares, your bank, broker or other nominee may vote your shares. Therefore, we do not expect any broker non-votes with respect to this proposal.

Recommendation of the Board of Directors



The Board of Directors unanimously recommends a vote FOR the Reverse Stock Split Proposal.

Proposal 4: Approval of an Adjournment of the Annual Meeting, if Necessary, to Solicit Additional Proxies if there are Not Sufficient Votes at the Time of the Annual Meeting to Approve the Reverse Stock Split Proposal

The Board believes that if the number of shares of the Company's common stock cast in favor of the Reverse Stock Split Proposal is insufficient to approve the Reverse Stock Split Proposal, it is in the best interests of the stockholders to enable the Company to continue to seek to obtain a sufficient number of additional votes to approve the Reverse Stock Split Proposal.

In this Adjournment Proposal, we are asking stockholders to authorize the holder of any proxy solicited by the Board to vote in favor of adjourning the Annual Meeting or any adjournment or postponement thereof. If our stockholders approve this proposal, we could adjourn the Annual Meeting, and any adjourned session of the Annual Meeting, to use the additional time to solicit additional proxies in favor of the Reverse Stock Split Proposal.

Vote Required

This proposal requires the affirmative vote of the holders of a majority in voting power of the votes cast affirmatively or negatively. Abstentions and broker non-votes will have no effect on this proposal. If your shares are held by your bank, broker or other nominee in street name and you do not vote your shares, your bank, broker or other nominee may vote your shares. Therefore, we do not expect any broker non-votes with respect to this proposal.

Recommendation of the Board of Directors

 **The Board of Directors unanimously recommends a vote FOR the Adjournment Proposal.**

EXECUTIVE OFFICERS

The following table identifies our current executive officers.

<u>Name</u>	<u>Age</u>	<u>Position</u>	<u>In Current Position Since</u>
Harlan W. Waksal, M.D.	71	Executive Chair and Chairperson of the Board	February 2022
Maria Palasis, Ph.D.	60	President and Chief Executive Officer and Director	January 2015
Jason Cavalier	52	Chief Financial Officer and Treasurer	September 2021

The following are brief biographies describing the backgrounds of our executive officers.

The biographies for Dr. Waksal and Dr. Palasis appear above.

Jason Cavalier has served as our Chief Financial Officer, and Treasurer since September 2021. He also served as our Secretary from September 2021 to March 2024. Prior to joining our Company, Mr. Cavalier served as a Managing Director and the Head of Life Sciences Mergers and Acquisitions at Cantor Fitzgerald & Co., where he led transactions across the medical technology, diagnostics and biopharma sectors, from 2017 to 2021. Prior to that, Mr. Cavalier served as a Director, Mergers and Acquisitions, at RBC Capital Markets LLC from 2009 to 2017, where he primarily focused on advising senior management and boards of directors on a range of strategic advisory assignments including mergers, acquisitions, divestitures and leveraged buyouts. Mr. Cavalier has also held positions of increasing responsibility within the investment banking divisions of Barclays Capital Inc., Bear Stearns & Co. Inc., and Lehman Brothers Inc. Mr. Cavalier received a B.S. in Applied Economics and Business Management from Cornell University and an M.B.A. from Columbia University Business School.

CORPORATE GOVERNANCE

General

Our Board has adopted Corporate Governance Guidelines, a Code of Business Conduct and Ethics, and charters for our Nominating and Corporate Governance Committee, Audit Committee and Compensation Committee to assist the Board in the exercise of its responsibilities and to serve as a framework for the effective governance of the Company. You can access our current committee charters, our Corporate Governance Guidelines, and our Code of Business Conduct and Ethics in the “Governance” section of the “Investors & News” page of our website located at www.lyratx.com, or by writing to our Secretary at our offices at 480 Arsenal Way, Watertown, Massachusetts 02472.

Board Composition

Our Board currently consists of six (6) members: C. Ann Merrifield, Maria Palasis, Ph.D., W. Bradford Smith, Nancy L. Snyderman, M.D., FACS, James R. Tobin and Harlan W. Waksal, M.D. As set forth in our Restated Certificate of Incorporation, the Board is divided into three classes with staggered, three-year terms. At each annual meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Our Restated Certificate of Incorporation and Amended and Restated Bylaws provide that the authorized number of directors may be changed only by resolution of the Board. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. The division of our Board into three classes with staggered three-year terms may delay or prevent a change of our management or a change in control of our Company. Our directors may be removed only for cause by the affirmative vote of the holders of at least two-thirds in voting power of the outstanding shares of our capital stock entitled to vote in the election of directors.

Director Independence

Our Board has determined that each of C. Ann Merrifield, W. Bradford Smith, Nancy L. Snyderman, M.D., FACS, James R. Tobin and, for the period in which they served until their resignations on each of April 15, 2024, December 12, 2024, and December 12, 2024, each of Edward T. Anderson, Michael Altman and Konstantin Poukalov, respectively, qualify as “independent” in accordance with the listing requirements of Nasdaq. The Nasdaq independence definition includes a series of objective tests, including that the director is not, and has not been for at least three years, one of our employees and that neither the director nor any of his family members has engaged in various types of business dealings with us. In addition, as required by Nasdaq rules, our Board has made a subjective determination as to each independent director that no relationships exist, which, in the opinion of our Board, would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. In making these determinations, our Board reviewed and discussed information provided by the directors and us with regard to each director’s business and personal activities and relationships as they may relate to us and our management, including that Mr. Altman and Mr. Poukalov were affiliated with certain of our significant stockholders. Maria Palasis, Ph.D. and Harlan W. Waksal, M.D. are not independent. There are no family relationships among any of our directors or executive officers.

Director Candidates

The Nominating and Corporate Governance Committee is primarily responsible for searching for qualified director candidates for election to the Board and filling vacancies on the Board. To facilitate the search process, the Nominating and Corporate Governance Committee may solicit current directors and executives of the Company for the names of potentially qualified candidates or ask directors and executives to pursue their own business contacts for the names of potentially qualified candidates. The Nominating and Corporate Governance Committee may also consult with outside advisors or retain search firms to assist in the search for qualified candidates, or consider director candidates recommended by our stockholders. Once potential candidates are identified, the Nominating and Corporate Governance Committee reviews the backgrounds of those candidates,

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evaluates candidates' independence from the Company and potential conflicts of interest and determines if candidates meet the qualifications desired by the Nominating and Corporate Governance Committee for candidates for election as a director.

In evaluating the suitability of individual candidates (both new candidates and current Board members), the Nominating and Corporate Governance Committee, in recommending candidates for election, and the Board, in approving (and, in the case of vacancies, appointing) such candidates, may take into account many factors, including: personal and professional integrity, ethics and values; experience in corporate management, such as serving as an officer or former officer of a publicly held company; strong finance experience; relevant social policy concerns; experience relevant to the Company's industry; experience as a board member or executive officer of another publicly held company; relevant academic expertise or other proficiency in an area of the Company's operations; expertise and experience in substantive matters pertaining to the Company's business relative to other board members; practical and mature business judgment, including, but not limited to, the ability to make independent analytical inquiries; and any other relevant qualifications, attributes or skills. The Board evaluates each individual in the context of the Board as a whole, with the objective of assembling a group that can best perpetuate the success of the business and represent stockholder interests through the exercise of sound judgment using its diversity of experience in these various areas. In determining whether to recommend a director for re-election, the Nominating and Corporate Governance Committee may also consider the director's past attendance at meetings and participation in and contributions to the activities of the Board.

Stockholders may recommend individuals to the Nominating and Corporate Governance Committee for consideration as potential director candidates by submitting the names of the recommended individuals, together with appropriate biographical information and background materials, to the Nominating and Corporate Governance Committee, c/o Secretary, Lyra Therapeutics, Inc., 480 Arsenal Way, Watertown, Massachusetts 02472. In the event there is a vacancy, and assuming that appropriate biographical and background material has been provided on a timely basis, the Nominating and Corporate Governance Committee will evaluate stockholder-recommended candidates by following substantially the same process, and applying substantially the same criteria, as it follows for candidates submitted by others.

Communications from Stockholders

The Board will give appropriate attention to written communications that are submitted by stockholders, and will respond if and as appropriate. Our Secretary is primarily responsible for monitoring communications from stockholders and for providing copies or summaries to the directors as he or she considers appropriate.

