

**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**

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

CARTESIAN THERAPEUTICS, INC.

(Exact name of Registrant as Specified in its Charter)
(Name of Person(s) Filing Proxy Statement, if Other Than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- No fee required.
 - Fee paid previously with preliminary materials.
 - Fee computed on table in exhibit required by Item 25(b) per Exchange Act Rules 14a-6(i)(1) and 0-11
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**CARTESIAN THERAPEUTICS, INC.
704 Quince Orchard Road
Gaithersburg, MD 20878
(617) 923-1400**

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

To be held , 2024

Notice is hereby given that a special meeting of stockholders (the "Special Meeting") of Cartesian Therapeutics, Inc. (the "Company") will be held on , 2024 at , Eastern Time, by virtual meeting online at www.virtualshareholdermeeting.com/RNAC2024SM2 for the following purposes:

1. To approve, in accordance with Nasdaq Listing Rule 5635(d), the issuance of shares of the Company's common stock, par value \$0.0001 per share ("Common Stock"), upon conversion of the Company's Series B Non-Voting Convertible Preferred Stock, par value \$0.0001 per share ("Series B Preferred Stock") (the "Conversion Proposal" or "Proposal No. 1"); and
2. To approve the adjournment or postponement of the Special Meeting, if necessary, to continue to solicit votes for Proposal No. 1 (the "Adjournment Proposal" or "Proposal No. 2").

Only Company stockholders of record at the close of business on July 29, 2024 will be entitled to vote at the Special Meeting and any adjournment or postponement thereof.

Your vote is important. Whether or not you attend the Special Meeting, it is important that your shares be represented and voted at the Special 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 virtual Special Meeting, you will be able to vote your shares electronically, even if you have previously submitted your proxy.

For questions regarding your stock ownership, you may contact us through our website at <https://ir.cartesiantherapeutics.com/> or, if you are a registered holder, our transfer agent, Equiniti Trust Company, LLC, by email at helpAST@equiniti.com, through its website at <https://equiniti.com/us/ast-access/individuals/> or by phone at (800) 937-5449.

Thank you for your ongoing support and continued interest in Cartesian Therapeutics, Inc.

IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS FOR THE STOCKHOLDER MEETING TO BE HELD ON , 2024

The Company's Notice of Special Meeting, Proxy Statement, and Annual Report on Form 10-K for the fiscal year ended December 31, 2023 are available at <http://www.proxyvote.com>.

By order of the board of directors,

Carsten Brunn, Ph.D.

President and Chief Executive Officer, Director

Gaithersburg, Maryland

, 2024

YOUR VOTE IS IMPORTANT

WE CURRENTLY PLAN TO HOLD THE SPECIAL MEETING VIA LIVE WEBCAST. WHETHER OR NOT YOU PLAN TO ATTEND THE SPECIAL MEETING, WE ENCOURAGE YOU TO VOTE AND SUBMIT YOUR PROXY BY INTERNET, TELEPHONE OR BY MAIL. FOR ADDITIONAL INSTRUCTIONS ON VOTING BY TELEPHONE OR THE INTERNET, PLEASE REFER TO YOUR PROXY CARD.

TO VOTE AND SUBMIT YOUR PROXY BY MAIL, PLEASE COMPLETE, SIGN AND DATE THE ENCLOSED PROXY CARD AND RETURN IT IN THE ENCLOSED ENVELOPE. IF YOU ATTEND THE SPECIAL MEETING, YOU MAY REVOKE YOUR PROXY AND VOTE IN PERSON. IF YOU HOLD YOUR SHARES THROUGH AN ACCOUNT WITH A BROKERAGE FIRM, BANK OR OTHER NOMINEE, PLEASE FOLLOW THE INSTRUCTIONS YOU RECEIVE FROM YOUR ACCOUNT MANAGER TO VOTE YOUR SHARES.

IT IS IMPORTANT THAT YOU RETAIN A COPY OF THE CONTROL NUMBER FOUND ON THE PROXY CARD, VOTING INSTRUCTION FORM OR NOTICE, AS SUCH NUMBER WILL BE REQUIRED IN ORDER FOR STOCKHOLDERS TO GAIN ACCESS TO THE SPECIAL MEETING.

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CARTESIAN THERAPEUTICS, INC.
704 Quince Orchard Road
Gaithersburg, MD 20878
(617) 923-1400
PROXY STATEMENT

SPECIAL MEETING OF STOCKHOLDERS
To Be Held on , 2024

INFORMATION CONCERNING SOLICITATION AND VOTING

This proxy statement contains information about the special meeting (the “Special Meeting”) of stockholders of Cartesian Therapeutics, Inc. (the “Company”), which will be held on , 2024 at , Eastern Time, by virtual meeting online at www.virtualshareholdermeeting.com/RNAC2024SM2 for the following purposes. The board of directors of Cartesian Therapeutics, Inc. (the “Board of Directors”) is using this proxy statement to solicit proxies for use at the Special Meeting. In this proxy statement, the terms “Cartesian,” “the Company,” “we,” “us,” and “our” refer to Cartesian Therapeutics, Inc.. The mailing address of our principal executive offices is Cartesian Therapeutics, Inc., 704 Quince Orchard Road, Gaithersburg, MD 20878.

