UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

SCHEDULE 14A

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

Filed by a Party other than the Registrant
Check the appropriate box: ☑ Preliminary Proxy Statement ☐ Confidential, for Use of the SEC Only (as permitted by Rule 14a-6(e)(2)) ☐ Definitive Proxy Statement ☐ Definitive Additional Materials ☐ Soliciting Material under § 240.14a-12
LIFECORE BIOMEDICAL, 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.

Filed by the Registrant $\ oxtimes$

Lifecore Biomedical, Inc. 3515 Lyman Boulevard Chaska, Minnesota 55318 (952) 368-4300

To Our Stockholders,

You are invited to attend a special meeting of stockholders (the "Special Meeting") of Lifecore Biomedical, Inc. to be held on [April 10], 2025 at [8:30 am], Central Time, virtually via the Internet at www.virtualshareholdermeeting.com/LFCR2025SM.

Details of the business to be conducted at the Special Meeting are described in this proxy statement, and information about Lifecore Biomedical, Inc. that you should consider when you vote your shares are described in the accompanying proxy statement.

At the Special Meeting, we will ask stockholders to approve, for purposes of complying with Nasdaq Listing Rule 5635(d), the issuance of shares of our common stock underlying shares of Series A Convertible Preferred Stock issued by us pursuant to the terms of that certain Securities Purchase Agreement, dated January 9, 2023, by and among Lifecore Biomedical, Inc. and the investors named therein, in an amount in excess of 19.99% of our common stock outstanding before the issuance of such Series A Convertible Preferred Stock (the "Issuance Proposal"). We will also ask stockholders to approve an adjournment of the Special Meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of the Issuance Proposal (the "Adjournment Proposal").

Your vote is important. Regardless of whether you plan to attend the Special Meeting virtually, please read the accompanying proxy statement and then submit your proxy to vote by Internet, telephone or mail as promptly as possible. Returning your proxy will help us assure that a quorum will be present at the Special Meeting, will avoid the additional expense of duplicate proxy solicitations, and will ensure that your shares are represented at the Special Meeting. Please refer to the enclosed proxy card (for record holders) or voting instruction form (for beneficial owners who hold their shares through brokers, banks or other nominees) for instructions on how to vote.

Our Board of Directors has approved the Issuance Proposal and the Adjournment Proposal set forth in the proxy statement and recommends that you vote in favor of such proposals.

Sincerely,

/s/ Ryan D. Lake Executive Vice President, Chief Financial Officer, and Secretary

If you have any questions or require any assistance in voting your shares, please call us at (952) 368-4300.

NOTICE OF THE LIFECORE BIOMEDICAL, INC. SPECIAL MEETING OF STOCKHOLDERS

NOTICE IS HEREBY GIVEN that the 2025 Special Meeting of Stockholders (including any postponement(s) or adjournment(s), the "Special Meeting") of Lifecore Biomedical, Inc., a Delaware corporation (the "Company," "we," "us," or "our") will be held virtually via live webcast on [April 10], 2025 at [8:30 am] Central Time. The Special Meeting can be accessed by visiting www.virtualshareholdermeeting.com/LFCR2025SM, where you will be able to listen to the meeting live and vote online for the proposals described below, in accordance with the voting instructions provided in the accompanying proxy statement for the Special Meeting (the "Proxy Statement").

Date and Time Place

Item of Business

Adjournments and Postponement

Record Date

Meeting Admission

Availability of Proxy Materials Voting

[April 10], 2025 at [8:30 am], Central Time.

Solely virtual via the Internet at www.virtualshareholdermeeting.com/LFCR2025SM. You will be able to attend the Special Meeting, vote, and submit questions during the meeting by visiting www.virtualshareholdermeeting.com/LFCR2025SM and using your control number which can be found on the enclosed proxy card.

- 1. A proposal to approve, for purposes of complying with Nasdaq Listing Rule 5635(d), the issuance of shares of our common stock ("Common Stock") underlying shares of Series A Convertible Preferred Stock, par value \$0.001 per share, of the Company (the "Series A Preferred Stock") issued by the Company pursuant to the terms of that certain Securities Purchase Agreement, dated January 9, 2023, by and among the Company and the investors named therein, in an amount in excess of 19.99% of the number of shares of Common Stock outstanding immediately prior to the issuance of such Series A Preferred Stock (the "Issuance Proposal"); and
- 2. A proposal to approve an adjournment of the Special Meeting, if necessary or appropriate, to solicit additional proxies if there are not sufficient votes in favor of the Issuance Proposal (the "Adjournment Proposal").

Any items of business that may be considered at the Special Meeting at the time and on the date specified above or at any time and date to which the Special Meeting may be properly postponed (prior to the Special Meeting being convened) or properly adjourned.

[February 18], 2025 (the "Record Date"). Only stockholders of record holding shares of the Company's Common Stock and Series A Preferred Stock as of the close of business on the Record Date are entitled to notice of and to vote at the Special Meeting.

You are invited to virtually attend the Special Meeting if you are a stockholder of record or a beneficial owner of shares of the Company's Common Stock or Series A Preferred Stock as of the Record Date.

Our proxy materials, including the Proxy Statement, are also available on the internet at proxyvote.com.

Holders of our Common Stock are entitled to one vote for each share of Common Stock outstanding as of the Record Date for each of the proposals.

With respect to the Issuance Proposal, in accordance with the Nasdaq Listing Rules, the affirmative vote of the holders of a majority of the total votes cast in person or by proxy at the Special Meeting is required to approve the Issuance Proposal. Only holders of Common Stock are permitted to vote on the Issuance Proposal, as Nasdaq Listing Rule 5635 prohibits the holders of Series A Preferred Stock from voting the Series A Preferred Stock on an as-converted basis for purposes of the Issuance Proposal. However, holders of Series A Preferred Stock who also hold Common Stock will be entitled to vote their shares of Common Stock on the Issuance Proposal.

The affirmative vote of the holders of at least the majority of the voting power of the votes cast in person or by proxy at the Special Meeting is necessary to approve the Adjournment Proposal. With respect to the Adjournment Proposal, each holder of Series A Preferred Stock is entitled to the whole number of votes equal to the number of shares of Common Stock into which such holder's shares of Series A Preferred Stock would be convertible on the Record Date, subject to the Conversion Limits. As of the Record Date, the Exchange Limit was met, and, as a result, the number of shares each Series A Preferred Stock holder is considered to be entitled to vote will be reduced on a pro rata basis proportionate to each such holder's holdings of Series A Preferred Stock to comply with the Exchange Limit, subject to the Beneficial Ownership Limit, where applicable, in each case, in accordance with the Certificate of Designations.

Please follow the instructions in the Proxy Statement and on the proxy card or voting instruction card provided to you.

Whether or not you expect to attend virtually, we urge you to submit your proxy to vote your shares as promptly as possible by following the instructions on your proxy card so that your shares may be represented and voted at the Special Meeting. Your vote is very important.

BY ORDER OF THE BOARD OF DIRECTORS,

Chaska, Minnesota

, 2025

Ryan D. Lake

Executive Vice President, Chief Financial Officer, and Secretary

IMPORTANT

WHETHER OR NOT YOU PLAN TO ATTEND THE VIRTUAL SPECIAL MEETING, PLEASE SIGN AND RETURN THE ENCLOSED PROXY CARD AS PROMPTLY AS POSSIBLE IN THE ENCLOSED POSTAGE-PREPAID ENVELOPE OR VOTE YOUR SHARES BY TELEPHONE OR VIA THE INTERNET. IF YOU ATTEND THE VIRTUAL SPECIAL MEETING AND SO DESIRE, YOU MAY REVOKE YOUR PROXY AND VOTE VIA THE VIRTUAL MEETING WEBSITE. IF YOU HOLD YOUR SHARES THROUGH AN ACCOUNT WITH A BROKER, BANK, OR OTHER NOMINEE, PLEASE FOLLOW THE INSTRUCTIONS YOU RECEIVE FROM YOUR ACCOUNT MANAGER TO VOTE YOUR SHARES.

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LIFECORE BIOMEDICAL, INC. PROXY STATEMENT FOR THE LIFECORE BIOMEDICAL, INC. SPECIAL MEETING OF STOCKHOLDERS TO BE HELD ON [APRIL 10], 2025

The enclosed proxy is solicited on behalf of the board of directors (the "Board") of Lifecore Biomedical, Inc. (the "Company," "we," "us," or "our") for use at the upcoming special meeting of stockholders (the "Special Meeting"), to be held on [April 10], 2025 at [8:30 am] Central Time, or any adjournment or postponement thereof. The Special Meeting will be held virtually via the Internet. You will be able to attend the Special Meeting, vote, and submit questions during the meeting by visiting at www.virtualshareholdermeeting.com/LFCR2025SM with the control number contained on the proxy card included in these proxy materials. In addition, unless the context otherwise requires, references to "stockholders" are to the holders of our common stock, par value \$0.001 per share (the "Common Stock") and holders of Series A Convertible Preferred Stock, par value \$0.001 per share, of the Company (the "Series A Preferred Stock").

This proxy statement and the enclosed proxy card are first being mailed on or about [April 10], 2025 to stockholders entitled to vote as of the close of business on [February 18], 2025 (the "Record Date").

Important Notice Regarding Availability of Proxy Materials for the Special Meeting to be held on [April 10], 2025. This Proxy Statement and proxy card are available at proxyvote.com. You are encouraged to read these materials before you vote.

INFORMATION ABOUT THE SPECIAL MEETING AND VOTING

Why is the Company Soliciting My Proxy?

Our Board is soliciting your proxy to vote at the Special Meeting because you owned shares of our Common Stock or Series A Preferred Stock on the Record Date. The specific proposals to be considered and acted upon at our Special Meeting are as follows:

- 1. A proposal to approve, for purposes of complying with Nasdaq Listing Rule 5635(d), the issuance of shares of Common Stock issuable upon conversion of the shares of Series A Preferred Stock, issued by the Company pursuant to the terms of that certain Securities Purchase Agreement, dated January 9, 2023, by and among the Company and the investors named therein, in an amount in excess of 19.99% of the number of shares of the Common Stock outstanding immediately prior to the issuance of such Series A Preferred Stock (the "Issuance Proposal").
- 2. A proposal to approve an adjournment of the Special Meeting, if necessary or appropriate, to solicit additional proxies if there are not sufficient votes in favor of the Issuance Proposal (the "Adjournment Proposal").

Why are you seeking approval for the increase in the issuable shares of Common Stock upon conversion of shares of Series A Preferred Stock?