Communications are forwarded to all directors if they relate to important substantive matters and include suggestions or comments that our Secretary and Chairperson of the Board consider to be important for the directors to know. In general, communications relating to corporate governance and long-term corporate strategy are more likely to be forwarded than communications relating to ordinary business affairs, personal grievances and matters as to which we tend to receive repetitive or duplicative communications. Stockholders who wish to send communications on any topic to the Board should address such communications to the Board of Directors in writing: c/o Secretary, Lyra Therapeutics, Inc., 480 Arsenal Way, Watertown, Massachusetts 02472.

Board Leadership Structure and Role in Risk Oversight

Our Board is currently chaired by Harlan W. Waksal, M.D., our Executive Chair. Our Corporate Governance Guidelines provide that, if the chairperson of the Board is a member of management or does not otherwise qualify as independent, the independent directors of the Board may elect an independent lead director. James R. Tobin currently serves as our lead director. The lead director's responsibilities include, but are not limited to: presiding over all meetings of the Board of Directors at which the chairperson is not present, including any executive sessions of the independent directors; calling meetings or separate sessions of the independent directors; approving Board

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meeting schedules and agendas; and acting as the liaison between the independent directors and the chief executive officer and chairperson of the Board. Our Corporate Governance Guidelines further provide flexibility for our Board to modify our leadership structure in the future as it deems appropriate.

Our Board has determined that combining the roles of Chairperson of the Board and Executive Chair is in the best interests of our Company and its stockholders at this time because it promotes unified leadership by Dr. Waksal and allows for a single, clear focus for management to execute the Company's strategy and business plans. For these reasons and because of the strong leadership of Dr. Waksal, our Board has concluded that our current leadership structure is appropriate at this time. However, our Board will continue to periodically review our leadership structure and may make such changes in the future as it deems appropriate.

Risk assessment and oversight are an integral part of our governance and management processes. Our Board encourages management to promote a culture that incorporates risk management into our corporate strategy and day-to-day business operations. Management discusses strategic and operational risks at regular management meetings and conducts specific strategic planning and review sessions during the year that include a focused discussion and analysis of the risks facing us. Throughout the year, senior management reviews these risks with the Board at regular Board meetings as part of management presentations that focus on particular business functions, operations or strategies, and presents the steps taken by management to mitigate or eliminate such risks. Our Board does not have a standing risk management committee, but rather administers this oversight function directly through the Board as a whole, as well as through various standing committees of the Board that address risks inherent in their respective areas of oversight. In particular, our Board is responsible for monitoring and assessing strategic risk exposure, including business continuity risks, and our Audit Committee is responsible for overseeing our financial and cybersecurity risk exposures and the steps our management has taken to monitor and control these exposures. The Audit Committee also monitors compliance with legal and regulatory requirements and considers and approves or disapproves any related person transactions. Our Nominating and Corporate Governance Committee manages risks associated with the Company's corporate governance framework and the Board's leadership structure, and monitors the effectiveness of the Corporate Governance Guidelines. Our Compensation Committee oversees the management of risks relating to the Company's compensation plans, equity incentive plans and other compensatory arrangements. The Board does not believe that its role in the oversight of our risks affects the Board's leadership structure.

Code of Business Conduct and Ethics

Our Board has adopted a written code of business conduct (the "Code of Business Conduct and Ethics") that applies to all of our directors, officers and employees, including our principal executive officer, principal financial officer and principal accounting officer, and persons performing similar functions. A copy of the Code of Business Conduct and Ethics is available on our website at www.lyratx.com in the "Governance" section of the "Investors & News" page. In addition, we intend to post on our website all disclosures that are required by law or The Nasdaq Stock Market LLC concerning any amendments to, or waivers from, any provision of our Code of Business Conduct and Ethics. We granted no waivers under our Code of Business Conduct and Ethics during the fiscal year 2024.

Insider Trading Compliance Policy

Our Board has adopted an insider trading policy governing the purchase, sale and other dispositions of the Company's securities that applies to all Company personnel, including directors, officers, employees, and other covered persons. The Company believes that its insider trading policy is reasonably designed to promote compliance with insider trading laws, rules and regulations, and listing standards applicable to the Company. The policy prohibits our directors, officers and employees and any entities they control from purchasing financial instruments such as prepaid variable forward contracts, equity swaps, collars, and exchange funds, or otherwise engaging in transactions that hedge or offset, or are designed to hedge or offset, any decrease in the market value of the Company's equity securities, or that may cause an officer, director, or employee to no longer have the same objectives as the Company's other stockholders. A copy of the Company's insider trading policy is filed as Exhibit 19.1 to our Annual Report on Form 10-K for the year ended December 31, 2024.

Clawback Policy

In accordance with Nasdaq listing standards and Rule 10D-1 under the Exchange Act, our Board has adopted a Policy for Recovery of Erroneously Awarded Compensation (the “Clawback Policy”) that applies to our current and former executive officers. Under the Clawback Policy, we are required to recoup the amount of any Erroneously Awarded Compensation (as defined in the Clawback Policy) on a pre-tax basis within a specified lookback period in the event of any accounting Restatement (as defined in the Clawback Policy), subject to limited impracticability exceptions. Covered restatements include both a restatement to correct an error that is material to previously issued financial statements or that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period. The amount required to be recovered is the excess of the amount of incentive-based compensation received over the amount that otherwise would have been received had it been determined based on the restated financial measure.

Attendance by Members of the Board of Directors at Meetings

There were ten (10) meetings of the Board of Directors during the fiscal year ended December 31, 2024. During the fiscal year ended December 31, 2024, each director, during the period in which he or she served as a director, attended at least 75% of the aggregate of (i) all meetings of the Board of Directors and (ii) all meetings of the committees on which the director served, other than Edward T. Anderson and Michael Altman.

Under our Corporate Governance Guidelines, which is available on our website at www.lyratx.com, a director is expected to spend the time and effort necessary to properly discharge his or her responsibilities. Accordingly, a director is expected to regularly prepare for and attend meetings of the Board and all committees on which the director sits (including separate meetings of the independent directors), with the understanding that, on occasion, a director may be unable to attend a meeting. A director who is unable to attend a meeting of the Board or a committee of the Board is expected to notify the Chairperson of the Board or the Chairperson of the appropriate committee in advance of such meeting, and, whenever possible, participate in such meeting via teleconference in the case of an in-person meeting. We do not maintain a formal policy regarding director attendance at the Annual Meeting; however, it is expected that absent compelling circumstances directors will attend. All of our then incumbent members of the Board attended the 2024 Annual Meeting of Stockholders.

COMMITTEES OF THE BOARD

Our Board has established three standing committees - Audit, Compensation and Nominating and Corporate Governance—each of which operates under a written charter that has been approved by our Board.

The members of each of the Board committees and committee Chairpersons are set forth in the following chart.

Name	Audit	Compensation	Nominating and Corporate Governance
C. Ann Merrifield		X	Chairperson
W. Bradford Smith	Chairperson		X
Nancy L. Snyderman, M.D., FACS	X	X	X
James R. Tobin	X	Chairperson	

Audit Committee

Our Audit Committee’s responsibilities include, among other things:

- appointing, approving the compensation of, and assessing the independence of our registered public accounting firm;
- overseeing the work of our registered public accounting firm, including through the receipt and consideration of reports from such firm;
- reviewing and discussing with management and the registered public accounting firm our annual and quarterly financial statements and related disclosures;
- coordinating our Board’s oversight of our internal control over financial reporting, disclosure controls and procedures and code of business conduct and ethics;
- discussing our risk management policies, including overseeing management of the Company’s financial and cybersecurity risks;
- meeting independently with our internal auditing staff, if any, registered public accounting firm and management;
- reviewing and approving or ratifying any related person transactions; and
- preparing the audit committee report required by SEC rules.

The Audit Committee charter is available on our website at www.lyratx.com. The members of the Audit Committee are Dr. Snyderman, Mr. Smith and Mr. Tobin. Mr. Smith serves as the Chairperson of the committee. Our Board has affirmatively determined that each of Dr. Snyderman, Mr. Smith, and Mr. Tobin is independent for purposes of serving on an audit committee under Rule 10A-3 promulgated under the Securities and Exchange Act of 1934, as amended (the “Exchange Act”) and Nasdaq rules, including those related to Audit Committee membership. The Board also determined that Mr. Anderson was independent for purposes of serving on an audit committee under Rule 10A-3 promulgated under the Exchange Act and Nasdaq rules, including those related to Audit Committee membership, for the period of time in which he served until his resignation on April 15, 2024.