All properly submitted proxies will be voted in accordance with the instructions contained in those proxies. If no instructions are specified, the proxies will be voted in accordance with the recommendation of our Board of Directors with respect to each of the matters set forth in the accompanying Notice of Special Meeting of Stockholders (“Notice of Meeting”). You may revoke your proxy at any time before it is exercised at the meeting by giving our Secretary written notice to that effect.

At the Special Meeting, our stockholders will be asked to approve:

1. In accordance with Nasdaq Listing Rule 5635(d), the issuance of shares of the Company’s common stock, par value \$0.0001 per share (“Common Stock”), upon conversion of the Company’s Series B Non-Voting Convertible Preferred Stock, par value \$0.0001 per share (“Series B Preferred Stock”) (the “Conversion Proposal” or “Proposal No. 1”); and
2. The adjournment or postponement of the Special Meeting, if necessary, to continue to solicit votes for Proposal No. 1 (the “Adjournment Proposal” or “Proposal No. 2”).

After careful consideration, the Board of Directors has approved the proposals referred to above, and has determined that they are advisable, fair and in the best interests of Cartesian’s stockholders. Accordingly, the Board of Directors recommends that stockholders vote “FOR” each of the proposals set forth above.

Your vote is important. Whether or not you attend the Special Meeting, it is important that your shares be represented and voted at the Special Meeting. Therefore, you are urged 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 (the “Internet Notice”), 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 virtual Special Meeting, you will be able to vote your shares electronically, even if you have previously submitted your proxy.

This proxy statement is dated , 2024 and is first being mailed to stockholders on or about , 2024.

QUESTIONS AND ANSWERS ABOUT THE SPECIAL MEETING

The following section provides answers to frequently asked questions about the Special Meeting. This section, however, only provides summary information. These questions and answers may not address all issues that may be important to you as a stockholder. You should carefully read this entire proxy statement, including each of the annexes attached hereto.

When are this proxy statement and the accompanying materials scheduled to be sent to stockholders?

On or about _____, 2024, we will begin mailing our proxy materials, including the Notice of Meeting, this proxy statement and the accompanying proxy card or, for shares held in street name (i.e., held for your account by a broker or other nominee), a voting instruction form.

When and where will the Special Meeting take place?

We will be hosting the Special Meeting via live webcast only. The Special Meeting will be held virtually, via live webcast at www.virtualshareholdermeeting.com/RNAC2024SM2 on _____, 2024, at _____, Eastern Time. Regardless of whether you are the record holder of your shares or your shares are held in street name, if you held your shares as of the close of business on July 29, 2024, you are welcome to attend the meeting. Stockholders may vote and submit questions while attending the Special Meeting online. The webcast will open five minutes before the start of the Special Meeting. In order to enter the Special Meeting, you will need the 16-digit control number, which is included in the Notice of Meeting or on your proxy card if you are a stockholder of record of shares of Common Stock, or included with your voting instruction card and voting instructions received from your broker, bank, or other agent if you hold shares of Common Stock in street name. Instructions on how to attend and participate online are also available at www.virtualshareholdermeeting.com/RNAC2024SM2. Information on how to vote online at the virtual Special Meeting is discussed below.

Who is soliciting my vote?

The Board of Directors is soliciting your vote for the Special Meeting.

When is the record date for the Special Meeting?

The record date for determination of stockholders entitled to vote at the Special Meeting is the close of business on July 29, 2024 (the "Record Date").

How many votes can be cast by all stockholders?

There were 21,382,485 shares of our Common Stock outstanding on the Record Date, all of which are entitled to vote with respect to all matters to be acted upon at the Special Meeting. Each outstanding share of our Common Stock is entitled to one vote on each matter considered at the Special Meeting. On the Record Date, there were 2,937,903 shares of Series B Preferred Stock issued and outstanding and 166,341.592 shares of Series A Non-Voting Convertible Preferred Stock, par value \$0.0001 per share ("Series A Preferred Stock"), issued and outstanding; neither the Series B Preferred Stock nor the Series A Preferred Stock is entitled to vote on the matters being considered at the Special Meeting.

Of the shares of our Common Stock issued and outstanding and entitled to vote, 3,563,247 shares of Common Stock were issued in a private placement in July 2024 (as described in "Proposal No. 1—Approval of Conversion of Series B Preferred Stock" below) and are not entitled to vote on Proposal No. 1 for purposes of the listing rules of the Nasdaq Stock Market LLC ("Nasdaq"). To comply with Nasdaq rules, we will instruct the inspector of elections to conduct a separate tabulation that subtracts 3,563,247 shares from the total number of shares voted in favor of Proposal No. 1 to determine whether that proposal has been adopted in accordance with applicable Nasdaq rules.

How do I vote?

Stockholders of Record. We recommend that stockholders vote by proxy even if they plan to participate in the virtual Special Meeting and vote electronically during the meeting. If you are a stockholder of record, you may vote:

- by Telephone - You can vote by telephone by calling 1-800-690-6903 and following the instructions on the proxy card;
- by Internet - You can vote over the Internet at www.proxyvote.com by following the instructions on the proxy card or Internet Notice;
- by Mail - You can vote by mail by signing, dating and mailing the proxy card, which you may have received by mail; or
- Electronically at the Meeting - You may vote at the Special Meeting by visiting www.virtualshareholdermeeting.com/RNAC2024SM2 and entering the 16-digit control number included on your Internet Notice, on your proxy card or on the instructions that accompanied your proxy materials. The meeting webcast will begin promptly at _____, Eastern Time, on _____, 2024.