On January 9, 2023, we entered into a Securities Purchase Agreement (the "Purchase Agreement") with the investors named therein. Pursuant to the Purchase Agreement, we issued and sold an aggregate of 38,750 shares of newly designated Series A Preferred Stock, with a stated value of \$1,000 per share for an aggregate purchase price of \$38.75 million (the "Series A Financing Transaction"). The proceeds of the Series A Financing Transaction were used to support our working capital requirements and liquidity needs, and for other general corporate purposes.

Pursuant to the terms of the Series A Preferred Stock, the holders of shares of Series A Preferred Stock have the right to convert their respective shares of Series A Preferred Stock, in whole or in part, into fully paid and non-assessable shares of Common Stock at the conversion price set forth in the Certificate of Designations for the Series A Preferred Stock (the "Certificate of Designations"), subject to the Conversion Limits (as defined below). The initial conversion price set forth in the Certificate of Designations was equal to \$7.00 per share. The conversion price is subject to customary anti-dilution adjustments, including in the event of any stock split, stock dividend, recapitalization or similar events, and is also subject to adjustment in the event of subsequent offerings of Common Stock or convertible securities for less than the conversion price. On October 3, 2024, we completed the sale of an aggregate of 5,928,775 shares of our common stock in a private placement at a purchase price of \$4.10 per share, for aggregate gross proceeds of approximately \$24.3 million (the "PIPE Offering"). As a result of the PIPE Offering, the conversion price of the Series A Preferred Stock was automatically adjusted to \$6.53 per share.

Pursuant to the terms of the Certificate of Designations, unless and until approval of the stockholders is obtained as contemplated by Nasdaq Listing Rule 5635(d), no holder of Series A Preferred Stock may convert its shares of Series A Preferred Stock into shares of Common Stock if and solely to the extent that the issuance of such shares of Common Stock would exceed 19.99% of the number of shares of Common Stock of the Company outstanding as of January 9, 2023 (the "Exchange Limit"), which was 30,296,585 shares. Additionally, subject to certain exceptions and waiver by each holder of Series A Preferred Stock, we will not issue any shares of Common Stock to any respective holder to the extent that such issuance of Common Stock would result in such holder beneficially owning in excess of 9.99% of the then-outstanding Common Stock (the "Beneficial Ownership Limit" and, together with the Exchange Limit, the "Conversion Limits"). The holders of the Series A Preferred Stock are entitled to vote their shares on most matters upon which holders of Common Stock are entitled to vote, on an as-converted basis (including any limitations implicated by the Conversion Limits). If the Exchange Limit is met, the number of shares of Common Stock into which such holder of Series A Preferred Stock is entitled to convert its Series A Preferred Stock.

As contemplated by the Purchase Agreement, we agreed to hold the Special Meeting for the purpose of soliciting the holders of our Common Stock to vote to approve, and to seek approval for, the Issuance Proposal, thereby removing the Exchange Limit. For more information, see "Proposal 1: Issuance Proposal" contained elsewhere in this proxy statement.

How Do I Attend the Virtual Special Meeting?

In order to attend the virtual Special Meeting, you can visit www.virtualshareholdermeeting.com/LFCR2025SM, where you will be able to listen to the meeting live, submit questions, and vote online. You will need the 16-digit control number included on your proxy card or voting instruction form. Beneficial holders who do not have a 16-digit control number should follow the instructions provided on the voting instruction form provided by your broker, bank, or other nominee.

Electronic entry to the meeting will begin at a.m. (Central Time), and the meeting will begin promptly at a.m. (Central Time). If you encounter difficulties accessing the virtual meeting, please call the technical support number that will be posted at www.virtualshareholdermeeting.com/LFCR2025SM. If you cannot attend the meeting or if you are not a shareholder of record, you can still listen to the meeting, which will be available at www.lifecore.com.

Questions relevant to meeting matters will be answered during the meeting, subject to time constraints. If we receive substantially similar questions, we may group questions together and provide a single response to avoid repetition. Additional information regarding the rules and procedures for participating in the virtual Annual Meeting will be provided in our meeting rules of conduct, which stockholders can view during the meeting at the meeting website. If you have any technical difficulties or any questions regarding the virtual meeting website, please call the support team at the number listed on the log-in screen.

Can I Vote at the Special Meeting?

Only holders of record of Common Stock and Series A Preferred Stock at the close of business on the Record Date will be entitled to vote at the Special Meeting. On this Record Date, there were (i) shares of our Common Stock outstanding and entitled to vote on the Issuance Proposal and the Adjournment Proposal, (ii) shares of Series A Preferred Stock outstanding, and (iii) votes attributable to the outstanding shares of Series A Preferred Stock that are entitled to vote, on an as-converted basis, on the Adjournment Proposal (which represents the number of shares of Common Stock that were issuable upon conversion of the shares of Series A Preferred Stock on the Record Date, subject to the Conversion Limits).

Holders of our Common Stock are entitled to one vote for each share of Common Stock outstanding as of the Record Date for each of the proposals.

With respect to the Issuance Proposal, only holders of Common Stock are permitted to vote, as Nasdaq Listing Rule 5635 prohibits the holders of Series A Preferred Stock from voting the Series A Preferred Stock on an as-converted basis for purposes of the Issuance Proposal. However, holders of Series A Preferred Stock who also hold Common Stock will be entitled to vote their shares of Common Stock on the Issuance Proposal. As of the Record Date, based on publicly available information, we estimate that the holders of the Series A Preferred Stock control the vote with respect to approximately shares of Common Stock, or approximately % of the voting power of the Common Stock.

With respect to the Adjournment Proposal, each holder of Series A Preferred Stock is entitled to the whole number of votes equal to the number of shares of Common Stock into which such holder's shares of Series A Preferred Stock would be convertible on the Record Date, subject to the Conversion Limits. As of the Record Date, the Exchange Limit was met, and, as a result, the number of shares each Series A Preferred Stock holder is considered to be entitled to vote will be reduced on a pro rata basis proportionate to each such holder's holdings of Series A Preferred Stock to comply with the Exchange Limit, subject to the Beneficial Ownership Limit, where applicable, in each case, in accordance with the Certificate of Designations. As of the Record Date, based on publicly available information, we estimate that the holders of the Series A Preferred Stock control the vote with respect to approximately votes, or approximately % of the voting power of the Common Stock

If, on the Record Date, your shares were registered directly in your name with our transfer agent, Broadridge Corporate Issuer Solutions, Inc., then you are considered the stockholder of record with respect to those shares. As a stockholder of record, you may vote at the Special Meeting or vote by telephone, by Internet, or by filling out and returning the proxy card.

If, on the Record Date, your shares were held in an account with a brokerage firm, bank, or other nominee, then you are the beneficial owner of the shares held in "street name." As a beneficial owner, you have the right to direct your nominee on how to vote the shares held in your account, and your nominee has enclosed or provided voting instructions for you to use in directing it on how to vote your shares. However, the organization that holds your shares is considered the stockholder of record for purposes of voting at the Special Meeting. Because you are not the stockholder of record, you may not vote your shares while attending the Special Meeting unless you request and obtain a valid proxy from the organization that holds your shares giving you the right to vote the shares while attending the Special Meeting.

You do not need to attend the Special Meeting to vote your shares. Shares represented by valid proxies, received in time for the Special Meeting and not revoked prior to the Special Meeting, will be voted at the Special Meeting. For instructions on how to change or revoke your proxy, see "May I Change or Revoke My Proxy?" below.

What is a quorum?

The holders of a majority of voting power of our shares of Common Stock and Series A Preferred Stock issued and outstanding and entitled to vote at the Special Meeting, counted together (on an as-converted basis), must be present at the Special Meeting in order to hold the Special Meeting and conduct business. This presence is called a quorum. Your shares are counted as present at the Special Meeting if you are virtually present at the Special Meeting or if you have properly submitted a proxy. Abstentions will be included in the calculation of the number of shares present during the Special Meeting to determine whether a quorum is present, and broker non-votes will be excluded in the calculation of the number of shares present during the Special Meeting to determine whether a quorum is present.

What Vote is Required to Approve the Issuance Proposal and How are Votes Counted?

In accordance with the Nasdaq Listing Rules, the affirmative vote of the holders of a majority of the total votes cast in person or by proxy at the Special Meeting is required to approve the Issuance Proposal. Nasdaq Listing Rule 5635 prohibits the holders of Series A Preferred Stock from voting the Series A Preferred Stock on an as-converted basis for purposes of the Issuance Proposal. However, holders of Series A Preferred Stock who also hold Common Stock will be entitled to vote their shares of Common Stock on the Issuance Proposal. As of the Record Date, based on publicly available information, we estimate that the holders of the Series A Preferred Stock control the vote with respect to approximately shares of Common Stock, or approximately % of the voting power of the Common Stock. Abstentions are not considered votes cast and thus have no effect on the outcome of this proposal. If you fail to instruct your broker, bank or nominee to vote your shares on this proposal, and broker non-votes will have no effect on the outcome of this proposal.

What Vote is Required to Approve the Adjournment Proposal and How are Votes Counted?

The affirmative vote of the holders of at least the majority of the voting power of the votes cast in person or by proxy at the Special Meeting is necessary to approve the Adjournment Proposal. With respect to the Adjournment Proposal, each holder of Series A Preferred Stock is entitled to the whole number of votes equal to the number of shares of Common Stock into which such holder's shares of Series A Preferred Stock would be convertible on the Record Date, subject to the Conversion Limits. As of the Record Date, the Exchange Limit was met, and, as a result, the number of shares each Series A Preferred Stock holder is considered to be entitled to vote will be reduced on a pro rata basis proportionate to each such holder's holdings of Series A Preferred Stock to comply with the Exchange Limit, subject to the Beneficial Ownership Limit, where applicable, in each case, in accordance with the Certificate of Designations. As of the Record Date, based on publicly available information, we estimate that the holders of the Series A Preferred Stock control the vote with respect to approximately votes, or approximately % of the voting power of the Common Stock. Abstentions and broker non-

votes will have no effect on the outcome of this proposal. If you fail to instruct your broker, bank or nominee to vote your shares on this proposal, you broker, bank or nominee will not be permitted to vote your shares on this proposal, and broker non-votes will have no effect on the outcome of this proposal.

How Many Votes Do I Have?

Each share of our Common Stock that you own entitles you to one vote on each proposal. Holders of Series A Preferred Stock are only entitled to vote with the holders of the shares of Common Stock on the Adjournment Proposal (voting together with the holders of shares of Common Stock as one class) on an as-converted basis, subject to the Conversion Limits.