The members of our Audit Committee meet the requirements for financial literacy under the applicable Nasdaq rules. In addition, our Board has determined that each of Mr. Smith and Mr. Tobin qualifies as an “audit committee financial expert,” as such term is defined in Item 407(d)(5) of Regulation S-K, and under the similar Nasdaq rules requirement that the Audit Committee have a financially sophisticated member.

The Audit Committee met five (5) times in 2024.

Compensation Committee

Our Compensation Committee's responsibilities include, among other things:

- reviewing, modifying (as needed) and approving (or if it deems appropriate, making recommendations to our Board regarding) the overall compensation strategy and policies for the Company;
- evaluating and making recommendations to our Board regarding the compensation plans and programs advisable for the Company, as well as the modification or termination of existing plans and programs;
- determining and recommending to our Board for determination and approval the compensation and other terms of employment of our CEO;
- periodically reviewing the performance of our CEO;
- determining and approving the compensation and other terms of employment for each executive officer;
- making recommendations to our Board regarding the type and amount of compensation to be paid or awarded to non-employee members of our Board;
- reviewing and discussing annually with management our "Compensation Discussion and Analysis," to the extent required; and
- preparing the annual compensation committee report required by SEC rules, to the extent required.

The Compensation Committee generally considers the Chief Executive Officer's recommendations when making decisions regarding the compensation of non-employee directors and executive officers (other than the Chief Executive Officer). Pursuant to the Compensation Committee's charter, which is available on our website at www.lyratx.com, the Compensation Committee has the authority to retain or obtain the advice of compensation consultants, legal counsel and other advisors to assist in carrying out its responsibilities. In 2024, the Compensation Committee engaged Pay Governance LLC, a compensation consulting firm ("Pay Governance"), to assist in making decisions regarding the amount and types of compensation to provide our executive officers and non-employee directors. As part of this process, the Compensation Committee reviewed a compensation assessment provided by Pay Governance comparing our compensation to that of a group of peer companies within our industry and met with Pay Governance to discuss our executive and non-employee director compensation and to receive input and advice. Pay Governance reports directly to the Compensation Committee. The Compensation Committee has considered the adviser independence factors required under SEC rules as they relate to Pay Governance and has determined that Pay Governance's work does not raise a conflict of interest. For 2024, Pay Governance did not provide additional services to us for which the fees exceeded \$120,000.

The Compensation Committee may delegate its authority under its charter to one or more subcommittees as it deems appropriate from time to time. The Compensation Committee may also delegate to an officer the authority to grant equity awards to certain employees, as further described in its charter and subject to the terms of our equity plans.

The members of our Compensation Committee are Ms. Merrifield, Dr. Snyderman and Mr. Tobin. Mr. Tobin serves as the Chairperson of the Compensation Committee. Each member of the Compensation Committee qualifies as an independent director under Nasdaq's heightened independence standards for members of a compensation committee and as a "non-employee director" as defined in Rule 16b-3 of the Exchange Act. The Board also determined that Mr. Anderson qualified as an independent director under Nasdaq's heightened independence standards for members of a compensation committee for the period in which he served until his resignation on April 15, 2024.

The Compensation Committee met nine (9) times in 2024.

Nominating and Corporate Governance Committee

Our Nominating and Corporate Governance Committee's responsibilities include, among other things:

- identifying individuals qualified to become board members;

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- recommending to our Board the persons to be nominated for election as directors and to be appointed to each board committee;
- developing and recommending to our Board corporate governance guidelines, and reviewing and recommending to our Board proposed changes to our corporate governance guidelines from time to time;
- reviewing the Board's leadership structure; and
- overseeing a periodic evaluation of our Board.

The Nominating and Corporate Governance Committee charter is available on our website at www.lyratx.com. The members of our Nominating and Corporate Governance Committee are Ms. Merrifield, Mr. Smith and Dr. Snyderman. Ms. Merrifield serves as the Chairperson of the Nominating and Corporate Governance Committee. The Nominating and Corporate Governance Committee has the authority to consult with outside advisors or retain search firms to assist in the search for qualified candidates, or consider director candidates recommended by our stockholders.

The Nominating and Corporate Governance Committee met three (3) times in 2024.

EXECUTIVE AND DIRECTOR COMPENSATION

This section discusses the material components of the executive compensation program for our executive officers who are named in the “2024 Summary Compensation Table” below. In 2024, our “named executive officers” and their positions were as follows:

- Maria Palasis, Ph.D., President and Chief Executive Officer;
- Harlan W. Waksal, M.D., Executive Chair and Chairperson of the Board;
- Jason Cavalier, Chief Financial Officer and Treasurer; and
- Richard Nieman, M.D, Former Chief Medical Officer

2024 Summary Compensation Table

The following table sets forth information concerning the compensation of our named executive officers for the years shown.

Name and Principal Position	Year	Salary (\$)	Bonus ⁽¹⁾ (\$)	Stock Awards ⁽²⁾ (\$)	Option Awards ⁽³⁾ (\$)	Non-Equity Incentive Plan Compensation ⁽⁴⁾ (\$)	All Other Compensation ⁽⁵⁾ (\$)	Total (\$)
Maria Palasis, Ph.D.	2024	625,000	187,500	72,060	2,783,149	—	64,488	3,732,197
<i>President and Chief Executive Officer</i>	2023	583,000	—	—	842,675	349,800	9,900	1,785,375
Harlan W. Waksal, M.D.	2024	400,000	—	2,365,731	—	—	30,878	2,796,609
<i>Executive Chairman</i>	2023	200,000	—	—	415,003	—	10,060	625,063
Jason Cavalier	2024	444,444	133,333	24,020	633,239	—	68,924	1,303,960
<i>Chief Financial Officer and Treasurer</i>	2023	441,141	—	—	290,502	175,000	36,530	943,173
Richard Nieman, M.D.(6)	2024	250,613	72,503	—	633,239	—	397,836	1,354,191
<i>Former Chief Medical Officer</i>	2023	476,579	—	—	115,240	200,000	25,834	817,653

- (1) Amounts represent cash retention bonuses awarded in 2024 and earned based on continued service through October 1, 2024, or, in the case of Dr. Nieman, upon his termination without cause on June 26, 2024. Upon his departure from the Company, Dr. Nieman received the first installment of the retention bonus, as reported in the Summary Compensation Table, and forfeited the right to receive the second and third installments of the retention bonus.
- (2) Amounts represent the full grant date fair value of restricted stock units (“RSUs”), including performance-based RSUs, granted during 2024 computed in accordance with ASC Topic 718, rather than the amounts paid to or realized by the named individual. The amount included for performance-based RSUs is based on the probable outcome of the applicable performance conditions as of the date of grant. This amount also represents the potential value of the award assuming maximum achievement of the performance conditions. We provide information regarding the assumptions used to calculate the value of all RSU awards, including performance-based RSU awards, made to named executive officers in Note 12 to the consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2024.
- (3) Amounts represent the full grant date fair value of stock options, including performance-based stock options, granted during 2024 computed in accordance with ASC Topic 718, rather than the amounts paid to or realized by the named individual. The amount included for performance-based stock options is based on the probable outcome of the applicable performance conditions as of the date of grant. This amount also represents the potential value of the award assuming maximum achievement of the performance conditions. We provide information regarding the assumptions used to calculate the value of all option awards made to named executive officers in Note 12 to the consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2024.

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- (4) Amounts represent performance-based annual cash bonuses for fiscal year 2023, determined by our Board of Directors for the named executive officers.
- (5) Amounts for fiscal year 2024 represent company 401(k) matching contributions, taxable fringe benefits, personal time off payouts and in the case of Dr. Waksal, travel expenses and related tax gross-ups, and in the case of Dr. Nieman, severance payments paid or accrued for fiscal year 2024 in conjunction with our restructuring program implemented in 2024, as described in Note 5 to the consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2024.
- (6) Dr. Nieman's active employment ceased effective June 26, 2024.

Narrative to Summary Compensation Table

2024 Salaries

The named executive officers receive a base salary to provide a fixed component of compensation reflecting the executive's skill set, experience, role and responsibilities. For 2024, the base salaries for Dr. Palasis, Dr. Waksal, Mr. Cavalier and Dr. Nieman were \$625,000, \$400,000, \$444,444 and \$483,351, respectively.