Telephone and Internet voting facilities for stockholders of record will be available 24 hours a day and will close at 11:59 p.m., Eastern Time, on _____, 2024. To participate in the Special 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 Special 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 Special Meeting. We encourage stockholders to submit their proxies via the Internet or telephone. If you submit your proxy, you may still decide to attend the Special 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. Telephone and Internet voting also may be offered to stockholders owning shares through certain banks and brokers. If your shares are held in street name and you would like to vote at the Special Meeting, you may visit www.virtualshareholdermeeting.com/RNAC2024SM2 and enter the 16-digit control number included in the voting instruction card provided to you by your bank or brokerage firm or otherwise vote through the bank or broker. If you lose your 16-digit control number, you may join the Special 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 Special 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 the Company prior to the Special Meeting; or
- by voting electronically at the virtual Special Meeting.

Your most recent proxy card or telephone or Internet proxy is the one that is counted. Your participation in the virtual Special Meeting by itself will not revoke your proxy unless you give written notice of revocation to the Secretary of the Company before your proxy is voted or you vote electronically at the virtual Special 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 electronically at the virtual Special Meeting by following the instructions above.

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

A quorum must be present at the Special Meeting for any business to be conducted. The presence at the Special Meeting, in person, or by remote communication, or represented 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.

What proposals will be voted on at the Special Meeting?

There are two proposals scheduled to be voted on at the meeting:

- Proposal No. 1 - Approval of, in accordance with Nasdaq Listing Rule 5635(d), the issuance of the Company’s Common Stock, upon conversion of the Company’s Series B Preferred Stock; and
- Proposal No. 2 - To approve the adjournment or postponement of the Special Meeting, if necessary, to continue to solicit votes for Proposal No. 1.

What vote is required to approve each item at the Special Meeting?

You may vote “for,” “against” or “abstain” on each of the proposals being placed before our stockholders. Under our amended and restated by-laws (the “Bylaws”), any proposal other than an election of directors is decided by a majority of the votes properly cast for and against such proposal, except as otherwise provided by applicable law, the rules of any stock exchange upon which our securities are listed, or by the restated certificate of incorporation, as amended (the “Charter”) or Bylaws.

- **Proposal No. 1** - The affirmative vote of the holders of shares of Common Stock representing a majority of the votes cast on the matter is required for the approval of Proposal No. 1, subject to the separate tabulation of votes described in “*Questions and Answers About the Special Meeting—How many votes can be cast by all stockholders?*” set forth above. Broker non-votes (if any) and abstentions will not be counted as votes cast on the matter and will have no effect on the outcome of this proposal.
- **Proposal No. 2** - If a quorum is present at the Special Meeting, the affirmative vote of the holders of shares of Common Stock representing a majority of the votes cast on the matter is required for the approval of Proposal No. 2. If a quorum is not present at the Special Meeting, the affirmative vote of the holders of a majority of the shares of Common Stock present at the Special Meeting or represented by proxy is required for the approval of Proposal No. 2.

As of the Record Date, the Company’s directors, executive officers, and their respective affiliates own approximately 49.7% of the Company’s issued and outstanding Common Stock.

Do I have appraisal rights?

Our stockholders are not entitled to dissenters’ or appraisal rights under the Delaware General Corporation Law (the “DGCL”) with respect to any of the proposals being voted on.

How is the vote counted?

If you are a stockholder of record, you have the right to direct the voting of your shares by voting over the Internet, by telephone, by returning your proxy or by voting during the Special Meeting. In contrast, if you are a beneficial owner and your shares are held in an account at a bank or at a brokerage firm or other nominee holds your shares, you must tell your bank, broker or other nominee how you would like your shares to be voted, which you can do by following the instructions provided to you by the bank, broker or other nominee.

“Broker non-votes” occur when a beneficial owner of shares held in street name does not give instructions to the bank, broker or other nominee holding the shares as to how to vote. If your shares are held in street name and you do not give voting instructions to your broker, your broker or nominee may vote the shares with respect to matters that are considered to be “discretionary” (if any), but may not vote the shares with respect to “non-discretionary” matters. Where a broker does not have discretion to vote on a given proposal, the unvoted shares are considered “broker non-votes.” For each of Proposal Nos. 1 and 2, broker non-votes will not be counted as votes cast on the matter and will have no effect on the outcome of the proposal. Similarly, abstentions will not be counted as votes cast on these matters and will have no effect on the outcome of Proposal Nos. 1 and 2.

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Who will count the vote?

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

How does the Board of Directors recommend that I vote on the proposals?

The Board of Directors recommends that you vote:

- **Proposal No. 1 - FOR** the approval of Proposal No. 1.
- **Proposal No. 2 - FOR** the approval of Proposal No. 2.

Who pays the cost for soliciting proxies?