What is the Effect of Giving a Proxy?

Proxies are solicited by and on behalf of the Board. Ryan D. Lake, our Chief Financial Officer and Secretary, and Paul Josephs, our President and Chief Executive Officer have each been designated as the proxy holder by our Board. When proxies are properly dated, signed, and returned, the shares represented by such proxies will be voted at the Special Meeting in accordance with the instructions of the stockholder. If no specific instructions are given, however, the shares will be voted in accordance with the recommendations of the Board as described in this Proxy Statement. If any matters not described in this Proxy Statement are properly presented at the Special Meeting, the proxy holder will use his own judgment to determine how to vote the shares. If the Special Meeting is postponed, adjourned, or continued, the proxy holder can vote the shares on the new Special Meeting date as well, unless you have properly revoked your proxy instructions.

How Do I Vote?

Whether you plan to attend the Special Meeting or not, we urge you to vote by proxy over the internet, by phone or by using the enclosed proxy card. All shares represented by valid proxies that we receive through this solicitation, and that are not revoked, will be voted in accordance with your instructions on the proxy card or as instructed via the Internet or telephone. You may specify whether your shares should be voted FOR, AGAINST or ABSTAIN. If you properly submit a proxy without giving specific voting instructions, your shares will be voted FOR the Issuance Proposal and the Adjournment Proposal in accordance with our Board's recommendations as noted below. Voting by proxy will not affect your right to attend the Special Meeting.

If your shares are registered directly in your name through our stock transfer agent, Broadridge Corporate Issuer Solutions, Inc., or you have stock certificates registered in your name, you may vote:

- · By Internet or by telephone. Follow the instructions included in the proxy card to vote over the Internet or by telephone.
- By mail. You can vote by mail by completing, signing, dating and returning the proxy card as instructed on the card. If you sign the proxy card but do not specify how you want your shares voted, they will be voted in accordance with our Board's recommendations as noted below.
- · At the time of the virtual Special Meeting. If you attend the virtual Special Meeting, you may vote your shares online at the time of the meeting.

Telephone and Internet voting facilities for stockholders of record will be available 24 hours a day and will close at 11:59 p.m. Central Time on [April 9], 2025.

If your shares are held in "street name" (held in the name of a brokerage firm, bank, or other nominee), you will receive instructions from the holder of record. You must follow the instructions of the holder of record in order for your shares to be voted. Telephone and Internet voting also will be offered to stockholders owning shares through certain banks and brokers. If your shares are not registered in your own name and you plan to vote your shares in person (virtually) at the Special Meeting, you should contact your broker or agent for instructions on obtaining a valid proxy to do so.

If you are a stockholder of record of both our Common Stock and our Series A Preferred Stock, you will receive **TWO** proxy cards, a proxy card for the Common Stock and a proxy card for the Series A Preferred Stock. If you are a holder of both our Series A Preferred Stock and our Common Stock and wish to vote your shares of Series A Preferred Stock and your shares of Common Stock, you will need to properly mark, sign, date, and return **BOTH** proxy cards or follow the voting instructions provided by your broker, bank, or other nominee, as applicable.

How Does Our Board Recommend that I Vote on the Issuance Proposal?

Our Board recommends that you vote "FOR" the Issuance Proposal and FOR the Adjournment Proposal.

May I Change or Revoke My Proxy?

If you give us your proxy, you may change or revoke it at any time before the Special Meeting. If you are a stockholder of record, you may change or revoke your proxy in any one of the following ways:

- · by signing a new proxy card with a date later than your previously delivered proxy and submitting it as instructed above;
- · by re-voting by Internet or by telephone as instructed above;
- · by notifying Lifecore Biomedical, Inc.'s Secretary in writing before the Special Meeting that you have revoked your proxy; or
- by attending the virtual Special Meeting and voting your shares online at the Special Meeting. Attending the Special Meeting virtually will not in and of itself revoke a previously submitted proxy. You must specifically request at the Special Meeting that it be revoked.

If you hold your shares in the name of a broker, bank, or other holder of record, you may change your voting instructions by following the instructions of your broker, bank, or other nominee.

Your most current vote, whether by telephone, Internet or proxy card is the one that will be counted.

What if I Receive More Than One Proxy Card?

You may receive more than one proxy card if you hold shares of our Common Stock or Series A Preferred Stock in more than one account, which may be in registered form or held in street name. Please vote in the manner described above under "How Do I Vote?" for each account to ensure that all of your shares are voted.

Where Can I Find the Voting Results of the Special Meeting?

The preliminary voting results will be announced at the Special Meeting, and we will publish preliminary, or final results if available, in a Current Report on Form 8-K within four business days of the Special Meeting. If final results are unavailable at the time we file the Form 8-K, then we will file an amended report on Form 8-K to disclose the final voting results within four business days after the final voting results are known.

What Are the Costs of Soliciting these Proxies?

We will pay all of the costs of soliciting these proxies. Our directors and employees may solicit proxies in person or by telephone, fax or email. We will pay these employees and directors no additional compensation for these services. We will ask banks, brokers and other institutions, nominees and fiduciaries to forward these proxy materials to their principals and to obtain authority to execute proxies. We will then reimburse them for their expenses.

Who should I contact if I have any questions about how to vote?

If you have any questions about how to vote your shares, please send your questions to Lifecore Biomedical, Inc., Attn: Secretary, 3515 Lyman Blvd. Chaska, MN 55318, or call us at (952) 368-4300.

Attending the Special Meeting

The Special Meeting will be held in a virtual meeting format only. To attend the virtual Special Meeting, go to www.virtualshareholdermeeting.com/LFCR2025SM shortly before the meeting time, and follow the instructions. You will need your 16 digit control number from your proxy card to access the virtual Special Meeting. If you miss the Special Meeting, you can view a replay of the Webcast at www.virtualshareholdermeeting.com/LFCR2025SM until one year from the date of the meeting. You need not attend the Special Meeting in order to vote.

No Appraisal Rights

Our stockholders have no dissenters' or appraisal rights in connection with the Issuance Proposal.

Interests of Certain Persons in the Transactions

In considering the recommendation of the Board to vote "FOR" the Issuance Proposal presented at the Special Meeting, you should be aware that certain of our directors have interests in the Series A Financing Transaction that may be different from, or be in addition to, the interests of our stockholders generally, as described below. The Board was aware of and considered these interests, among other matters, in evaluating the Series A Financing Transaction and the related transaction and in recommending to our stockholders that they vote in favor of the Issuance Proposal presented at the Special Meeting. For additional information, see "Proposal No. 1: Issuance Proposal—Series A Preferred Stock—Purchaser Directors."

Nelson Obus and Wynnefield Capital

Nelson Obus has served as a member of the Board since October 2018. Mr. Obus is General Partner at Wynnefield Capital, Inc. ("Wynnefield") and Managing Member of Wynnefield Capital Management, LLC, as affiliate of Wynnefield. As of the Record Date, Wynnefield beneficially owned shares of our Common Stock. Additionally, entities affiliated with Wynnefield purchased shares of Series A Preferred Stock in the Series A Financing Transaction and, as of the Record Date, owned shares of Series A Preferred Stock.

Christopher S. Kiper and Legion Partners

Christopher S. Kiper has served as a member of the Board since January 2023, and is a director nominee of the holders of the Series A Preferred Stock. Mr. Kiper has served as a Co-Founder, Managing Director and Chief Investment Officer of Legion Partners Asset Management, LLC ("Legion") since April 2012, and at Legion's predecessor entities from January 2010 to April 2012. As of the Record Date, Legion beneficially owned shares our Common Stock. Additionally, entities affiliate with Legion purchased shares of Series A Preferred Stock in the Series A Financing Transaction and, as of the Record Date, owned shares of Series A Preferred Stock.

Preferred Directors

For so long as 30% of the shares of Series A Preferred Stock issued in the Series A Financing Transaction remain outstanding, the holders of the Series A Preferred Stock, voting separately as a class, have the right to nominate two directors to the Board. Pursuant to such right, the holder of the Series A Preferred Stock previously nominated Nathaniel Calloway and Mr. Kiper to serve as directors, and, pursuant to the Cooperation Agreements (described below) nominated Jason Aryeh and Christopher Kiper to serve as directors.

Series A Holder Ownership, Cooperation Agreements and Other Voting Matters

As of the Record Date, the holders of the Series A Preferred Stock own approximately shares of Common Stock, or approximately % of the voting power of the Common Stock entitled to vote on the Issuance Proposal, in addition to the shares of Series A Preferred Stock held by such parties. In addition, if the Issuance Proposal is approved, the holders of the Series A Preferred Stock will be entitled to convert the shares of Series A Preferred Stock as of the Record Date into approximately shares of Common Stock, representing % of the total voting power of the Company.

As further described in the Company's Current Report on Form 8-K filed on July 1, 2024, on June 28, 2024, the Company entered into cooperation agreements with (i) certain affiliates of 22NW, L.P., Matthew Korenberg and Jason Aryeh, (ii) certain affiliated entities of Legion Partners, Christopher S. Kiper and Raymond T. White, and (iii) certain affiliated entities of Wynnefield Capital (collectively, the "Cooperation Agreements"), pursuant to which, among other things and subject to the terms thereof, the Board agreed to (a) appoint Humberto C. Antunes, Paul H. Johnson, and Matthew Korenberg to the Board as independent directors, immediately following the Company's 2023 Annual Meeting of Stockholders (the "2023 Annual Meeting"), (b) re-nominate Mr. Aryeh as a Series A Preferred Director at the 2023 Annual Meeting, (c) nominate Messrs. Korenberg, Obus and Antunes for election to the Board at the Company's 2024 Annual Meeting of Stockholders (the "2024 Annual Meeting"), (d) re-nominate Mr. Johnson for election to the Board at the Company's 2025 Annual Meeting of Stockholders (the "2025 Annual Meeting"), and (e) re-nominate Mr. Kiper as a Series A Preferred Director at the 2023 Annual Meeting, the 2024 Annual Meeting and the 2025 Annual Meeting of Stockholders party to each of the Cooperation Agreements also each agreed, subject to certain exceptions, to vote, or cause to be voted, all shares of Common Stock and Series A Preferred Stock beneficially owned by such stockholders in favor of each of the directors nominated by the Board and recommended by the Board in the election of directors (and not in favor of any other nominees to serve on the Board).