Retention Bonuses

In May 2024, we entered into retention bonus letter agreements with Dr. Palasis, Mr. Cavalier and Dr. Nieman that provide for retention bonuses to be paid in three installments, with the first installment (representing 50% of the total retention bonus in the case of Dr. Palasis and Mr. Cavalier and 25% in the case of Dr. Nieman) earned based on continued service through October 1, 2024; the second installment (representing 25% of the total retention bonus) earned based on continued service through January 1, 2025; and the final installment (representing 25% of the total retention bonus in the case of Dr. Palasis and Mr. Cavalier and 50% in the case of Dr. Nieman) earned based on continued service through May 1, 2025. In the event that such named executive officer is terminated by the Company without "cause" prior to any retention date, he or she is entitled to the retention bonus installment payment that would otherwise be paid in respect of such retention date (subject to signing a release of claims in favor of the Company).

The total retention bonus amounts are set forth in the following table:

<u>Named Executive Officer</u>	<u>Total Retention Bonus</u>
Maria Palasis, Ph.D.	\$ 375,000
Jason Cavalier	\$ 266,666
Richard Nieman, M.D.	\$ 290,011

Equity Compensation

We offer stock awards and stock options to our employees, including our named executive officers, as the long-term incentive component of our compensation program. Our stock awards allow employees to receive shares of common stock upon their respective vesting dates and options generally allow employees to purchase shares of our common stock at a price equal to the fair market value of our common stock on the date of grant. With respect to grants made in connection with the commencement of employment, our stock options typically vest as to 25% of the underlying shares on the first anniversary of the vesting commencement date and in equal monthly installments over the following three years, subject to the holder's continued service with us. From time to time, our Board of Directors may also construct alternate vesting schedules as it determines are appropriate to motivate particular employees. Historically, our stock options have been intended to qualify as "incentive stock options" to the extent permitted under the Internal Revenue Code.

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The following table sets forth the stock awards and options granted to our named executive officers in 2024.

<u>Named Executive Officer</u>	<u>2024 Stock Awards Granted</u>	<u>2024 Stock Options Granted</u>
Maria Palasis, Ph.D.	300,000	1,050,000
Harlan W. Waksal, M.D.	660,000	—
Jason Cavalier	100,000	200,000
Richard Nieman, M.D.	—	200,000

In connection with our annual performance review, in March 2024 Dr. Palasis was granted an option to purchase 1,050,000 shares of our common stock, with 550,000 option shares subject to vesting based on achievement of performance goals, and 500,000 option shares subject to time vesting conditions. In addition, in October 2024, Dr. Palasis was granted 300,000 restricted stock units subject to time vesting conditions. In March 2024, Dr. Waksal was granted 660,000 restricted stock units, 275,000 of which are subject to time vesting conditions and 385,000 of which are subject to achievement of performance goals. In January 2024, Mr. Cavalier was granted an option to purchase 200,000 shares of common stock subject to time vesting conditions, and in October 2024, Mr. Cavalier was granted 100,000 restricted stock units subject to time vesting conditions. In January 2024, Dr. Nieman was granted an option to purchase 200,000 shares of common stock subject to time vesting conditions. This option was forfeited upon his termination of employment with the Company in June 2024.

Other Elements of Compensation

Retirement Plan

We maintain a 401(k) retirement savings plan for our employees, including our named executive officers, who satisfy certain eligibility requirements. Our named executive officers are eligible to participate in the 401(k) plan on the same terms as other full-time employees. We believe that providing a vehicle for tax-deferred retirement savings through our 401(k) plan adds to the overall desirability of our executive compensation package and further incentivizes our employees, including our named executive officers, in accordance with our compensation policies. For 2024, we made matching contributions of 50% of the first 6% of eligible compensation contributed under our 401(k) plan.

Employee Benefits and Perquisites

All of our full-time employees, including our named executive officers, are eligible to participate in our employee benefit plans and programs, including medical, dental, and vision benefits, health spending accounts, and short- and long-term disability, accidental death and dismemberment, and life insurance and personal time off (“PTO”) pay-outs to the same extent as our other full-time employees, subject to the terms and eligibility requirements of those plans.

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Outstanding Equity Awards at 2024 Fiscal Year-End

The following table summarizes the number of shares of common stock underlying outstanding equity incentive plan awards for each named executive officer as of December 31, 2024.

Name	Option Awards ⁽¹⁾						Stock Awards			Equity incentive plan awards: market or payout value of unearned shares, units or other rights that have not vested ⁽⁸⁾
	Vesting Commencement Date	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#)	Option Exercise Price (\$)	Option Expiration Date	Number of shares or units of stock that have not vested (#)	Market value of shares or units of stock that have not vested ⁽⁸⁾	Equity incentive plan awards: number of unearned shares, units or other rights that have not vested (#)	
Maria Palasis, Ph.D.	9/23/2015	94,287	—	—	22.76	9/23/2025	—	—	—	—
	6/13/2017	31,429	—	31,429 ⁽²⁾	1.73	6/13/2027	—	—	—	—
	3/6/2019	170,455	—	—	2.76	3/6/2029	—	—	—	—
	4/30/2020	326,303	—	—	16.00	4/29/2030	—	—	—	—
	2/8/2021	115,000	—	5,000 ⁽¹⁾	10.63	2/8/2031	—	—	—	—
	2/12/2022	90,241 ⁽²⁾	—	37,159 ⁽¹⁾	4.78	2/11/2032	—	—	—	—
	2/16/2022	58,333	—	—	116,667 ⁽³⁾	4.21	2/16/2032	—	—	—
	1/31/2023	119,791 ⁽²⁾	—	130,209 ⁽¹⁾	2.85	1/31/2033	—	—	—	—
	6/15/2023	56,250	—	93,750 ⁽¹⁾	2.99	6/15/2033	—	—	—	—
	3/18/2024	114,583	—	385,417 ⁽¹⁾	5.77	3/18/2034	—	—	—	—
Harlan W. Waksal, M.D.	3/21/2024	—	—	550,000 ⁽⁴⁾	6.07	3/21/2034	—	—	—	—
	10/16/2024	—	—	—	—	—	300,000 ⁽⁵⁾	61,800	—	—
	2/16/2022	—	—	520,000 ⁽³⁾	4.21	2/15/2032	—	—	—	—
	6/16/2022	—	—	953,002 ⁽³⁾	5.09	6/15/2032	—	—	—	—
	1/31/2023	45,833	—	154,167 ⁽¹⁾	2.85	1/31/2033	—	—	—	—
Jason Cavalier	3/18/2024	—	—	—	—	—	275,000 ⁽⁶⁾	56,650	—	—
	3/21/2024	—	—	—	—	—	—	—	385,000 ⁽⁷⁾	79,310
	9/13/2021	84,500	—	19,500 ⁽¹⁾	8.22	9/12/2031	—	—	—	—
	2/12/2022	11,053	—	4,552 ⁽¹⁾	4.78	2/11/2032	—	—	—	—
	1/31/2023	67,083	—	72,917 ⁽¹⁾	2.85	1/31/2033	—	—	—	—
	1/31/2024	45,833	—	154,167 ⁽¹⁾	4.58	1/31/2034	—	—	—	—
	10/16/2024	—	—	—	—	—	100,000 ⁽⁵⁾	20,600	—	—

- (1) Except as otherwise indicated, options vest and become exercisable in equal monthly installments over four years following the vesting commencement date, subject to the named executive officer's continued service with us on each applicable vesting date.
- (2) Options were eligible to vest and become exercisable at the end of any given three-month period occurring prior to six years from the vesting commencement date in which we recognize revenue from the commercial sale of an FDA-approved product each month and in amounts, with respect to the second and third months of such period that increase from the revenue recognized from such product sales in the immediately preceding month, subject to Dr. Palasis' continued employment with us on each applicable vesting date. Such milestone was not achieved during the six-year performance period; however, the options remain eligible to vest, in full or in part, in the event of certain terminations of Dr. Palasis' employment with us or upon a change in control transaction.
- (3) Options vest and become exercisable as to one-third of the shares underlying the option, in each case, upon the achievement of three distinct market capitalization targets during the five-year performance period following the date of grant, provided that no more than one-third of the option may vest prior to the first anniversary of the date of grant, no more than two-thirds of the option may vest prior to the second anniversary of the date of grant and the option may not become fully vested prior to the third anniversary of the date of grant, subject to the named executive officer's continued service on each applicable vesting date.
- (4) Option is eligible to vest as to 100% of the shares underlying the option on January 31, 2028, subject to the achievement by the Company of certain specified strategic milestones within specified timeframes.