We will pay the expenses of soliciting proxies. Following the original mailing of the soliciting materials, we and our agents, including directors, officers and other employees, without additional compensation, may solicit proxies by mail, electronic mail, telephone, facsimile, by other similar means, or in person. Following the original mailing of the soliciting materials, we will request brokers, custodians, nominees and other record holders to forward copies of the soliciting materials to persons for whom they hold shares and to request authority for the exercise of proxies. In such cases, we, upon the request of the record holders, will reimburse such holders for their reasonable expenses. If you choose to access the proxy materials and/or vote through the Internet, you are responsible for any Internet access charges you may incur.

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

We plan to announce preliminary voting results at the Special Meeting and we will report the final results in a Current Report on Form 8-K, which we intend to file with the Securities and Exchange Commission (the "SEC") within four business days of the Special Meeting.

Who can provide me with additional information and help answer my questions?

If you would like additional copies, without charge, of this proxy statement or if you have questions about the proposals being considered at the Special Meeting, including the procedures for voting your shares, you should contact our Secretary at (617) 923-1400.

CAUTIONARY INFORMATION REGARDING FORWARD LOOKING STATEMENTS

This proxy statement contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including, but not limited to, statements regarding stockholder approval of the conversion of the Series B Preferred Stock and our expectations regarding the conversion of the Series B Preferred Stock and Series A Preferred Stock. The use of words such as, but not limited to, “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “might,” “plan,” “potential,” “predict,” “project,” “should,” “target,” “will,” or “would” and similar words expressions are intended to identify forward-looking statements. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, our clinical results and other future conditions. New risks and uncertainties may emerge from time to time, and it is not possible to predict all risks and uncertainties. No representations or warranties (expressed or implied) are made about the accuracy of any such forward-looking statements. We may not actually achieve the forecasts disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Such forward-looking statements are subject to a number of material risks and uncertainties including but not limited to those set forth in our most recent Annual Report on Form 10-K filed with the SEC on March 7, 2024 and subsequently filed Quarterly Reports on Form 10-Q, as well as discussions of potential risks, uncertainties, and other important factors in our subsequent filings with the SEC. Any forward-looking statement speaks only as of the date on which it was made. Neither we, nor our affiliates, advisors or representatives, undertake any obligation to publicly update or revise any forward-looking statement, whether as result of new information, future events or otherwise, except as required by law. These forward-looking statements should not be relied upon as representing our views as of any date subsequent to the date hereof.

PROPOSAL NO. 1—APPROVAL OF CONVERSION OF SERIES B PREFERRED STOCK

Overview

On July 2, 2024, we entered into the Securities Purchase Agreement with the purchasers party thereto, pursuant to which we issued and sold an aggregate of 3,563,247 shares of our Common Stock and 2,937,903 shares of our Series B Preferred Stock (the “Private Placement”). The Series B Preferred Stock is intended to have rights that are generally equivalent to shares of our Common Stock, provided that the Series B Preferred Stock does not have the right to vote on most matters (including the election of directors). Subject to the approval of Proposal No. 1 and certain beneficial ownership limitations set by each holder, each share of Series B Preferred Stock will automatically convert into one share of Common Stock. Proposal No. 1 would provide the necessary approval to permit such conversion. Assuming approval of Proposal No. 1 and subject to certain beneficial ownership limitations, 2,937,903 shares of Common Stock are issuable upon conversion of the above-described Series B Preferred Stock.

Description of Series B Preferred Stock

Conversion. Following stockholder approval of Proposal 1, effective as of 5:00 p.m., Eastern Time, on the third business day after the date on which such stockholder approval is received, each share of Series B Preferred Stock will automatically convert into one share of Common Stock (the “Automatic Conversion”). The Automatic Conversion is subject to certain beneficial ownership limitations, including that a holder of Series B Preferred Stock is prohibited from converting shares of Series B Preferred Stock into shares of common stock if, as a result of such conversion, such holder, together with its affiliates, would beneficially own more than a specified percentage (to be established by the holder between 0% and 19.9%) of the total number of shares of Common Stock issued and outstanding immediately after giving effect to such conversion (the “Beneficial Ownership Limitation”). Following the Automatic Conversion, each share of Series B Preferred Stock that is not otherwise converted into Common Stock as a result of the Beneficial Ownership Limitation shall be convertible, at any time and from time to time, at the option of the holder thereof, into one share of Common Stock, subject to the Beneficial Ownership Limitation and only to the extent the same shall have ceased to apply.

Voting Rights. Except as otherwise required by law (e.g. voting on a change to the authorized shares of Series B Preferred Stock or the rights of such shares as required by the DGCL) and the Certificate of Designation of Preferences, Rights and Limitations of Series B Non-Voting Convertible Preferred Stock (the “Certificate of Designation”), the Series B Preferred Stock does not have voting rights. However, as long as any shares of Series B Preferred Stock are outstanding, we will not, without the affirmative vote of the holders of a majority of the then outstanding shares of the Series B Preferred Stock, (a) alter or change adversely the powers, preferences or rights given to the Series B Preferred Stock, (b) alter or amend the Certificate of Designation, or (c) amend the Charter or other organizational documents in any matter that adversely affects any rights of the holders of Series B Preferred Stock.

Dividends. Holders of Series B Preferred Stock are entitled to receive dividends on shares of Series B Preferred Stock equal, on an as-if-converted-to-common-stock basis, and in the same form as dividends actually paid on shares of common stock.

Liquidation and Dissolution. The Series B Preferred Stock ranks on parity with Common Stock and any outstanding Series A Preferred Stock upon any liquidation, dissolution or winding-up of the Company.