The Company stockholders party to each of the Cooperation Agreements also each agreed, subject to vote, or cause to be voted, all shares of Common Stock and Series A Preferred Stock beneficially owned by such stockholders in accordance with the recommendations of the Board on other proposals, including the Issuance Proposal and the Adjournment Proposal (subject to certain limitations, including in the event Institutional Shareholder Services Inc. recommends otherwise), until the earlier of immediately after the 2025 Annual Meeting or October 31, 2025.

Pursuant to the terms of the Purchase Agreement, the Company agreed to use reasonable efforts to cause its officers and directors to vote their respective shares in favor of the Issuance Proposal. As of the Record Date, the officers and directors of the Company (excluding Messrs. Kiper and Obus, whose beneficial ownership is described above in "—Interests of Certain Persons in the Transactions") beneficially owned approximately shares of Common Stock, or approximately % of the voting power of the Common Stock entitled to vote on the Issuance Proposal.

Investor Dispute

On December 23, 2024, 22NW Fund, L.P. ("22NW"), a holder of shares of the Company's Common Stock and Series A Preferred Stock, filed a complaint against the Company, two former officers, and five former or current directors in the Commercial Division of the Supreme Court of the State of New York, New York County. The complaint seeks money damages (including compensatory damages, court costs, and attorneys' fees) for (i) alleged material misrepresentations by the Company on which 22NW allegedly relied when purchasing shares of the Series A Preferred Stock and Common Stock, (ii) alleged breaches of certain express representations in the Purchase Agreement, and (iii) registration delay fees allegedly owed under the Registration Rights Agreement in connection with the issuance of the Series A Preferred Stock. 22NW is also seeking the equitable remedy of specific performance under the Purchase Agreement, requesting an order compelling the Company to file a proxy statement with the SEC and to hold a stockholder meeting to seek the approval of the Issuance Proposal. In conjunction with that relief, 22NW has filed an expedited request that the Court enter a preliminary injunction directing Lifecore to file the proxy statement and to hold a stockholder meeting to seek the approval of the Issuance Proposal during the pendency of this action. The Court has set a hearing on January 23, 2025 to entertain 22NW's expedited request for preliminary injunction. The Company intends to defend itself vigorously against these claims.

Householding of Proxy Materials

Some companies, brokers, banks, and other nominee record holders participate in a practice commonly known as "householding," where a single copy of our Proxy Statement is sent to one address for the benefit of two or more stockholders sharing that address. Householding is permitted under rules adopted by the SEC as a means of satisfying the delivery requirements for proxy statements and annual reports, potentially resulting in extra convenience for stockholders and cost savings for companies. We will promptly deliver a separate copy of either document to you if you contact our Secretary at the address listed above or call us at (952) 368-4300. If you are receiving multiple copies of our Proxy Statement at your household and wish to receive only one, please notify your bank, broker, or other nominee record holder, or contact our Secretary at the address listed above.

PROPOSAL NO. 1 ISSUANCE PROPOSAL

Background and Description of Proposal

On January 9, 2023, we entered into a Securities Purchase Agreement (the "Purchase Agreement") with the investors named therein. Pursuant to the Purchase Agreement, we issued and sold an aggregate of 38,750 shares of newly designated Series A Preferred Stock, with a stated value of \$1,000 per share for an aggregate purchase price of \$38.75 million (the "Series A Financing Transaction"). The proceeds of the Series A Financing Transaction were used to support our working capital requirements and liquidity needs, and for other general corporate purposes.

Pursuant to the terms of the Series A Preferred Stock, the holders of shares of Series A Preferred Stock have the right to convert their respective shares of Series A Preferred Stock, in whole or in part, into fully paid and non-assessable shares of Common Stock at the conversion price set forth in the Certificate of Designations for the Series A Preferred Stock (the "Certificate of Designations"), subject to the Conversion Limits (as defined below). The initial conversion price set forth in the Certificate of Designations was equal to \$7.00 per share. The conversion price is subject to customary anti-dilution adjustments, including in the event of any stock split, stock dividend, recapitalization or similar events, and is also subject to adjustment in the event of subsequent offerings of Common Stock or convertible securities for less than the conversion price. On October 3, 2024, we completed the sale of an aggregate of 5,928,775 shares of our common stock in a private placement at a purchase price of \$4.10 per share, for aggregate gross proceeds of approximately \$24.3 million (the "PIPE Offering"). As a result of the PIPE Offering, the conversion price of the Series A Preferred Stock was automatically adjusted to \$6.53 per share.

Pursuant to the terms of the Certificate of Designations, unless and until approval of the stockholders is obtained as contemplated by Nasdaq Listing Rule 5635(d), no holder of Series A Preferred Stock may convert its shares of Series A Preferred Stock into shares of Common Stock if and solely to the extent that the issuance of such shares of Common Stock would exceed 19.99% of the number of shares of Common Stock of the Company outstanding as of January 9, 2023 (the "Exchange Limit"), which was 30,296,585 shares. Additionally, subject to certain exceptions and waiver by each holder of Series A Preferred Stock, we will not issue any shares of Common Stock to any respective holder to the extent that such issuance of Common Stock would result in such holder beneficially owning in excess of 9.99% of the then-outstanding Common Stock (the "Beneficial Ownership Limit" and, together with the Exchange Limit, the "Conversion Limits"). The holders of the Series A Preferred Stock are entitled to vote their shares on most matters upon which holders of Common Stock are entitled to vote, on an as-converted basis (including any limitations implicated by the Conversion Limits). If the Exchange Limit is met, the number of shares of Common Stock into which such holder of Series A Preferred Stock is entitled to convert its Series A Preferred Stock.

As contemplated by the Purchase Agreement, we agreed to hold the Special Meeting for the purpose of soliciting the holders of our Common Stock to vote to approve, and to seek approval for, the Issuance Proposal, thereby removing the Exchange Limit.

The Board hereby recommends that the holders of Common Stock approve, for purposes of complying with Nasdaq Listing Rule 5635(d), the issuance of shares of Common Stock issuable upon conversion of the shares of Series A Preferred Stock, in an amount in excess of 19.99% of the number of shares of the Common Stock outstanding immediately prior to the issuance of such Series A Preferred Stock (the "Issuance Proposal"), thereby eliminating the Exchange Limit.

The Purchase Agreement and Certificate of Designations were filed with the Securities and Exchange Commission (the "SEC") in connection with our Current Report on Form 8-K filed on January 10, 2023.

Reasons for the Series A Financing Transaction

In January 2023, our Board determined to raise additional funds to support our working capital requirements and liquidity needs and for general corporate purposes. The Series A Financing Transaction, which yielded gross proceeds of \$38.75 million, furthered these objectives. We believe that the terms of the Series A Preferred Stock, including the rights granted to the holders of the Series A Preferred Stock, were reasonable in light of the timing, size and type of the Series A Financing Transaction. Our Board considered various alternatives to the Series A Financing Transaction, none of which proved to be feasible or would have resulted in aggregate terms equivalent to, or more favorable than, the terms obtained in the Series A Financing Transaction.

Series A Preferred Stock

The following description of the material terms of the Series A Preferred Stock is summarized from, and qualified in its entirety by reference to, our certificate of incorporation and the Certificate of Designations, each of which has been publicly filed with the Securities and Exchange Commission, and is incorporated herein by reference.

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Each share of Series A Preferred Stock has the powers, designations, preferences and other rights as are set forth in the Certificate of Designations of the Series A Preferred Stock filed by the Company with the Delaware Secretary of State on January 9, 2023 (the "Certificate of Designations").

The Series A Preferred Stock ranks senior to our Common Stock with respect to dividends, distributions and payments on liquidation, winding-up and dissolution.

Dividends

The holders of Series A Preferred Stock are entitled to dividends on the Liquidation Preference (as defined below) at the rate of 7.5% per annum, payable in-kind. We may, at our option, pay such dividends in cash from and after the earlier of June 29, 2026 or the termination or waiver of the restriction on cash dividends and/or redemptions that is set forth in the Credit Agreements (as defined in the Certificate of Designations) (such earlier date, the "Applicable Date"). The holders of Series A Preferred Stock are also entitled to participate in dividends declared or paid on the Common Stock on an as-converted basis.

Liquidation

Upon a liquidation, dissolution, winding up or change of control of the Company, each share of Series A Preferred Stock will be entitled to receive an amount per share of Series A Preferred Stock equal to the greater of (i) the purchase price paid by the purchaser at issuance, plus all accrued and unpaid dividends (the "Liquidation Preference") and (ii) the amount that the holder of Series A Preferred Stock would have been entitled to receive at such time if the Series A Preferred Stock had been converted into Common Stock immediately prior to such liquidation event.

Upon certain bankruptcy events, we are required to pay to each holder of Series A Preferred Stock an amount in cash equal to the Liquidation Preference being redeemed. From and after the Applicable Date, each holder of Series A Preferred Stock shall have the right to require the Company to redeem all or any part of such holder's Series A Preferred Stock for an amount equal to the Liquidation Preference.

Conversion and Exchange Limit

Each holder of Series A Preferred Stock has the right, at its option, to convert its Series A Preferred Stock, in whole or in part, into fully paid and non-assessable shares of our Common Stock at an initial conversion price equal to \$7.00 per share. The conversion price is subject to customary anti-dilution adjustments, including in the event of any stock split, stock dividend, recapitalization or similar events, and is also subject to adjustment in the event of subsequent offerings of Common Stock or convertible securities by the Company for less than the conversion price. On October 3, 2024, we completed the sale of an aggregate of 5,928,775 shares of our common stock in a private placement at a purchase price of \$4.10 per share, for aggregate gross proceeds of approximately \$24.3 million (the "PIPE Offering"). As a result of the PIPE Offering, the conversion price was automatically adjusted to \$6.53 per share.

Pursuant to the terms of the Certificate of Designations, unless and until approval of the our stockholders is obtained as contemplated by Nasdaq Listing Rule 5635(d), no holder of Series A Preferred Stock may convert its shares of Series A Preferred Stock into shares of Common Stock if and solely to the extent that the issuance of such shares of Common Stock would exceed the aggregate number of shares of Common Stock that is equal to 19.99% of the amount of Common Stock of the Company outstanding as of January 9, 2023 (the "Exchange Limit"), which was 30,296,585 shares. Additionally, subject to certain exceptions and waiver by each holder of Series A Preferred Stock, we will not issue any shares of Common Stock to any respective holder to the extent that such issuance of Common Stock would result in such holder beneficially owning in excess of 9.99% of the then-outstanding Common Stock (the "Beneficial Ownership Limit" and, together with the Exchange Limit, the "Conversion Limits"). If the Exchange Limit is met, the number of shares of Common Stock into which such holder of Series A Preferred Stock is entitled to convert its Series A Preferred Shares is reduced on a pro rata basis, proportionate to each such holder's holdings in the Series A Preferred Stock.