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- (5) RSUs vest in three substantially equal installments on each of April 1, 2025, October 1, 2025 and April 1, 2026, subject to the named executive officer's continued service on each applicable vesting date.
- (6) RSUs vest as to 100% of the underlying shares on January 31, 2025, subject to Dr. Waksal's continued service on such vesting date.
- (7) Performance-based RSUs are eligible to vest as to 100% of the underlying shares on January 31, 2028, subject to the achievement by the Company of certain specified strategic milestones within specified timeframes. The amount shown is the target number of RSUs, which is also the maximum number of RSUs that may vest.
- (8) Amounts are based on per share value of \$0.206, the closing stock price of our common stock on December 31, 2024.

Executive Employment Agreements

We have entered into employment agreements with each of our named executive officers. The employment agreements provide for the annual base salaries described above under the headings "2024 Salaries." Each of our named executive officers, other than Dr. Waksal, is eligible for an annual target bonus opportunity, however, each such named executive officer waived such opportunity in respect of the 2024 fiscal year.

Each of our named executive officers is also entitled to reimbursement of reasonable travel and other business expenses incurred in the performance of such individual's duties to the Company in accordance with the Company's expense reimbursement policy.

Additionally, Dr. Palasis and Dr. Waksal are each entitled to receive a cash bonus upon a change in control transaction in which our market capitalization equals or exceeds \$750,000,000 (each, a "Transaction Bonus"), in an amount equal to 1.0% of our market capitalization at the time of the change in control transaction, subject to the named executive officer's continued service through the completion of the change in control transaction and execution of a release of claims.

Under the employment agreements, if we terminate the employment of Dr. Palasis, Dr. Waksal or Mr. Cavalier without "cause" or the executive resigns for "good reason" (each as defined below), subject to the executive's timely execution of a release of claims and continued compliance with a separate restrictive covenant agreement (described below), the executive is entitled to receive (i) an amount in cash equal to 12 months' base salary for Dr. Palasis and Dr. Waksal, and 9 months' base salary for Mr. Cavalier, (ii) in the case of Dr. Palasis and Mr. Cavalier, payment of any annual bonus for the prior year earned but unpaid as of the date of termination, (iii) direct payment of or reimbursement for continued medical, dental or vision coverage pursuant to COBRA for up to 12 months for Dr. Palasis and Dr. Waksal, and 9 months for Mr. Cavalier, less the amount each named executive officer would have had to pay to receive such coverage as an active employee based on the cost sharing levels in effect on the named executive officer's termination date, and (iv) in the case of Dr. Palasis and Dr. Waksal, any vested and exercisable options will remain outstanding and exercisable for 15 months or 12 months, respectively, following termination.

If we terminate Dr. Palasis, Dr. Waksal, or Mr. Cavalier without "cause" or the executive resigns for "good reason," in either case, on or within three months prior to or 12 months following a change in control, then, in lieu of the severance benefits described above, subject to the executive's timely execution of a release of claims, the executive is entitled to receive (i) an amount in cash equal to 1.5 times for Dr. Palasis and Dr. Waksal, and 1.0 times for Mr. Cavalier the sum of the named executive officer's annual base salary plus target annual bonus for the year of termination, (ii) in the case of Dr. Palasis and Mr. Cavalier, payment of any annual bonus for the prior year earned but unpaid as of the date of termination, (iii) direct payment of or reimbursement for continued medical, dental or vision coverage pursuant to COBRA for up to 18 months for Dr. Palasis and Dr. Waksal and 12 months for Mr. Cavalier, less the amount each named executive officer would have had to pay to receive such coverage as an active employee based on the cost sharing levels in effect on the named executive officer's termination date, (iv) accelerated vesting of all unvested equity or equity-based awards held by the named executive officer that vest solely based on the passage of time, with any such awards that vest based on the attainment of performance-vesting conditions being governed by the terms of the applicable award agreement, (v) in the case of Dr. Palasis and Dr. Waksal, any vested and exercisable options will remain outstanding and exercisable for 15 months or 12 months, respectively, following termination, and (vi) in the case of Dr. Palasis and Dr. Waksal, payment of the Transaction Bonus, provided that the conditions for payment are otherwise satisfied.

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Each of our named executive officers has agreed to refrain from competing with us while employed and following his or her termination of employment for any reason for a period of one year and to refrain from soliciting our employees or customers while employed and following his or her termination of employment for any reason for a period of two years in the case of Dr. Palasis and one year in the case of Dr. Waksal and Mr. Cavalier.

For purposes of the employment agreements, “cause” generally means the named executive officer’s refusal to substantially perform the duties associated with his or her position with our Company or to carry out the reasonable and lawful instructions of our Board of Directors concerning duties or actions consistent with his or her position, his or her breach of a material provision of the employment agreement which remains uncured (to the extent capable of cure) for a period of 30 days following written notice from our Company, his or her conviction, plea of no contest or nolo contendere or imposition of unadjudicated probation for any felony or crime involving moral turpitude, his or her unlawful use (including being under the influence) or possession of illegal drugs on our premises or while performing his or her duties and responsibilities under the employment agreement, or his or her commission of any act of fraud, embezzlement, misappropriation, willful misconduct, or breach of fiduciary duty against us.

For purposes of the employment agreements, “good reason” generally means, subject to certain cure rights, the named executive officer’s termination of employment due to a reduction in salary or target bonus (other than a reduction of 20% or less of the named executive officer’s base salary implemented as part of an across the board, proportionate reduction of base salaries for other members of our management team), a material decrease in authority or areas of responsibility, our Company’s breach of any one or more of the material provisions of the employment agreement, or a relocation by our Company of the named executive officer’s primary office to a location more than 50 miles from the named executive officer’s primary office on the date of the agreement.

Severance Agreement with Dr. Nieman

Dr. Nieman ceased employment with us in June 2024 and, upon his execution of a release of claims in favor of the Company, commenced receiving severance payments and benefits pursuant to his employment agreement with us, which consist of base salary continuation for a period of nine months; and payment of or reimbursement for continued medical, dental or vision coverage pursuant to COBRA for up to nine months, less the amount Dr. Nieman would have had to pay to receive such coverage as an active employee based on the cost sharing levels in effect on his termination date.

Clawback Policy

We maintain a compensation recovery policy that is compliant with the listing requirements of Nasdaq.

Equity Award Timing Policies and Practices

We do not grant option awards in anticipation of the release of material nonpublic information, and we do not time the release of material nonpublic information based on option award grant dates or for the purpose of affecting the value of executive compensation. In addition, we do not take material nonpublic information into account when determining the timing and terms of such awards. In fiscal 2024, we granted stock options to Dr. Palasis within four business days before the filing of our Annual Report on Form 10-K for the year ended December 31, 2023. The following table is being provided pursuant to Item 402(x) of Regulation S-K regarding such stock option grants.

Name	Grant date	Number of securities underlying the award	Exercise price of the award	Grant date fair value of the award	Percentage change in the closing market price of the securities underlying the award between the trading day ending immediately prior to the disclosure of material nonpublic information and the trading day beginning immediately following the disclosure of material nonpublic information
Maria Palasis, Ph.D.	March 18, 2024	500,000	\$ 5.77	\$ 4.02	1.5%
Maria Palasis, Ph.D.	March 21, 2024	550,000	\$ 6.07	\$ 4.23	1.5%

Director Compensation**2024 Director Compensation Table**

<u>Name</u>	<u>Fees Earned or Paid in Cash</u> <u>(\$)</u>	<u>Option Awards</u> <u>(\$)⁽¹⁾</u>	<u>Total</u> <u>(\$)</u>
Michael Altman	37,935	8,169	46,104
C. Ann Merrifield	53,250	8,169	61,419
Edward Anderson	11,875	—	11,875
W. Bradford Smith	64,000	8,169	72,169
James Tobin	92,500	8,169	100,669
Konstantin Poukalov	37,935	8,169	46,104
Nancy Snyderman, M.D.	54,563	8,169	62,732

(1) Amounts reflect the full grant-date fair value of stock awards and stock options granted during 2024 computed in accordance with ASC Topic 718, rather than the amounts paid to or realized by the named individual. We provide information regarding the assumptions used to calculate the value of all stock awards and option awards made to our directors in Note 12 to the consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2024.