Preemptive Rights. The Series B Preferred Stock does not have preemptive rights.

Redemption. The Series B Preferred Stock is not redeemable.

Reasons for Stockholder Approval. Our common stock is listed on The Nasdaq Global Market, and, as such, we are subject to the applicable rules of Nasdaq, including Nasdaq Listing Rule 5635(d), which requires stockholder approval prior to the issuance of 20% or more of the common stock or 20% or more of the voting power outstanding before the issuance at a price that is less than the Minimum Price (as defined in the Nasdaq Listing Rules). Thus, in order to permit the issuance of Common Stock upon conversion of the Series B Preferred Stock, we must first obtain stockholder approval of this issuance. This Special Meeting is being called for the purpose of obtaining such stockholder approval.

Interests of Certain Parties. When considering our Board of Directors’ recommendation that our stockholders vote in favor of Proposal No. 1, our stockholders should be aware that certain of our directors and officers have

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interests in the potential conversion that are different from, or in addition to, the interests of other stockholders generally. Our directors were aware of and considered these interests, among other matters, in evaluating the Private Placement (other than Dr. Timothy A. Springer, who recused himself and was not present for discussions and decisions related to the Private Placement), and in recommending to stockholders that they approve Proposal No. 1. Our stockholders should take these interests into account in deciding whether to approve Proposal No. 1. These interests include:

- Dr. Timothy A. Springer, Ph.D., a member of our Board of Directors, purchased 1,636,832 shares of Series B Preferred Stock in the Private Placement at the Private Placement purchase price per share of \$20, for a purchase price of \$32,736,640. Additionally, TAS Partners LLC, an affiliate of Dr. Springer, and Dr. Chafen Lu, Ph.D., Dr. Springer's spouse, purchased 721,361 and 1,307 shares of Series B Preferred Stock, respectively, in the Private Placement, for purchase prices of \$14,427,220 and \$26,140, respectively. If stockholders do not ever approve the issuance of Common Stock underlying these shares of Series B Preferred Stock, these shares will be unable to convert into Common Stock and may have little value.

Vote Required; Board Recommendation

The affirmative vote of the holders of shares of Common Stock representing a majority of the votes cast on the matter is required for the approval of Proposal No. 1, subject to the separate tabulation of votes described in "Questions and Answers About the Special Meeting—How many votes can be cast by all stockholders?" set forth above.

THE BOARD OF DIRECTORS RECOMMENDS THAT OUR STOCKHOLDERS VOTE "FOR" THE PROPOSAL NO. 1.

PROPOSAL NO. 2—APPROVAL OF ADJOURNMENT OF THE SPECIAL MEETING

General

If we fail to receive a sufficient number of votes to approve Proposal No. 1, we may propose to adjourn or postpone the Special Meeting. We currently do not intend to propose adjournment or postponement at the Special Meeting if there are sufficient votes to approve Proposal No. 1.

Vote Required; Recommendation of Board of Directors

If a quorum is present at the Special Meeting, the affirmative vote of the holders of shares of Common Stock representing a majority of the votes cast on the matter is required for the approval of Proposal No. 2. If a quorum is not present at the Special Meeting, the affirmative vote of the holders of a majority of the shares of Common Stock present at the Special Meeting or represented by proxy is required for the approval of Proposal No. 2.

**THE BOARD OF DIRECTORS RECOMMENDS THAT OUR STOCKHOLDERS VOTE “FOR”
PROPOSAL NO. 2.**

PRINCIPAL STOCKHOLDERS

The following table sets forth certain information with respect to holdings of our Common Stock by (i) stockholders who beneficially owned more than 5% of the outstanding shares of our Common Stock, and (ii) each of our directors, each of our “Named Executive Officers” and all directors and executive officers as a group, in both cases as of July 29, 2024, 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 a person has sole or shared voting power or investment power. Applicable percentage ownership is based on 21,382,485 shares of Common Stock outstanding as of July 29, 2024. In computing the number of shares beneficially owned by a person and the percentage ownership of that person, shares of Common Stock subject to options, warrants or other rights held by such person that are currently exercisable or will become exercisable within 60 days of July 29, 2024 are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person. Although the conversion limitations on the Series B Preferred Stock prevent the Series B Preferred Stock from converting into Common Stock until stockholder approval of the Proposal No. 1 is obtained, we are separately presenting below beneficial ownership assuming the conversion of all shares of Series B Preferred Stock into Common Stock, subject to beneficial ownership limitations set by each holder of Series B Preferred Stock. The beneficial ownership information below also gives effect to beneficial ownership limitations applicable to certain holders of Series A Preferred Stock.

Unless otherwise indicated, the address of each beneficial owner listed below is 704 Quince Orchard Road, Gaithersburg, Maryland 20878. We believe, based on information provided to us, that 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.