Subject to certain conditions, we may from time to time, at our option, require conversion of all or any portion of the outstanding shares of Series A Preferred Stock to Common Stock if, for at least 20 consecutive trading days during the respective measuring period the closing price of the Common Stock was at least 150% of the conversion price (the "Mandatory Conversion Right"). We may not exercise this Mandatory Conversion Right unless certain conditions with regard to the shares of Common Stock to be issued upon such conversion are satisfied.

Voting

The holders of Series A Preferred Stock are generally entitled to vote with the holders of the shares of Common Stock on all matters submitted for a vote of holders of shares of Common Stock (voting together with the holders of shares of Common Stock as one class), other than the Issuance Proposal, on an as-converted basis, subject to the Conversion Limits described above and certain other limitations, including the limitations set forth in the Nasdaq Listing Rules with respect to the approval of the Issuance Proposal.

Preferred Directors

For so long as 30% of the shares of Series A Preferred Stock issued in the Series A Financing Transaction remain outstanding, the holders of the Series A Preferred Stock, voting separately as a class, have the right to nominate two members to our Board (the "Series A Director Right"). Pursuant to such right, the holders of Series A Preferred Stock originally nominated Nathaniel Calloway and Christopher Kiper to serve as the director nominees the holders Series A Preferred Stock. Pursuant to the Cooperation Agreements, the Company has currently nominated Jason Aryeh and Mr. Kiper.

Purchase Rights

If, after the date of the Purchase Agreement and until the date that the purchasers of the Series A Preferred Stock hold, in the aggregate, less than 30% of the shares of Series A Preferred Stock issued in the Series A Financing Transaction, we intend to issue new equity or equity equivalent securities, including without limitation any debt, preferred stock or other instrument or security that is, at any time during its life and under any circumstances, convertible into or exchangeable or exercisable for shares of Common Stock, then we shall notify the holders of the Series A Preferred Stock and such holders shall have certain rights to participate in such offering, subject to certain exceptions.

Consent Rights

Additionally, for so long as 30% of the shares of Series A Preferred Stock issued in the Series A Financing Transaction remain outstanding, certain matters will require the approval of the majority of the outstanding Series A Preferred Stock, voting as a separate class, including (i) amending, altering or repealing any provision of our Certificate of Incorporation or Bylaws, in each case, in a manner that adversely affects the powers, preferences or rights of the Series A Preferred Stock; (iii) increasing or decreasing the authorized number of shares of Series A Preferred Stock (except to provide for the issuance of PIK dividends); (iv) creating (including by reclassification), issuing shares of or increasing the authorized number of shares of any additional class or series of capital stock of the Company unless such class or series rank junior to the Series A Preferred Stock and are issued at fair market value; (v) purchasing or redeeming or paying, declaring or setting aside any fund for, any dividend or distribution on, any Common Stock or other Junior Stock (as defined in the Certificate of Designations), other than purchases of equity securities of the Company upon the termination of an employee of the Company or any of its subsidiaries in accordance with the terms of such employee's employment agreement or any equity incentive or similar plan approved by the Board; or (vi) creating, incurring, granting, entering into, permitting, assuming or allowing, directly or indirectly, (a) any indebtedness by the Company (or any of its subsidiaries), excluding equity securities and non-Series A Preferred Stock (but including convertible debt), at any time when, or as a result of which, the principal amount of our total outstanding and available indebtedness exceeds \$175,000,000, or (b) any lien, charge or other encumbrance on all or substantially all of our (or any of our subsidiaries') properties or assets.

Effect of Removal of Exchange Limit

As of the Record Date, there were shares of Series A Preferred Stock outstanding, and, based on the conversion price of \$6.53 per share, the Exchange Limit has been met. As a result, as of the Record Date and the date of the Special Meeting, the holders of Series A Preferred Stock would be entitled to convert their Series A Preferred Stock into up to 6,056,284 shares of Common Stock, and are entitled to an equal number of votes on matters in which shares of Series A Preferred Stock are entitled to vote, as a single class, on an as-converted basis with holders of shares of Common Stock, which represents approximately 14.1% of the total voting power of the voting securities of the Company, based on the shares outstanding as of January 16, 2025.

If the Issuance Proposal is approved, and holders of the Series A Preferred Stock were to convert their shares of Series A Preferred Stock into Common Stock, it would result in an increase in the number of shares of Common Stock outstanding, and our stockholders would incur additional dilution of their percentage ownership and voting power. For example, if the Issuance Proposal is approved, based on the conversion price of \$6.53 per share and the number of shares of Series A Preferred Stock outstanding as of the Record Date, on the date of the Special Meeting, the holders of Series A Preferred Stock would be entitled to convert their Series A Preferred Stock into up to shares of Common Stock, and would be entitled to an equal number of votes on matters in which shares of Series A Preferred Stock are entitled to vote, as a single class, on an as-converted basis with holders of shares of Common Stock, which would represent approximately % of the total voting power of the voting securities of the Company, based on the shares outstanding as of January 16, 2025.

Below is a summary chart setting forth, for illustrative purposes, (i) the maximum number of shares of Common Stock issuable if the holders of Series A Preferred Stock upon conversion of the Series A Preferred Stock, and the approximate percentage of total voting power represented by the Series A Preferred Stock, in each case, as of the Record Date, and (ii) the maximum number of shares of Common Stock that Series A Preferred Stock could convert into, and the approximate percentage of total voting power represented by the Series A Preferred Stock as of the Special Meeting Date, in each case, assuming the Issuance Proposal is approved:

As of the Special Meeting Date
(Assuming the Issuance
As of the Record Date (1) Proposal is Approved) (1) Change Percent Change

Maximum Number of Shares of Common Stock Issuable

Voting Power (2)

(1) Based upon an assumed conversion price of \$6.53 per share, and the number of shares of Series A Preferred Stock outstanding as of the date indicated.

(2) Based on 37,025,331 shares of Common Stock outstanding as of January 16, 2025.

In addition, as further described in "Series A Preferred Stock—Dividends," above, holders of Series A Preferred Stock are entitled to dividends that must be payable in kind until the Applicable Date, and we may continue to be paid in kind thereafter, for so long as the Series A Preferred Stock remains outstanding. Accordingly, the number of shares of Series A Preferred Stock outstanding is expected to continue to increase, which, in turn, will result further dilution to holders of Common Stock. For example, if the Issuance Proposal is approved and assuming all shares of Series A Preferred Stock remain outstanding and receive PIK dividends through January 10, 2028, the maximum aggregate amount of shares of Common Stock issuable upon conversion of the shares of Series A Preferred Stock at that time, at a conversion price of \$6.53 per share would represent approximately shares of our Common Stock, or approximately % of the shares of Common Stock outstanding as of January 16, 2025. This dilutive impact may be increased if the conversion price is further reduced in the future, including in the event the Company seeks to raise additional equity capital.

While, as of the date of this proxy statement, no holders of Series A Preferred Stock have requested the Company to convert any of their shares of Series A Preferred Stock into Common Stock, we generally do not have control over whether the holders of shares of Series A Preferred Stock convert their shares, other in connection with its exercise of the Mandatory Conversion Right, and have limited control over the extent to which we pay dividends in the form of PIK dividends or may require additional equity capital in the future. For these reasons, we are unable to accurately forecast or predict with any certainty the total number of shares of Common Stock that may be issued upon conversion of the Series A Preferred Stock, and thus the ultimate magnitude of the dilutive effect cannot be conclusively determined. Future issuances of shares of Common Stock upon conversion of the Series A Preferred Stock, if any, may cause a significant reduction in the percentage economic interests of our current stockholders, and could cause the market price of our Common Stock to decline. In addition, if the Issuance Proposal is approved, the voting power of the Common Stockholders will be reduced, and the voting power may become further centralized with the holders of the Series A Preferred Stock, which may also have an incidental anti-takeover effect and/or discourage the possibility of, or render more difficult, certain mergers, tender offers, proxy contests or other change of control or ownership transactions.

Vote Required

In accordance with the Nasdaq Listing Rules, the affirmative vote of the holders of a majority of the total votes cast in person or by proxy at the Special Meeting is required to approve the Issuance Proposal. Nasdaq Listing Rule 5635 prohibits the holders of Series A Preferred Stock from voting the Series A Preferred Stock on an as-converted basis for purposes of the Issuance Proposal. However, holders of Series A Preferred Stock who also hold Common Stock will be entitled to vote their shares of Common Stock on the Issuance Proposal. As of the Record Date, based on publicly available information, we estimate that the holders of the Series A Preferred Stock control the vote with respect to approximately shares of Common Stock, or approximately % of the voting power of the Common Stock. Abstentions are not considered votes cast and thus have no effect on the outcome of this proposal. If you fail to instruct your broker, bank or nominee to vote your shares on this proposal, you broker, bank or nominee will not be permitted to vote your shares on this proposal, and broker non-votes will have no effect on the outcome of this proposal.

Recommendation of the Board of Directors

Nasdaq Listing Rule 5635(d) requires us to obtain stockholder approval prior to the issuance of securities in connection with a transaction other than a public offering involving the sale, issuance or potential issuance by us of our Common Stock (or securities convertible into or exercisable for our Common Stock) representing 20% or more of Common Stock, or 20% or more of the voting power outstanding before the issuance, at a price that is the lower of: (i) the Nasdaq Official Closing Price (as reflected on Nasdaq.com) immediately preceding the signing of the binding agreement or (ii) the average Nasdaq Official Closing Price (as reflected on Nasdaq.com) for the five trading days immediately preceding the binding agreement. In the case of the Series A Financing Transaction, the Conversion Limit established a limitation on conversion at 19.99% of the shares of our Common Stock outstanding immediately preceding the issuance of the Series A Preferred Stock, which were issued on January 9, 2023.

As contemplated by the Purchase Agreement, we agreed to hold the Special Meeting for the purpose of soliciting the holders of our Common Stock to vote to approve, and to seek approval for, the Issuance Proposal, thereby removing the Exchange Limit.

Our Board considered various alternatives to the Series A Financing Transaction, none of which proved to be feasible or would have resulted in aggregate terms equivalent to, or more favorable than, the terms obtained in the Series A Financing Transaction. In connection with the Series A Financing Transaction, we agreed to seek approval of our stockholders for the issuance of shares of Common Stock upon conversion of the Series A Preferred Stock (including in respect of PIK dividends). If our stockholders do not approve this proposal, we are obligated under the Purchase Agreement to continue using our best efforts to obtain stockholder approval under Nasdaq Rule 5635(d), including by calling additional meetings of stockholders, until we obtain the requisite approval. The requirement to call and hold additional stockholder meetings to obtain the stockholder approval would be costly for the Company and result in potential distractions for management and the Company. The failure of our stockholders to approve the Issuance Proposal could also materially and adversely affect our ability to obtain additional capital under terms similar to the Series A Preferred Stock in the future to fund our business.