The table below shows the aggregate numbers of option awards (exercisable and unexercisable) held as of December 31, 2024 by each non-employee director. None of our non-employee directors held unvested stock awards as of December 31, 2024.

<u>Name</u>	<u>Options Outstanding at Fiscal Year End</u>
Michael Altman	49,000
C. Ann Merrifield	77,788
W. Bradford Smith	77,789
Konstantin Poukalov	49,000
James Tobin	64,500
Nancy Snyderman, M.D.	79,000

Non-Employee Director Compensation Program

Compensation received by our non-employee directors for their services on our Board of Directors under our non-employee director compensation program consisted of the following amounts for fiscal year 2024:

- Upon the director's initial election or appointment to our Board of Directors, an option to purchase 60,000 shares of our common stock;
- If the director has served on our Board of Directors for at least six months as of the date of an annual meeting of stockholders and will continue to serve as a director immediately following such meeting, an option to purchase 30,000 shares of our common stock on the date of the annual meeting;
- An annual director fee of \$40,000;
- If the director serves as lead independent director or chair or on a committee of our Board of Directors, an additional annual fee as follows:
 - Chair of the board or lead independent director: \$30,000;
 - Chair of the audit committee: \$20,000;
 - Audit committee member other than the chair, \$10,000;
 - Chair of the compensation committee, \$15,000;
 - Compensation committee member other than the chair, \$7,500;

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- Chair of the nominating and corporate governance committee, \$10,000; and
- Nominating and corporate governance committee member other than the chair, \$5,000.

Director fees under the program are payable in arrears in four equal quarterly installments not later than the fifteenth day following the final day of each calendar quarter, provided that the amount of each payment is prorated for any portion of a quarter that a director is not serving on our Board of Directors and no fee was payable in respect of any period prior to the effective date of the registration statement relating to our initial public offering.

Stock options granted to our non-employee directors under the program have an exercise price equal to the fair market value of our common stock on the date of grant and expire not later than ten years after the date of grant. The stock options granted upon a director's initial election or appointment vest in 36 substantially equal monthly installments following the date of grant. The stock options granted annually to directors vest in a single installment on the earlier of the day before the next annual meeting or the first anniversary of the date of grant. In addition, all unvested stock options vest in full upon the occurrence of a change in control.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information with respect to the beneficial ownership of our common stock by (i) each person or group of affiliated persons known by us to beneficially own more than 5% of our common stock, (ii) each of our named executive officers, (iii) each of our directors and (iv) all of our current executive officers and directors as a group as of February 28, 2025, unless otherwise indicated.

The number of shares beneficially owned by each stockholder is determined under rules issued by the SEC. Under these rules, beneficial ownership includes any shares as to which the individual or entity has sole or shared voting power or investment power. Applicable percentage ownership is based on 65,880,561 shares of common stock outstanding as of February 28, 2025. In computing the number of shares beneficially owned by an individual or entity and the percentage ownership of that person, shares of common stock subject to options held by such person that are currently exercisable or will become exercisable within 60 days of February 28, 2025 are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person. Unless noted otherwise, the address of all listed stockholders is 480 Arsenal Way, Watertown, MA 02472. Each of the stockholders listed below has sole voting and investment power with respect to the shares beneficially owned by the stockholder unless noted otherwise, subject to community property laws where applicable.

<u>Name of Beneficial Owner</u>	<u>Shares of Common Stock Beneficially Owned</u>	<u>Percentage</u>
5% or Greater Stockholders		
Entities Affiliated with Perceptive Advisors, LLC ⁽¹⁾	12,757,562	19.36%
Entities Affiliated with North Bridge Venture Partners ⁽²⁾	5,888,416	8.94%
Named Executive Officers and Directors		
Maria Palasis, Ph.D. ⁽³⁾	670,450	1.01%
Harlan W. Waksal, M.D. ⁽⁴⁾	1,140,466	1.72%
Jason Cavalier. ⁽⁵⁾	186,936	*
Richard Nieman, M.D.	—	*
C. Ann Merrifield ⁽⁶⁾	59,116	*
W. Bradford Smith ⁽⁷⁾	47,789	*
Nancy L. Snyderman, M.D. ⁽⁸⁾	50,025	*
James R. Tobin ⁽⁹⁾	34,500	*
All current executive officers and directors as a group (8 Persons) ⁽¹⁰⁾	2,189,282	3.24%

* Less than 1% ownership as of February 28, 2025.

- (1) Pursuant to a Schedule 13D/A filed with the SEC on December 16, 2024, Perceptive Life Sciences Master Fund, Ltd. (“Perceptive Life”) reported shared voting power and shared dispositive power over 11,469,116 shares of common stock; Perceptive LS (A), LLC (“Perceptive LS”) reported shared voting power and shared dispositive power over 1,288,446 shares of common stock; Joseph Edelman reported shared voting power and shared dispositive power over 12,757,562 shares of common stock; and Perceptive Advisors LLC reported shared voting power and shared dispositive power over 12,757,562 shares of common stock. Perceptive Advisors LLC serves as the investment advisor to Perceptive Life. Perceptive LS GP, LLC is the manager of Perceptive LS. Joseph Edelman is the managing member of Perceptive Advisors LLC and the sole member of Perceptive LS GP, LLC. On December 12, 2024, each of Konstantin Poukalov and Michael Altman, Managing Directors at Perceptive Advisors, resigned from our Board of Directors. The address of the aforementioned individuals and entities is c/o Perceptive Advisors, LLC, 51 Astor Place, 10th Floor, New York, New York 10003.

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- (2) Pursuant to a Schedule 13D/A filed with the SEC on June 9, 2023, North Bridge Venture Partners V-A, L.P. (“NBVP V-A”) reported shared voting power and shared dispositive power over 2,259,301 shares of common stock; North Bridge Venture Partners V-B, L.P. (“NBVP V-B”) reported shared voting power and shared dispositive power over 1,107,370 shares of common stock; and North Bridge Venture Partners VI, L.P. (“NBVP VI”) reported shared voting power and shared dispositive power over 2,521,745 shares of common stock. North Bridge Venture Management V, L.P. (“NBVM V”), is the sole General Partner of NBVP V-A and NBVP V-B and may be deemed to have voting and dispositive power with respect to the shares held by those entities. NBVM GP, LLC, the General Partner of NBVM V, may be deemed to have voting and dispositive power over the shares held of record by NBVP VA and NBVP V-B. Shared voting and dispositive power of such shares are vested in Edward T. Anderson and Richard A. D’Amore. North Bridge Venture Management VI, L.P. (“NBVM VI”), is the sole General Partner of NBVP VI. NBVM GP, LLC, the General Partner of NBVM VI, and may be deemed to have voting and dispositive power over the shares held of record by NBVP VI. Shared voting and dispositive power of such shares are vested in Edward T. Anderson and Richard A. D’Amore. Mr. Anderson, a former member of our Board of Directors, and a manager of NBVM GP, LLC, disclaims beneficial ownership over such shares, except to the extent of his pecuniary interest therein. Mr. Anderson has sole voting power and sole dispositive power over 118,483 shares of common stock. The address of all entities affiliated with North Bridge Venture Partners is 150 A Street, Suite 102 Needham, MA 02492.
- (3) Consists of options to purchase 570,450 shares of common stock that are or will be immediately exercisable within 60 days of February 28, 2025 and 100,000 shares of common stock underlying restricted stock units that will vest within 60 days of February 28, 2025.
- (4) Consists of 536,966 shares of common stock and options to purchase 603,500 shares of common stock that are or will be immediately exercisable within 60 days of February 28, 2025.
- (5) Consists of options to purchase 153,603 shares of common stock that are or will be immediately exercisable within 60 days of February 28, 2025 and 33,333 shares of common stock underlying restricted stock units that will vest within 60 days of February 28, 2025.
- (6) Consists of 11,328 shares of common stock and 47,788 options to purchase shares of common stock that are or will be immediately exercisable within 60 days of February 28, 2025.
- (7) Consists of options to purchase 47,789 shares of common stock that are or will be immediately exercisable within 60 days of February 28, 2025.
- (8) Consists of 1,025 shares of common stock and 49,000 options to purchase shares of common stock that are or will be immediately exercisable within 60 days of February 28, 2025.
- (9) Consists of options to purchase 34,500 shares of common stock that are or will be immediately exercisable within 60 days of February 28, 2025.
- (10) Consists of 549,319 shares of common stock, 1,506,630 shares of common stock that are or will be immediately exercisable within 60 days of February 28, 2025 and 133,333 shares of common stock underlying restricted stock units that will vest within 60 days of February 28, 2025.