Name and address of beneficial owner	No Conversion of Preferred Stock		Full Conversion of Preferred Stock (subject to beneficial ownership limitations)	
	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned
5% Stockholders:				
Entities affiliated with Timothy A. Springer, Ph.D. ⁽¹⁾	6,473,817	30.0%	8,833,317	34.4%
Entities affiliated with Murat Kalayoglu, M.D., Ph.D. ⁽²⁾	3,539,019	16.5%	5,075,750	19.9%
FMR LLC ⁽³⁾	2,708,422	12.7%	2,708,422	10.6%
Named Executive Officers and Directors:				
Carsten Brunn, Ph.D. ⁽⁴⁾	8,731	*	8,731	*
Blaine Davis	—	*	—	*
Chris Jewell, Ph.D. ⁽⁵⁾	117,297	0.5%	117,297	0.5%
Metin Kurtoglu, M.D., Ph.D. ⁽⁶⁾	235,201	1.1%	235,201	0.9%
Peter G. Traber, M.D. ⁽⁷⁾	5,301	*	5,301	*
Lloyd Johnston, Ph.D. ⁽⁸⁾	2,983	*	2,983	*
Carrie S. Cox ⁽⁹⁾	10,026	*	10,026	*
Göran Ando, M.D. ⁽¹⁰⁾	—	*	—	*
Timothy C. Barabe ⁽¹¹⁾	10,021	*	10,021	*
Nishan de Silva, M.D., M.B.A. ⁽¹²⁾	1,921	*	1,921	*
Murat Kalayoglu, M.D., Ph.D. ⁽²⁾	3,539,019	16.5%	5,075,750	19.9%
Kemal Malik, MBBS ⁽¹³⁾	422	*	422	*
Scott D. Myers ⁽¹⁴⁾	3,350	*	3,350	*
Aymeric Sallin ⁽¹⁵⁾	—	*	—	*
Michael Singer, M.D., Ph.D. ⁽¹⁶⁾	770,377	3.6%	770,377	3.0%
Timothy A. Springer, Ph.D. ⁽¹⁾	6,473,817	30.0%	8,833,317	34.4%
Patrick Zenner ⁽¹⁷⁾	3,529	*	3,529	*
All executive officers and directors as a group (14 persons)⁽¹⁸⁾	11,178,645	51.0%	15,074,876	57.9%

* Represents beneficial ownership of less than one percent.