Based on the foregoing, the Board hereby recommends that the holders of Common Stock FOR the approval, for purposes of complying with Nasdaq Listing Rule 5635(d), the issuance of shares of Common Stock issuable upon conversion of the shares of Series A Preferred Stock, in an amount in excess of 19.99% of the number of shares of the Common Stock outstanding immediately prior to the issuance of such Series A Preferred Stock (the "Issuance Proposal"). If stockholder approval of the Issuance Proposal is obtained, then the Exchange Limit will be removed and the full number of shares of Common Stock underlying the Series A Preferred Stock may be issued upon conversion of the Series A Preferred Stock.

OUR BOARD RECOMMENDS YOU VOTE "FOR" THE ISSUANCE PROPOSAL

PROPOSAL NO. 2

ADJOURNMENT PROPOSAL

Overview

If the Special Meeting is convened and a quorum is present, but there are not sufficient votes to approve the Issuance Proposal, one or more of our proxy holders may move to adjourn the Special Meeting at that time in order to enable our Board to solicit additional proxies to approve the Issuance Proposal.

In this proposal, we are asking our stockholders to authorize one or more of our proxy holders to adjourn the Special Meeting to another time and place, if necessary, to solicit additional proxies in the event that there are not sufficient votes to approve the Issuance Proposal. If our stockholders approve this proposal, one or more of our proxy holders can adjourn the Special Meeting and any adjourned session of the Special Meeting to allow for additional time to solicit additional proxies, including the solicitation of proxies from our stockholders that have previously voted. Among other things, approval of this proposal could mean that, even if we had received proxies representing a sufficient number of votes to defeat the Issuance Proposal, we could adjourn the Special Meeting without a vote on such proposals and seek to convince our stockholders to change their votes in favor of the Issuance Proposal.

If it is necessary to adjourn the Special Meeting, no notice of the adjourned meeting is required to be given to our stockholders, other than an announcement at the Special Meeting of the time and place to which the Special Meeting is adjourned, so long as the meeting is adjourned for 30 days or less and no new record date is fixed for the adjourned meeting. At the adjourned meeting, we may transact any business which might have been transacted at the original meeting.

Vote Required and Recommendation of the Board of Directors

The affirmative vote of the holders of at least the majority of the voting power of the votes cast in person or by proxy at the Special Meeting is necessary to approve the Adjournment Proposal. With respect to the Adjournment Proposal, each holder of Series A Preferred Stock is entitled to the whole number of votes equal to the number of shares of Common Stock into which such holder's shares of Series A Preferred Stock would be convertible on the Record Date, subject to the Conversion Limits. As of the Record Date, the Exchange Limit was met, and, as a result, the number of shares each Series A Preferred Stock holder is considered to be entitled to vote will be reduced on a pro rata basis proportionate to each such holder's holdings of Series A Preferred Stock to comply with the Exchange Limit, subject to the Beneficial Ownership Limit, where applicable, in each case, in accordance with the Certificate of Designations. Abstentions and broker non-votes will have no effect on the outcome of this proposal. If you fail to instruct your broker, bank or nominee to vote your shares on this proposal, you broker, bank or nominee will not be permitted to vote your shares on this proposal, and broker non-votes will have no effect on the outcome of this proposal.

The Board recommends that stockholders vote FOR the approval to authorize the adjournment of the Special Meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of the Issuance Proposal.

OUR BOARD RECOMMENDS YOU VOTE "FOR" THE ADJOURNMENT PROPOSAL

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS

The following table sets forth the beneficial ownership of Common Stock and Series A Preferred Stock as of January 16, 2025 as to (i) each person who is known by us to beneficially own more than 5% of any class of the our voting stock, (ii) each of our directors, (iii) each of our named executive officers, and (iv) all of our directors and executive officers as a group. The business address of each director, director nominee, and executive officer named below is c/o Lifecore Biomedical, Inc., 3515 Lyman Blvd., Chaska, MN 55318.

The number of shares of stock beneficially owned by each person or entity is determined in accordance with the applicable rules of the SEC and includes voting or investment power with respect to such shares

to such shares.	Shares Beneficially Owned				
Name	Number of Shares of Common Stock ⁽¹⁾	Percent of Common Stock	Series A Preferred Stock Owned	Percent of Series A Preferred Stock	Combined Voting Power
5% Stockholder					
Wynnefield Capital, Inc.	5,300,349 (2)	14.12 %	3,765	8.39 %	14.12 %
Legion Partners Asset Management, LLC	6,385,463 (3)	16.38 %	14,482	32.26 %	16.38 %
Cove Street Capital, LLC	468,875 (4)	1.25 %	3,476 (5)	7.74 %	1.25 %
22NW, LP	4,099,529 (6)	10.41 %	17,378	38.71 %	10.41 %
Greenhaven Road Investment Management, LP	3,366,053 (7)	9.09 %	_	_	9.09 %
325 Capital	1,574,138 (8)	4.16 %	5,793 (8)	12.90 %	4.16 %
LW Capital Management	1,899,992 (9)	5.13 %	_	_	5.13 %
Directors and Named Executives					
Jason Aryeh	_	*	_	_	*
Humberto Antunes	3,000	*	_	_	*
Katrina L. Houde	59,906	*	_	_	*
Paul Johnson	_	*	_	_	*
Christopher Kiper	6,385,463 (3)	16.38 %	14,482	32.26 %	16.38 %
Matthew Korenberg	_	*	_	_	*
Nelson Obus	5,300,349 (2)	14.12 %	3,765	8.39 %	14.12 %
Joshua E. Schechter	59,667	*	_	_	*
Paul Josephs	59,717	*	_	_	*
Ryan D. Lake	54,929	*	_	_	*
All current directors and executive officers as a group (10 persons)	11,923,031	32.20 %	18,247	40.64 %	32.20 %

^{*} Less than 1%

⁽¹⁾ The number of shares of Common Stock beneficially owned by each holder includes (1) the total number of shares of Common Stock each such holder is deemed to beneficially own as of January 16, 2025 based on the Company's review of certain schedules filed with the SEC for 5% Stockholders, the Company's internal records and other information available to the Company, plus (2) any shares of Common Stock that could be issued within 60 days of January 16, 2025 upon conversion of shares of Series A Preferred Stock beneficially owned by such holder based on the Company's internal records, taking into account the Conversion Limits, including the Exchange Limit, which the Company met last year.

- (2) This information is based on (1) an Amendment No. 10 to Schedule 13D filed on July 5, 2024 by Wynnefield Partners Small Cap Value, L.P. ("Wynnefield Partners"), Wynnefield Small Cap Value Offshore Fund, Ltd. ("Wynnefield Offshore"), Wynnefield Capital, Inc. Profit Sharing Plan ("Wynnefield Partners"), Wynnefield Capital Management, LLC ("WCM"), Wynnefield Capital, Inc. ("WCI") and Nelson Obus and Joshua Landes (collectively, the "Wynnefield Investors"), and (2) the subsequent participation by the Wynnefield Investors in the PIPE Offering. According to the Schedule 13D/A, (i) Wynnefield Partners I has sole voting and sole dispositive power over 2,216,667 shares (including 243,814 shares issuable upon conversion of certain shares of Series A Preferred Stock); (ii) Wynnefield Partners has sole voting and sole dispositive power over 1,396,408 shares (including 162,543 shares issuable upon conversion of certain shares of Series A Preferred Stock); (iii) Wynnefield Offshore has sole voting and sole dispositive power over 938,554 shares (including 101,589 shares issuable upon conversion of certain shares of Series A Preferred Stock); (iv) Wynnefield Plan has sole voting and sole dispositive power over 3,613,075 shares (including 406,357 shares issuable upon conversion of certain shares of Series A Preferred Stock); (vi) WCI has sole voting and sole dispositive power over 938,554 shares (including 101,589 shares issuable upon conversion of certain shares of Series A Preferred Stock); (vii) Mr. Obus has sole voting and sole dispositive power over 88,687 shares and shared voting and shared dispositive power over 4,918,979 shares (including 507,946 shares issuable upon conversion of certain shares of Series A Preferred Stock); and (viii) Mr. Landes has shared voting and shared dispositive power over 4,918,979 shares (including 507,946 shares issuable upon conversion of certain shares of Series A Preferred Stock); and (viii) Mr. Landes has shared voting and shared dispositive power over 4,918,979 shares (including 507,
- (3) This information is based solely on (1) an Amendment No. 9 to Schedule 13D filed on October 7, 2024 by Legion Partners, L.P. I, Legion Partners, L.P. II, Legion Partners, L.P. II, Legion Partners, L.P. II, Legion Partners Asset Management, L.L.C, Legion Partners Holdings, L.L.C, Christopher S. Kiper and Raymond T. White (collectively the "Legion Investors"), and (2) the Company's internal records with respect to the number of shares of Common Stock into which the shares of Series A Preferred Stock may convert. According to the Schedule 13D/A, (i) Legion Partners, L.P. II, has shared voting and shared dispositive power over 5,938,615 shares (including 1,854,347 shares issuable upon conversion of certain shares of Series A Preferred Stock); (iii) Legion Partners, L.P. II, has shared voting and shared dispositive power over 495,720 shares (including 176,434 shares issuable upon conversion of certain shares of Series A Preferred Stock); (iv) Legion Partners, L.P. Las shared voting and shared dispositive power over 6,434,335 shares (including 2,030,781 shares issuable upon conversion of certain shares of Series A Preferred Stock); (iv) Legion Partners Asset Management, LLC has shared voting and shared dispositive power over 6,462,404 shares (including 2,030,781 shares issuable upon conversion of certain shares of Series A Preferred Stock); and (v) each of Legion Partners Holdings, LLC, Christopher S. Kiper and Raymond T. White has shared voting and shared dispositive power over 6,462,404 shares (including 2,030,781 shares issuable upon conversion of certain shares of Series A Preferred Stock). Each of Messrs. Kiper and White, as a managing director of Legion Partners Asset Management, LLC and a managing member of Legion Partners Holdings, LLC, may be deemed the beneficial owner of the (i) 5,938,615 shares beneficially owned by Legion Partners, L.P. I, (ii) 495,720 shares beneficially owned by Legion Partners, L.P. II, (iii) 200 shares beneficially owned by Legion Partners Holdings, LLC, and (iv) 28,069 shares th