CERTAIN RELATIONSHIPS AND RELATED PERSON TRANSACTIONS

Policies and Procedures for Related Person Transactions

Our Board recognizes the fact that transactions with related persons present a heightened risk of conflicts of interests (or the perception thereof) and has adopted a written related person transactions policy to comply with Section 404 of the Exchange Act. Under the policy, our finance team is primarily responsible for developing and implementing processes and procedures to obtain information regarding related persons with respect to potential related person transactions and then determining, based on the facts and circumstances, whether such potential related person transactions do, in fact, constitute related person transactions requiring compliance with the policy. In addition, any potential related person transaction that is proposed to be entered into by the Company must be reported to the Company's Chief Financial Officer, by both the related person and the person at the Company responsible for such potential related person transaction.

If our finance team determines that a transaction or relationship is a related person transaction requiring compliance with the policy, our Chief Financial Officer is required to present to the Audit Committee all relevant facts and circumstances relating to the related person transaction. Our Audit Committee must review the relevant facts and circumstances of each related person transaction, including if the transaction is on terms comparable to those that could be obtained in arm's length dealings with an unrelated third party and the extent of the related person's interest in the transaction, take into account the conflicts of interest and corporate opportunity provisions of our Code of Business Conduct and Ethics, and either approve or disapprove the related person transaction. If advance Audit Committee approval of a related person transaction requiring the Audit Committee's approval is not feasible, then the transaction may be preliminarily entered into by management upon prior approval of the transaction by the chair of the Audit Committee subject to ratification of the transaction by the Audit Committee at the Audit Committee's next regularly scheduled meeting; provided, that if ratification is not forthcoming, management will make all reasonable efforts to cancel or annul the transaction. If a transaction was not initially recognized as a related person transaction, then upon such recognition the transaction will be presented to the Audit Committee for ratification at the Audit Committee's next regularly scheduled meeting; provided, that if ratification is not forthcoming, management will make all reasonable efforts to cancel or annul the transaction.

Our management will update the Audit Committee as to any material changes to any approved or ratified related person transaction and will provide a status report at least annually of all then current related person transactions. No director may participate in the approval of a related person transaction for which he or she is a related person.

The following are certain transactions, arrangements and relationships with our directors, executive officers and stockholders owning 5% or more of our outstanding common stock, or any member of the immediate family of any of the foregoing persons, since January 1, 2023.

LianBio License Agreement

Entities affiliated with Perceptive Advisors, LLC are shareholders of both us and LianBio. Additionally, our former directors, Konstantin Poukalov and Michael Altman are each a Managing Director at Perceptive Advisors, LLC and Mr. Poukalov serves as the Executive Chairman of LianBio's board of directors.

Private Placement

On May 25, 2023, we entered into a Securities Purchase Agreement (the "Purchase Agreement") with the purchasers named therein (the "Investors"), including Perceptive Advisors, LLC and, North Bridge Venture Partners, which are 5% or greater holders of our common stock and entities with which certain of our directors are related, pursuant to which we agreed to sell securities to the Investors in a private placement (the "Private Placement"). The Purchase Agreement provided for the sale and issuance by us of: (i) an aggregate of 17,652,962 shares of our common stock, and pre-funded warrants to purchase up to 2,408,188 shares of common

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stock, with an exercise price of \$0.001 per share, and (ii) accompanying warrants to purchase up to 10,030,575 shares of common stock, with an exercise price of \$2.673 per share, for aggregate gross proceeds of approximately \$50.0 million, before deducting private placement expenses.

Investor Rights Agreement

On April 7, 2022, we entered into a Ninth Amended and Restated Investor Rights Agreement (“Investor Rights Agreement”) with the holders of our then-outstanding preferred stock, including Perceptive Advisers, LLC and, North Bridge Venture Partners, which are 5% or greater holders of our common stock and entities with which certain of our directors are related. The agreement provides for certain rights relating to the registration of such holders’ common stock. On May 25, 2023, in connection with the Purchase Agreement, the Company entered into an Amendment No. 1 to the Ninth Amended and Restated Investor Rights Agreement (“Amendment No. 1”) with certain Investors affiliated with Perceptive Advisors and North Bridge Venture Partners (the “IRA Covered Investors”). Pursuant to Amendment No. 1, the definition of “Registrable Shares” in the Investor Rights Agreement was amended to include all shares of common stock purchased by the IRA Covered Investors in the Private Placement.

Indemnification Agreements

We have entered into indemnification agreements with each of our directors and executive officers. These agreements, among other things, require us to indemnify each director (and in certain cases their related venture capital funds) and executive officer to the fullest extent permitted by Delaware law, including indemnification of expenses such as attorneys’ fees, judgments, fines and settlement amounts incurred by the director or executive officer in any action or proceeding, including any action or proceeding by or in right of us, arising out of the person’s services as a director or executive officer.

STOCKHOLDERS' PROPOSALS

Stockholders who intend to have a proposal considered for inclusion in our proxy materials for presentation at our 2026 Annual Meeting of Stockholders pursuant to Rule 14a-8 under the Exchange Act must submit the proposal to our Secretary at our offices at 480 Arsenal Way, Watertown, Massachusetts 02472 in writing not later than [●].

Stockholders intending to present a proposal at the 2026 Annual Meeting of Stockholders, but not to include the proposal in our proxy statement, or to nominate a person for election as a director, must comply with the requirements set forth in our Amended and Restated Bylaws. Our Amended and Restated Bylaws require, among other things, that our Secretary receive written notice from the stockholder of record of their intent to present such proposal or nomination not less than 90 days nor more than 120 days prior to the first anniversary of the preceding year's annual meeting. Therefore, we must receive notice of such a proposal or nomination for the 2026 Annual Meeting of Stockholders no earlier than January 14, 2026 and no later than February 13, 2026. The notice must contain the information required by the Amended and Restated Bylaws, a copy of which is available upon request to our Secretary. In the event that the date of the 2026 Annual Meeting of Stockholders is more than 30 days before or more than 60 days after May 14, 2026, then our Secretary must receive such written notice not earlier than the close of business on the 120th day prior to the 2026 Annual Meeting and not later than the close of business on the 90th day prior to the 2026 Annual Meeting or, if later, the close of business on the 10th day following the day on which public disclosure of the date of such meeting is first made by us.

In addition to satisfying the foregoing requirements under our Amended and Restated 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(b) under the Exchange Act.

We reserve the right to reject, rule out of order, or take other appropriate action with respect to any proposal that does not comply with these or other applicable requirements.

OTHER MATTERS

Our Board is not aware of any matter to be presented for action at the Annual Meeting other than the matters referred to above and does not intend to bring any other matters before the Annual Meeting. However, if other matters should come before the Annual Meeting, it is intended that holders of the proxies named on the Company's proxy card will vote thereon in their discretion.

SOLICITATION OF PROXIES

The accompanying proxy is solicited by and on behalf of our Board, whose Notice of Annual Meeting is attached to this proxy statement, and the entire cost of our solicitation will be borne by us. In addition to the use of mail, proxies may be solicited by personal interview, telephone, e-mail and facsimile by our directors, officers and other employees who will not be specially compensated for these services. We will also request that brokers, nominees, custodians and other fiduciaries forward soliciting materials to the beneficial owners of shares held by the brokers, nominees, custodians and other fiduciaries. We will reimburse these persons for their reasonable expenses in connection with these activities.

Certain information contained in this proxy statement relating to the occupations and security holdings of our directors and officers is based upon information received from the individual directors and officers.

Stockholders may obtain our proxy statement (and any amendments and supplements thereto) and other documents as and when filed by us with the SEC without charge from the SEC's website at: www.sec.gov.

LYRA'S ANNUAL REPORT ON FORM 10-K

A copy of Lyra's Annual Report on Form 10-K for the fiscal year ended December 31, 2024, including financial statements and schedules thereto but not including exhibits, as filed with the SEC, will be sent to any stockholder of record as of March 18, 2025 without charge upon written request addressed to:

Lyra Therapeutics, Inc. Attention: Secretary 480 Arsenal Way Watertown, Massachusetts 02472

A reasonable fee will be charged for copies of exhibits. You also may access this proxy statement and our Annual Report on Form 10-K at www.proxyvote.com. You also may access our Annual Report on Form 10-K for the fiscal year ended December 31, 2024 at www.lyratx.com.