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- (1) Based on a Schedule 13D/A filed with the SEC on July 5, 2024 and other information known to us, consists of (i) 4,373,966 shares of Common Stock held directly by Timothy A. Springer, Ph.D., a member of our Board of Directors, (ii) 1,636,832 shares of Common Stock issuable upon conversion of shares of Series B Preferred Stock held directly by Timothy A. Springer, Ph.D., (iii) 1,688 shares of Common Stock issuable upon exercise of outstanding options within 60 days of July 29, 2024 and held directly by Timothy A. Springer, Ph.D., (iv) 1,927,630 shares of Common Stock held by TAS Partners LLC ("TAS") directly, (v) 721,361 shares of Common Stock issuable upon conversion of shares of Series B Preferred Stock held by TAS directly, (vi) 167,040 shares of Common Stock issuable upon exercise of underlying warrants exercisable within 60 days of July 29, 2024 held by TAS directly, (vii) 3,493 shares of Common Stock held by Dr. Chafen Lu, Dr. Springer's wife, and (viii) 1,307 shares of Common Stock issuable upon conversion of shares of Series B Preferred Stock held by Dr. Chafen Lu. Dr. Springer is the sole managing member of TAS. Dr. Springer exercises sole voting and dispositive power over the shares held by him directly and the shares held by TAS. Dr. Springer disclaims beneficial ownership of the shares held by TAS. Dr. Lu exercises sole voting and dispositive power over the shares held by her directly. The principal business address of each of Dr. Springer, TAS, and Dr. Lu is 36 Woodman Road, Newton, MA, 02467.
- (2) Based on a Schedule 13D/A filed with the SEC on April 10, 2024 and other information known to us, consists of (i) 500,444 shares of Common Stock held directly by Murat Kalayoglu, M.D., Ph.D., a member of our Board of Directors, (ii) 1,688 shares of Common Stock issuable upon exercise of outstanding options within 60 days of July 29, 2024 and held directly by Murat Kalayoglu, M.D., Ph.D., (iii) 3,036,887 shares of Common Stock held by Seven One Eight Three Four Irrevocable Trust directly, and (iv) up to 3,398,448 shares of Common Stock issuable upon conversion of shares of Series A Preferred Stock held by Seven One Eight Three Four Irrevocable Trust. The trustees of Seven One Eight Three Four Irrevocable Trust are Elizabeth Hoge and Sinan Kalayoglu, each of whom has shared voting and dispositive control over the shares of Common Stock and Series A Preferred Stock held by Seven One Eight Three Four Irrevocable Trust. Dr. Kalayoglu has the power to remove and appoint new trustees of Seven One Eight Three Four Irrevocable Trust and, pursuant to a right of substitution, to acquire from Seven One Eight Three Four Irrevocable Trust the shares of Common Stock and Series A Preferred Stock held by Seven One Eight Three Four Irrevocable Trust in exchange for assets with an equal value to such shares. Accordingly, Dr. Kalayoglu may be deemed to have sole voting and dispositive power of the shares of Common Stock and Series A Preferred Stock held by Seven One Eight Three Four Irrevocable Trust. The ability of the shares of Series A Preferred Stock held by Dr. Kalayoglu and Seven One Eight Three Four Irrevocable Trust to convert into shares of Common Stock is subject to a beneficial ownership limitation, such that neither Dr. Kalayoglu nor Seven One Eight Three Four Irrevocable Trust may convert shares of Series A Preferred Stock into Common Stock to the extent that doing so would result in such holder beneficially owning greater than 19.9% of the Company's outstanding Common Stock after giving effect to such conversion. Accordingly, the numbers of shares of Common Stock presented in this row include only a total of 1,536,731 shares of Common Stock issuable upon conversion of the shares of Series A Preferred Stock held by Seven One Eight Three Four Irrevocable Trust, and assume Seven One Eight Three Four Irrevocable Trust does not convert any shares of Series A Preferred Stock beyond such limitation.
- (3) Based on a Schedule 13G/A filed with the SEC on May 10, 2024 and other information known to us, consists of 2,708,422 shares of Common Stock owned by funds or accounts managed by direct or indirect subsidiaries of FMR LLC, all of which shares are beneficially owned, or may be deemed to be beneficially owned, by FMR LLC, certain of its subsidiaries and affiliates, and other companies. Abigail P. Johnson is a Director, the Chairman and the Chief Executive Officer of FMR LLC. Members of the Johnson family, including Abigail P. Johnson, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC. The address of these funds and accounts is 245 Summer Street, Boston, MA 02210.
- (4) Consists of 8,731 shares of Common Stock held by Dr. Brunner directly.
- (5) Consists of 117,297 shares of Common Stock underlying outstanding stock options exercisable within 60 days of July 29, 2024 held by Dr. Jewell directly.
- (6) Consists of 235,201 shares of Common Stock underlying outstanding stock options exercisable within 60 days of July 29, 2024 held by Dr. Kurtoglu directly.
- (7) Consists of 5,301 shares of Common Stock held by Dr. Traber directly. Dr. Traber ceased service as our Chief Medical Officer effective November 13, 2023 and ceased full-time employment with the Company effective December 31, 2023.
- (8) Consists of 2,983 shares of Common Stock held by Dr. Johnston directly. Dr. Johnston ceased service as our Chief Operations Officer effective November 13, 2023 and ceased full-time employment with the Company effective December 31, 2023.
- (9) Consists of (i) 7,096 shares of Common Stock held by Ms. Cox directly, (ii) 1,094 shares of Common Stock issuable upon exercise of underlying warrants exercisable within 60 days of July 29, 2024, and (iii) 1,836 shares of Common Stock underlying outstanding stock options exercisable within 60 days of July 29, 2024.
- (10) We are not aware of any beneficial ownership of Common Stock by Dr. Ando, who retired from the Board of Directors on January 4, 2023.
- (11) Consists of (i) 8,333 shares of Common Stock held by Mr. Barabe directly and (ii) 1,688 shares of Common Stock underlying outstanding stock options exercisable within 60 days of July 29, 2024.
- (12) Consists of (i) 233 shares of Common Stock held by Dr. de Silva directly and (ii) 1,688 shares of Common Stock underlying outstanding stock options exercisable within 60 days of July 29, 2024.
- (13) Consists of 422 shares of Common Stock underlying outstanding stock options exercisable within 60 days of July 29, 2024 held by Dr. Malik directly.
- (14) Consists of (i) 2,694 shares of Common Stock held by Mr. Myers directly and (ii) 656 shares of Common Stock issuable upon exercise of underlying warrants exercisable within 60 days of July 29, 2024. Mr. Myers resigned from the Board of Directors on November 21, 2023.
- (15) We are not aware of any beneficial ownership of Common Stock by Mr. Sallin directly. Mr. Sallin resigned from the Board of Directors on February 28, 2024.

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- (16) Based on a Schedule 13D/A filed with the SEC on April 10, 2024 and other information known to us, consists of (i) 113,821 shares of Common Stock held by Dr. Singer directly, (ii) 383,796 shares of Common Stock held by Thirsty Brook 2010 Irrevocable Trust, a trust for which Dr. Singer is a trustee, that Dr. Singer has the right to acquire pursuant to a right of substitution in exchange for assets with an equal value to such shares, (iii) 56,719 shares of Common Stock held by Singer Asefzadeh Family Holding Trust, a trust for which Dr. Singer is a trustee and beneficiary, (iv) 7,127 shares of Common Stock held by Bakezilla 2019 Irrevocable Trust, a trust for which Dr. Singer is a trustee and beneficiary, (v) 14,788 shares of Common Stock held by Dr. Baharak Asefzadeh, Dr. Singer's spouse, (vi) 96,219 shares of Common Stock held by a minor child of Dr. Singer through a custodial account established pursuant to the Uniform Transfer to Minors Act ("UTMA") for which Dr. Singer serves as custodian, (vii) 96,219 shares of Common Stock held by a minor child of Dr. Singer through a custodial account established pursuant to the UTMA for which Dr. Singer serves as custodian, and (viii) 1,688 shares of Common Stock issuable upon exercise of outstanding options within 60 days of July 29, 2024 held by Dr. Singer directly.
- (17) Consists of 1,841 shares of Common Stock held by Mr. Zenner directly and (ii) 1,688 shares of Common Stock underlying outstanding stock options exercisable within 60 days of July 29, 2024.
- (18) Includes (i) 10,645,627 shares of Common Stock owned directly or beneficially by our executive officers or members of our Board of Directors, (ii) 533,018 shares of Common Stock underlying outstanding stock options and warrants exercisable within 60 days of July 29, 2024, (iii) 1,536,731 shares of Common Stock issuable upon conversion of the shares of Series A Preferred Stock, and (iv) 2,359,500 shares of Common Stock issuable upon conversion of shares of Series B Preferred Stock.