- (4) This information is based solely on (1) an Amendment No. 1 to Schedule 13D filed on August 15, 2023 by Cove Street Capital LLC ("Cove Street"), Jeffrey Bronchick and CSC Partners Fund, LP (collectively, the "Cove Street Investors"), (2) the Company's internal records with respect to the number of shares of Common Stock into which the shares of Series A Preferred Stock may convert, and (3) subsequent information provided to the Company by representatives of Cove Street. According to the Schedule 13D/A, (i) Cove Street has sole voting and dispositive power over 267,179 shares, shared voting power over 1,094,183 shares and shared dispositive power over 1,583,440 shares (including 444,157 shares issuable upon conversion of certain shares of Series A Preferred Stock); (ii) Mr. Bronchick reported sole voting and dispositive power over 5,303 shares, shared voting power over 1,336,201 shares, and shared dispositive power over 1,583,440 shares (including 444,157 shares issuable upon conversion of certain shares of Series A Preferred Stock); and (iii) CSC Partners Fund, LP has sole voting and dispositive power over 267,179 shares. Mr. Bronchick is a Principal and Portfolio Manager of Cove Street Capital, LLC. Cove Street Capital, LLC is a controlling owner of CSC Partners, LLC, which serves as the general partner of CSC Partners Fund, LP, Based on the Company's internal records, the number of shares of Common Stock into which the shares of Series A Preferred Stock beneficially owned by the Cove Street Investors were, in the aggregate, 468,874 as of January 16, 2025, or 24,717 more shares than were reported on the Schedule 13D/A. Representatives of Cove Street informed the Company that, subsequent to the Schedule 13D/A, Cove Street had reduced the Cove Street Investors' aggregate beneficial ownership of Common Stock to one share of Common Stock. The address for each of the Cove Street Investors is 525 South Douglas Street, Suite 225, El Segundo, California, 90245.
- (5) Includes (i) 1,738 shares of Series A Preferred Stock over which each of Cove Street Capital, LLC and Mr. Bronchick has sole voting power; (ii) 1,738 shares of Series A Preferred Stock over which CSC Partners Fund, LP has sole voting and dispositive power. Mr. Bronchick is a Principal and Portfolio Manager of Cove Street Capital, LLC. Cove Street Capital, LLC controls CSC Partners Fund, LP. The address for each of the Cove Street Investors is 525 South Douglas Street, Suite 225, El Segundo, California, 90245.
- (6) This information is based solely on (1) an Amendment No. 6 to a Schedule 13D filed on December 26, 2024 by 22NW Fund, LP ("22NW Fund"), 22NW, LP ("22NW"), 22NW Fund GP, LLC ("22NW GP"), 22NW GP, Inc. ("22NW Inc."), Aron R. English, Bryson O. Hirai-Hadley and Nathaniel Calloway (collectively, the "22NW Investors"), and (2) the Company's internal records with respect to the number of shares of Common Stock into which the shares of Series A Preferred Stock may convert. According to the Schedule 13D/A, the 22NW Investors in the aggregate hold 4,367,499 shares (including 2,612,338 shares issuable upon conversion of certain shares of Series A Preferred Stock) over which each of 22NW Fund, 22NW GP, 22NW Inc. and Mr. English has sole voting and dispositive power. Furthermore, the Schedule 13/A discloses (i) 583 shares over which Mr. Hirai-Hadley has sole voting and dispositive power and (ii) 34,315 shares over which Dr. Calloway has sole voting and dispositive power. 22NW Inc. is the general partner of 22NW, which is the investment manager of 22NW Fund. 22NW GP is the general partner of 22NW Fund. Mr. English is the Portfolio Manager of 22NW, Manager of 22NW GP and President and sole shareholder of 22NW Inc. Mr. Hirai-Hadley is head of research and partner at 22NW, and Dr. Calloway is an analyst and partner at 22NW. By virtue of their respective positions with 22NW Fund, each of 22NW GP, 22NW Inc. and Mr. English may be deemed to have sole power to vote and dispose of the shares directly beneficially owned by 22NW Fund. Based on the Company's internal records, the number of shares of Common Stock into which the shares of Series A Preferred Stock beneficially owned by the 22NW Investors were, in the aggregate, 2,344,368 as of January 16, 2025, or 267,970 fewer shares than were reported on the Schedule 13D/A. The address of the principal office of each of 22NW, Fund, 22NW, 22NW GP, 22NW Inc., and Mr. English is 590 1st Avenue S, Unit C1, Seattle, WA, 98104.
- (7) This information is based solely on (1) Schedule 13G filed on June 30, 2023 by Scott Miller, Greenhaven Road Investment Management, LP ("Greenhaven IM"), MVM Funds, LLC ("MVM"), Greenhaven Road Capital Fund 1, L.P. ("Greenhaven Fund 1"), and Greenhaven Road Capital Fund 2, L.P ("Greenhaven Fund 2" and, together with Greenhaven Fund 1, the "Funds") (collectively, the "Greenhaven Investors"), and (2) the subsequent participation by the Greenfield Investors in the PIPE Offering. According to the Schedule 13G, (i) each of Scott Miller, Greenhaven IM, and MVM has sole voting and sole dispositive power over 1,902,639 shares, (ii) Greenhaven Fund 1 has sole voting and sole dispositive power over 872,741 shares, and (iii) Greenhaven Fund 2 has sole voting and dispositive power over 1,029,898 shares, with the Funds directly owning the shares reported on the Schedule 13G. Greenhaven IM is the investment manager of Greenhaven Fund 1 and Greenhaven Fund 2. MVM is the general partner of each Greenhaven Fund 1, Greenhaven Fund 2 and Greenhaven IM. Mr. Miller is the controlling person of MVM. Accordingly, Mr. Miller, Greenhaven IM and MVM may be deemed to beneficially own the Common Stock directly owned by the Funds. On October 3, 2024, Greenhaven Fund 1 purchased 646,308 shares of Common Stock and Greenhaven Fund 2 purchased 817,106 shares of Common Stock, in each case, in the PIPE Offering. The address for each of the Greenhaven Investors is 8 Sound Shore Drive, Suite 190, Greenwich, CT, 06830.

- (8) Includes (i) 897 shares of Series A Preferred Stock held by 325 Capital Master Fund; (ii) 481 shares of Series A Preferred Stock held by Gothic ERP 649947; (iii) 2,603 shares of Series A Preferred Stock held by Gothic Lorp 649429; (iv) 971 shares of Series A Preferred Stock held by Gothic JBD LLC 650324; and (v) 841 shares of Series A Preferred Stock held by Gothic HSP Corp 649359 (collectively, the "325 Capital Investors"). Based on the Company's internal records, the number of shares of Common Stock into which the shares of Series A Preferred Stock beneficially owned by the 325 Capital Investors were, in the aggregate, 781,456. Also includes 792,682 shares of Common Stock purchased by affiliates of the 325 Capital Investors on October 3, 2024 in the PIPE Offering. To the knowledge of the Company, 325 Capital Master Fund LP has voting and investment discretion over the securities held by each of the 325 Capital Investors. The address for each of the 325 Capital Investors is 280 S Mangum St., Suite 210 Durham, NC 27701.
- (9) This information is based solely on (1) Schedule 13G filed on February 14, 2024 by LW Capital Management, LLC. Laughing Water Capital, LP and Laughing Water Capital II, LP (collectively, the "LW Investors") reporting beneficial ownership as of December 31, 2023, and (2) the subsequent participation by the LW Investors in the PIPE Offering. According to the Schedule 13G, (i) LW Capital Management, LLC has sole voting power and dispositive power over 544,294 shares and shared voting and dispositive power over 1,033,903 shares, (ii) Laughing Water Capital, LP has shared voting and dispositive power over 529,234 shares, and (iii) Laughing Water Capital II, LP has shared voting and dispositive power over 504,669 shares. On October 3, 2024, Laughing Water Capital, LP purchased 153,973 shares of Common Stock and Laughing Water Capital II, LP purchased 167,822 shares of Common Stock, in each case, in the PIPE Offering. The address for each LW Capital Management, LLC investors is 41 B North Village Road, Rockville Centre, NY 11570.

INCORPORATION OF INFORMATION BY REFERENCE

We file annual, quarterly and current reports, proxy statements and other information with the SEC under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Our SEC filings are available to the public at the SEC's website at www.sec.gov.

The SEC allows us to "incorporate by reference" information into this proxy statement, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this proxy statement, except for any information superseded by information contained directly in this proxy statement. This proxy statement incorporates by reference the documents set forth below that we have previously filed with the SEC:

- our Annual Report on Form 10-K for the fiscal year ended May 26, 2024, filed with the SEC on August 26, 2024;
- our Quarterly Reports on Form 10-Q for the quarterly periods ended August 25, 2024 and November 24, 2024, filed with the SEC on October 4, 2024 and January 2, 2025, respectively;
- our Current Reports on Form 8-K filed with the SEC on June 7, 2024, July 1, 2024, July 12, 2024, July 24, 2024, August 21, 2024, August 26, 2024, August 29, 2024, September 23, 2024, October 4, 2024, November 8, 2024, November 21, 2024, November 26, 2024, January 2, 2025, January 7, 2025 and January 17, 2025 (in each of the foregoing cases, excluding any current reports, or portions thereof, exhibits thereto or information therein that are "furnished" to the SEC).

In addition, we are incorporating by reference any documents it may file under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this document and prior to the date of the Special Meeting. However, the Company is not incorporating by reference any information that is "furnished" to the SEC. These subsequent filings with the SEC with automatically modify and supersede information in this proxy statement.

If requested, we will provide to each person, including any beneficial owner, to whom a proxy statement is delivered, a copy of any or all of the information that has been incorporated by reference in the proxy statement but not delivered with the proxy statement. Exhibits to the filings will not be sent, however, unless those exhibits have specifically been incorporated by reference into such documents.

To obtain a copy of these filings at no cost, you may write or telephone us at the following address:

Lifecore Biomedical, Inc. 3515 Lyman Boulevard Chaska, Minnesota 55318 (952) 368-4300

ADDITIONAL INFORMATION

Deadline for Receipt of Stockholder Proposals for the 2025 Annual Meeting of Stockholders

Stockholder Proposals for Inclusion in 2025 Proxy Statement

Pursuant to Rule 14a-8 under the Exchange Act, stockholders may present proper proposals for inclusion in the Company's proxy statement and for consideration at the 2025 Annual Meeting. To be eligible for inclusion in the Company's 2025 Annual Meeting Proxy Statement, a stockholder's proposal must be received by the Company no later than June 6, 2025 and must otherwise comply with the Bylaws and Rule 14a-8 under the Exchange Act.