WHETHER OR NOT YOU PLAN TO ATTEND THE ANNUAL MEETING ONLINE, WE URGE YOU TO VOTE YOUR SHARES VIA THE TOLL-FREE TELEPHONE NUMBER OR OVER THE INTERNET, AS DESCRIBED IN THIS PROXY STATEMENT. IF YOU RECEIVED A COPY OF THE PROXY CARD BY MAIL, YOU MAY SIGN, DATE AND MAIL THE PROXY CARD IN THE ENCLOSED RETURN ENVELOPE. PROMPTLY VOTING YOUR SHARES WILL ENSURE THE PRESENCE OF A QUORUM AT THE ANNUAL MEETING AND WILL SAVE US THE EXPENSE OF FURTHER SOLICITATION.

By Order of the Board of Directors,

[•]

Jason Cavalier
Chief Financial Officer and Treasurer
Watertown, Massachusetts

[•], 2025

APPENDIX A
CERTIFICATE OF AMENDMENT
TO
RESTATED CERTIFICATE OF INCORPORATION
OF
LYRA THERAPEUTICS, INC.
Pursuant to Section 242 of the
General Corporation Law of the State of Delaware

Lyra Therapeutics, Inc. (the "Corporation"), a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware,

DOES HEREBY CERTIFY THAT:

1. Board of Directors of the Corporation duly adopted resolutions at a meeting recommending and declaring advisable that the Restated Certificate of Incorporation of the Corporation, as amended, be further amended and that such amendment be submitted to the stockholders of the Corporation for their consideration, as follows:

RESOLVED, that the first paragraph of Article FOURTH is being amended to read as follows:

"That, effective as of 5 p.m. Eastern Time on the date this Certificate of Amendment of Restated Certificate of Incorporation is filed with the Office of the Secretary of State of the State of Delaware (the "**Effective Time**"), a one-for-[]¹ reverse stock split of the Corporation's Common Stock (as defined below) shall become effective, pursuant to which each [] shares of Common Stock outstanding and held of record by each stockholder of the Corporation (including treasury shares) immediately prior to the Effective Time shall be reclassified and combined into one validly issued, fully-paid and nonassessable share of Common Stock automatically and without any action by the holder thereof upon the Effective Time and shall represent one share of Common Stock from and after the Effective Time (such reclassification and combination of shares, the "**Reverse Stock Split**"). The par value of the Common Stock following the Reverse Stock Split shall remain at \$0.001 per share. No fractional shares of Common Stock shall be issued as a result of the Reverse Stock Split. In lieu thereof, (i) with respect to holders of one or more certificates which formerly represented shares of Common Stock that were issued and outstanding immediately prior to the Effective Time, upon surrender after the Effective Time of such certificate or certificates, any holder who would otherwise be entitled to a fractional share of Common Stock as a result of the Reverse Stock Split, following the Effective Time, shall be entitled to receive a cash payment (the "**Fractional Share Payment**") equal to the fraction of which such holder would otherwise be entitled multiplied by the closing price per share as reported by The Nasdaq Capital Market (as adjusted to give effect to the Reverse Stock Split) on the date of the Effective Time; provided that, whether or not fractional shares would be issuable as a result of the Reverse Stock Split shall be determined on the basis of (a) the total number of shares of Common Stock that were issued and outstanding immediately prior to the Effective Time formerly represented by certificates that the holder is at the time surrendering and (b) the aggregate number of shares of Common Stock after the Effective Time into which the shares of Common Stock formerly represented by such certificates shall have been reclassified; and (ii) with respect to holders of shares of Common Stock in book-entry form in the records of the

¹ Shall be a whole number between and including 10 and 50, which number is referred to as the "Reverse Split Factor" (it being understood that any Reverse Split Factor within such range shall, together with the remaining provisions of this Certificate of Amendment not appearing in brackets, constitute a separate amendment being approved and adopted by the Board and stockholders in accordance with Section 242 of the Delaware General Corporation Law).

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Company's transfer agent that were issued and outstanding immediately prior to the Effective Time, any holder who would otherwise be entitled to a fractional share of Common Stock as a result of the Reverse Stock Split, following the Effective Time, shall be entitled to receive the Fractional Share Payment automatically and without any action by the holder.

The total number of shares of all classes of stock which the Corporation shall have authority to issue is 210,000,000 shares, consisting of (a) 200,000,000 shares of Common Stock, \$0.001 par value per share ("Common Stock"), and (b) 10,000,000 shares of Preferred Stock, \$0.001 par value per share ("Preferred Stock")."

2. stockholders of the Corporation duly adopted such amendment at an annual meeting of the stockholders of the Corporation.
The

3. amendment has been duly adopted in accordance with Section 242 of the General Corporation Law of the State of Delaware.
Such

IN WITNESS WHEREOF, this Certificate of Amendment to Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of the Corporation on this []th day of [], 2025.

By: _____
Name: Maria Palasis
Title: President and Chief Executive Officer



LYRA THERAPEUTICS, INC.
480 ARSENAL WAY
WATERTOWN, MASSACHUSETTS 02472



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 up until 11:59 PM Eastern Daylight Time on May 13, 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/LYRA2025

You may attend the meeting via the Internet and vote during the meeting. We recommend, however, that you vote before the meeting even if you plan to participate in the meeting, since you can change your vote during the meeting by voting when the polls are open. Have the information that is printed in the box marked by the arrow available and follow the instructions.

VOTE BY PHONE - 1-800-690-6903

Use any touch-tone telephone to transmit your voting instructions up until 11:59 PM Eastern Daylight Time on May 13, 2025. Have your proxy card in hand when you call 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:

V64651-P28320

KEEP THIS PORTION FOR YOUR RECORDS

DETACH AND RETURN THIS PORTION ONLY

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

LYRA THERAPEUTICS, INC.

For All **Withhold All** **For 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:

- Election of Class II Directors to serve until the 2028 Annual Meeting of Stockholders, and until their respective successors shall have been duly elected and qualified.

Nominees:

- 01) C. Ann Merrifield
- 02) Harlan W. Waksal

The Board of Directors recommends you vote FOR the following proposals:

For **Against** **Abstain**

- | | |
|---|--|
| <ol style="list-style-type: none"> To ratify the appointment of BDO USA, P.C. as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2025. To approve amendments to the Company's amended and restated certificate of incorporation, to effect a reverse stock split of the Company's common stock at a ratio ranging from any whole number between 1-for-10 and 1-for-50, as determined by the Board of Directors in its discretion, subject to the Board of Directors' authority to abandon such amendments. To approve an adjournment of the Annual Meeting, if necessary, to solicit additional proxies if there are not sufficient votes at the time of the Annual Meeting to approve Proposal 3. | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
|---|--|

NOTE: Such other business as may properly come before the Annual Meeting or any continuation, postponement or adjournment 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 Form 10-K are available at www.proxyvote.com.

V64652-P28320

LYRA THERAPEUTICS, INC.
Annual Meeting of Stockholders
May 14, 2025 8:00 AM EDT
This proxy is solicited by the Board of Directors

The undersigned stockholder(s) of Lyra Therapeutics, Inc. hereby appoint(s) Maria Palasis, Ph.D. and Jason Cavalier, or either of them, as proxies, each with the power to appoint his/her substitute, and hereby authorize(s) them to represent and to vote, as designated on the reverse side of this proxy card, all of the shares of common stock of Lyra Therapeutics, Inc. that the stockholder(s) is/are entitled to vote at the Annual Meeting of Stockholders to be held at 8:00 AM EDT on May 14, 2025, via live webcast at www.virtualshareholdermeeting.com/LYRA2025, and any continuation, adjournment or postponement thereof.

Such proxies are authorized to vote in their discretion (x) for the election of any person to the Board of Directors if any nominee named herein becomes unable to serve or for good cause will not serve, (y) on any matter that the Board of Directors did not know would be presented at the Annual Meeting by a reasonable time before the proxy solicitation was made, and (z) on such other business as may properly be brought before the meeting or any continuation, adjournment or postponement thereof.

This proxy, when properly executed, will be voted in the manner directed herein by the undersigned stockholder(s). 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