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

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

STOCKHOLDER PROPOSALS

Requirements for Stockholder Proposals or Nominations to be Brought Before the Annual Meeting. Stockholders intending to present a proposal at the 2025 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 Bylaws. Our 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 earlier than the close of business on the 120th day and not later than the close of business on the 90th day prior to the anniversary of the preceding year's annual meeting. Therefore, the Company must receive notice of such a proposal or nomination for the 2025 Annual Meeting of Stockholders no earlier than the close of business on February 14, 2025 and no later than the close of business on March 16, 2025. The notice must contain the information required by the Bylaws, a copy of which is available upon request to our Secretary. In the event that the date of the 2025 Annual Meeting of Stockholders is more than 30 days before or more than 60 days after June 14, 2025, then our Secretary must receive such written notice not earlier than the close of business on the 120th day prior to the 2025 Annual Meeting of Stockholders and not later than the close of business on the 90th day prior to the 2025 Annual Meeting of Stockholders or, if later, the 10th day following the day on which public disclosure of the date of such meeting is first made by the Company. SEC rules permit management to vote proxies in its discretion in certain cases if the stockholder does not comply with this deadline and, in certain other cases notwithstanding the stockholder's compliance with this deadline. In addition to satisfying all of the requirements under our Bylaws, any stockholders who intend to solicit proxies in support of director nominees other than the Company's nominees at the 2025 Annual Meeting of Stockholders must also comply with all applicable requirements of Rule 14a-19 under the Exchange Act. The advance notice requirement under Rule 14a-19 does not override or supersede the longer advance notice requirement under our Bylaws.

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.

Requirements for Stockholder Proposals to be Considered for Inclusion in the Company's Proxy Materials for the 2025 Annual Meeting of Stockholders. Any stockholder who wishes to submit a proposal for inclusion in our proxy materials must comply with Rule 14a-8 promulgated under the Exchange Act. For such proposals to be included in our proxy materials for presentation at our 2025 Annual Meeting of Stockholders, all applicable requirements of Rule 14a-8 must be satisfied, and we must have received such proposals no later than December 27, 2024 at our offices at 704 Quince Orchard Road, Gaithersburg, Maryland 20878, Attn: Secretary.

OTHER MATTERS

The Board of Directors does not know of any other matters to be brought before the Special Meeting. If any other matters not mentioned in this proxy statement are properly brought before the Special Meeting, the individuals named in the enclosed proxy card intend to use their discretionary voting authority under the proxy card to vote the proxy card in accordance with their best judgment on those matters.

CARTESIAN THERAPEUTICS, INC.
704 QUINCE ORCHARD ROAD
GAITHERSBURG, MARYLAND 20878



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 p.m. Eastern Time on []. 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/RNAC2024SM2

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

VOTE BY PHONE - 1-800-690-6903

Use any touch-tone telephone to transmit your voting instructions up until 11:59 p.m. Eastern Time on []. 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:

V54979-594148

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

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

CARTESIAN THERAPEUTICS, INC.



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

	For	Against	Abstain
1. To approve, in accordance with Nasdaq Listing Rule 5635(d), the issuance of shares of common stock, par value \$0.0001 per share ("Common Stock"), of Cartesian Therapeutics, Inc. (the "Company") upon conversion of the Company's Series B Non-Voting Convertible Preferred Stock, par value \$0.0001 per share (the "Conversion Proposal" or "Proposal No. 1"); and	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. To approve the adjournment or postponement of the special meeting of stockholders of the Company (the "Special Meeting"), if necessary, to continue to solicit votes for Proposal No. 1 (the "Adjournment Proposal" or "Proposal No. 2").	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NOTE: To transact such other business as may properly come before the Special 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.

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Signature [PLEASE SIGN WITHIN BOX]

Date

--	--

Signature (Joint Owners)

Date

Important Notice Regarding the Availability of Proxy Materials for the Special Meeting:

The Notice and Proxy Statement and the Proxy Statement are available at www.proxyvote.com.

V54980-S94148

**CARTESIAN THERAPEUTICS, INC.
Special Meeting of Stockholders
[], Eastern Time
This proxy is solicited by the Board of Directors**

The undersigned stockholder(s) of Cartesian Therapeutics, Inc. hereby appoint(s) Carsten Brunn, Ph.D. and Blaine Davis, or either of them, as proxies, each with the power to appoint his 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 CARTESIAN THERAPEUTICS, INC. that the stockholder(s) is/are entitled to vote at the Special Meeting of Stockholders to be held at [], virtually via live webcast at www.virtualshareholdermeeting.com/RNAC2024SM2, by means of remote communication as authorized by Section 211(a) of the General Corporation Law of the State of Delaware, and any continuation, postponement or adjournment thereof.

Such proxies are authorized to vote in their discretion (x) on any matter that the Board of Directors did not know would be presented at the Special Meeting by a reasonable time before the proxy solicitation was made, and (y) on such other business as may properly be brought before the meeting or any continuation, postponement or adjournment 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