Stockholder Proposals for 2025 Annual Meeting

Pursuant to the Certificate of Incorporation and the Bylaws, only such business (including the nominations of directors) shall be conducted at an annual meeting of stockholders as is properly brought before the meeting. For business to be properly brought before any such meeting (including any director nominees), in addition to any other applicable requirements, timely notice of the matter must be first given to the Secretary of the Company. Pursuant to our Bylaws, to be timely, written notice must be received by our Secretary not less than 120 calendar days before the one-year anniversary of the date on which we first mailed the proxy statement from the previous year's annual meeting of stockholders; provided, however, that if no annual meeting was held in the previous year or the date of the annual meeting has been changed by more than 30 days from the date of the prior year's meeting, the notice must be so received no later than the close of business on the later of (i) 120 calendar days in advance of such annual meeting and (ii) 10 calendar days following the date on which public announcement of the date of the meeting is first made.

While the Board will consider proper stockholder proposals that are properly brought before any annual meeting, the Company reserves the right to omit from the Company's proxy statement for the 2025 Annual Meeting (the "2025 Annual Meeting Proxy Statement") any stockholder proposals that the Company is not required to include under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), including Rule 14a-8 thereunder.

In addition to satisfying the requirements under our organizational documents, to comply with the universal proxy rules, stockholders who intend to solicit proxies in support of director nominees other than our nominees must provide notice that sets forth the information required by Rule 14a-19 under the Exchange Act. To be timely, written notice must be postmarked or transmitted electronically to our Secretary not less than 120 calendar days before the one-year anniversary of the 2024 Annual Meeting, provided, however, that if the 2025 Annual Meeting is changed by more than 30 days from the date of the 2024 Annual Meeting, the notice must be so received no later than the close of business on the later of (i) 120 calendar days in advance of such annual meeting and (ii) 10 calendar days following the date on which public announcement of the date of the meeting is first made.

Notices to the Company's Secretary should be sent to the following address: Lifecore Biomedical, Inc., Attn: Secretary, 3515 Lyman Boulevard, Chaska, Minnesota 55318.

REGARDLESS OF WHETHER YOU PLAN TO ATTEND THE SPECIAL MEETING, PLEASE READ THE PROXY STATEMENT AND THEN SUBMIT A PROXY TO VOTE BY INTERNET, TELEPHONE OR MAIL AS PROMPTLY AS POSSIBLE TO ENSURE THAT YOUR SHARES ARE REPRESENTED AT THE SPECIAL MEETING.

BY ORDER OF THE BOARD OF DIRECTORS,

Chaska, Minnesota

2025

Ryan D. Lake

Executive Vice President, Chief Financial Officer and Secretary

C/O BROADRIDGE CORPORATE ISSUER SOLUTIONS P.O. BOX 1342 BRENTWOOD, NY 11717



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 April 9, 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.

 $\textit{During The Meeting} \cdot \mathsf{Go} \ \mathsf{to} \ \underline{\mathbf{www.virtualshareholdermeeting.com/LFCR2025SM}}$

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 April 9, 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 c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.

	THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED. DETACH AND I	RETUR	N THIS P	ORTION
co	RE BIOMEDICAL, INC.			
PRO	XY CARD FOR SERIES A PREFERRED STOCK		-	
				33
The	Board of Directors recommends you vote FOR the following proposal:	F	Agains	
ine	To approve an adjournment of the Special Meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of the proposal	FOF	Agains	t Abst
.,	to approve, for purposes of complying with Nasdaq Listing Rule 5635(d), the issuance of shares of our common stock ("Common Stock") underlying shares of Series A Preferred Stock, par value \$0.001 per share, of the Company (the "Series A Preferred Stock") issued by the Company pursuant to the terms of that certain Securities Purchase Agreement, dated January 9, 2023, by and among the Company and the investors named therein, in an amount in excess of 19.99% of the number of shares of Common Stock outstanding immediately prior to the issuance of such Series A Preferred Stock.	0	0	C
shan	ASE MARK, SIGN, DATE AND RETURN THE PROXY CARD USING THE ENCLOSED ENVELOPE. Please sign exactly as your name appears hereon. Where es are held by joint tenants, both should sign. When signing as attorney, executor, administrator, rustee, or guardian, please give full title as such, if a oration, please sign in full corporate name by president or other authorized officer. If a partnership, please sign in partnership name by authorized person.			

Please note there are <u>two</u> proxy cards, one for holders of Common Stock and one for holders of Series A Preferred Stock. Stockholders who receive a Common Stock proxy card <u>and</u> a Series A Preferred Stock proxy card must vote the shares represented by each card <u>separately</u>.

Important Notice Regarding the Availability of Proxy Materials for the Special Meeting of Stockholders' to be held on April 10, 2025:

The Notice and Proxy Statement and Annual Report on Form 10-K are available at www.proxyvote.com.

V61341-S08531

LIFECORE BIOMEDICAL, INC.

2025 SPECIAL MEETING OF STOCKHOLDERS

The undersigned hereby appoints each of Ryan D. Lake and Paul Josephs, each with full power of substitution, as proxy and attorney in fact, in the name of the undersigned, to attend the 2025 Special Meeting of Stockholders of Lifecore Biomedical, Inc., a Delaware corporation ("Lifecore" or the "Company"), to be held on April 10, 2025, at 8:30 a.m. Central Time, online at www.virtualshareholdermeeting.com/LFCR2025SM, or any adjournment or postponement thereof, and to vote the number of shares of the Company's capital stock that the undersigned would be entitled to vote, and with all power the undersigned would possess, if personally present, as specified on the reverse side.

THIS PROXY, WHEN PROPERLY EXECUTED, WILL BE VOTED AS DIRECTED OR, IF NO SUCH DIRECTIONS ARE MADE, WILL BE VOTED "FOR" THE ADJOURNMENT PROPOSAL, AND AS SAID PROXY HOLDER DEEMS ADVISABLE ON SUCH OTHER MATTERS AS MAY PROPERLY COME BEFORE THE MEETING OR ANY ADJOURNMENT THEREOF.

PLEASE MARK, SIGN, DATE AND RETURN THIS PROXY CARD PROMPTLY USING THE ENCLOSED REPLY ENVELOPE.

CONTINUED AND TO BE MARKED, DATED AND SIGNED ON REVERSE SIDE

LIFECORE BIOMEDICAL, INC.
C/O BROADRIDGE CORPORATE ISSUER SOLUTIONS P.O. BOX 1342 BRENTWOOD, NY 11717



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 April 9, 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.

$\textit{During The Meeting} \cdot \mathsf{Go} \ \mathsf{to} \ \underline{\mathbf{www.virtualshareholdermeeting.com/LFCR2025SM}}$

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VOTE BY PHONE - 1-800-690-6903
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Eastern Time on April 9, 2025. Have your proxy card in hand when you call and then follow the instructions.

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

OTE,	MARK BLOCKS BELOW IN BLUE OR BLAC	CK INK AS FOLLOWS:	V61342-S08531	KEEP THIS POR	10ITS	N FOR YOU	JR RECO
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ECO	RE BIOMEDICAL, INC.						
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Γhe	Board of Directors recommends you	vote FOR the following p	proposals:		For	Against	Absta
1.	pursuant to the terms of that certain Se	ecurities Purchase Agreemer 3% of the number of shares	approve the issuance of shares of our common stock ("Common Si r share, of the Company (the "Series A Preferred Stock") issued by th nt, dated January 9, 2023, by and among the Company and the inves- of Common Stock outstanding immediately prior to the issuance of s	stors named	0	0	0
2.	To approve an adjournment of the Spe of the Issuance Proposal.	cial Meeting, if necessary o	or appropriate, to solicit additional proxies if there are not sufficient	otes in favor	0	0	0
	,						
PLEA	ASE MARK, SIGN, DATE AND RETURN TH	IE PROXY CARD USING TH	E ENCLOSED ENVELOPE. Please sign exactly as your name appears h	nereon. Where			
corp	res are neid by joint tenants, both should poration, please sign in full corporate nam	sign, when signing as atto e by president or other author	rney, executor, administrator, trustee, or gúardián, please give full tit orized officer. If a partnership, please sign in partnership name by auth	orized person.			
Sign	nature [PLEASE SIGN WITHIN BOX]	Date	Signature (Joint Owners)	Date			

Please note there are <u>two</u> proxy cards, one for holders of Common Stock and one for holders of Series A Preferred Stock. Stockholders who receive a Common Stock proxy card <u>and</u> a Series A Preferred Stock proxy card must vote the shares represented by each card <u>separately</u>.

Important Notice Regarding the Availability of Proxy Materials for the Special Meeting of Stockholders' to be held on April 10, 2025:

The Notice and Proxy Statement and Annual Report on Form 10-K are available at www.proxyvote.com.

V61343-508531

LIFECORE BIOMEDICAL, INC.

2025 SPECIAL MEETING OF STOCKHOLDERS

The undersigned hereby appoints each of Ryan D. Lake and Paul Josephs, each with full power of substitution, as proxy and attorney in fact, in the name of the undersigned, to attend the 2025 Special Meeting of Stockholders of Lifecore Biomedical, Inc., a Delaware corporation ("Lifecore" or the "Company"), to be held on April 10, 2025, at 8:30 a.m. Central Time, online at www.virtualshareholdermeeting.com/LFCR2025SM, or any adjournment or postponement thereof, and to vote the number of shares of the Company's capital stock that the undersigned would be entitled to vote, and with all power the undersigned would possess, if personally present, as specified on the reverse side.

THIS PROXY, WHEN PROPERLY EXECUTED, WILL BE VOTED AS DIRECTED OR, IF NO SUCH DIRECTIONS ARE MADE, WILL BE VOTED "FOR" THE ISSUANCE PROPOSAL, "FOR" THE ADJOURNMENT PROPOSAL, AND AS SAID PROXY HOLDER DEEMS ADVISABLE ON SUCH OTHER MATTERS AS MAY PROPERLY COME BEFORE THE MEETING OR ANY ADJOURNMENT THEREOF.

PLEASE MARK, SIGN, DATE AND RETURN THIS PROXY CARD PROMPTLY USING THE ENCLOSED REPLY ENVELOPE.

CONTINUED AND TO BE MARKED, DATED AND SIGNED ON REVERSE SIDE