

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

SCHEDULE 14A INFORMATION

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

Filed by the Registrant
Filed by a Party other than the Registrant

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Check the appropriate box:

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

FIBROBIOLOGICS, 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)

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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.

FIBROBIOLOGICS, INC.

**455 E. Medical Center Blvd., Suite 300
Houston, Texas 77598
281-671-5150**

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

To Be Held On February 20, 2026

Dear Stockholder:

You are cordially invited to attend a Special Meeting of Stockholders, or the Special Meeting, of **FIBROBIOLOGICS, INC.**, a Delaware corporation, or the Company, we or our. The meeting will be held on Friday, February 20, 2026 at 11:00 a.m. Central Time virtually via the Internet at www.virtualshareholdermeeting.com/FBLG2026SM, originating from Houston, Texas. **You will not be able to attend the Special Meeting in person.** At the Special Meeting, you will be asked to consider and vote upon the following proposals:

1. To approve an amendment to our Amended and Restated Certificate of Incorporation, as amended, to effect a reverse stock split of our issued and outstanding common stock and preferred stock at a ratio not less than 1-for-5 and not greater than 1-for-30, with the exact ratio to be set within that range at the discretion of our Board of Directors without further approval or authorization of our stockholders, prior to the one-year anniversary of the date on which the reverse stock split is approved by stockholders at the Special Meeting;
2. To approve, in accordance with Nasdaq Listing Rule 5635(d), the issuance of up to 12,110,203 shares of common stock issuable upon the exercise of outstanding common warrants issued pursuant to that certain Securities Purchase Agreement, dated November 18, 2025, between the Company and the purchaser party thereto, or the November 18 SPA;
3. To approve, in accordance with Nasdaq Listing Rule 5635(d), the issuance of up to 4,477,614 shares of common stock issuable upon the exercise of outstanding common warrants issued pursuant to those certain Securities Purchase Agreements, each dated November 24, 2025, by and among the Company and the purchasers party thereto, or the November 24 SPA, and up to 313,433 shares of common stock issuable upon the exercise of outstanding common warrants issued pursuant to that certain Engagement Letter, dated November 10, 2025, between the Company and H.C. Wainwright & Co., LLC, or the Engagement Letter, in connection with the November 24 SPA;
4. To approve, in accordance with Nasdaq Listing Rule 5635(d), the issuance of up to 5,227,275 shares of common stock issuable upon the exercise of outstanding common warrants issued pursuant to those certain Securities Purchase Agreements, each dated December 14, 2025, by and among the Company and the purchasers party thereto, or the December SPA, and up to 365,909 shares of common stock issuable upon the exercise of outstanding common warrants issued pursuant to the Engagement Letter in connection with the December SPA;
5. To approve a proposal to adjourn the Special Meeting from time to time, if necessary or appropriate, including to solicit additional votes in favor of one or more proposals if there are not sufficient votes at the time of the Special Meeting to adopt such proposals or to establish a quorum; and
6. To conduct any other business properly brought before the Special Meeting.

These items of business are more fully described in the proxy statement that accompanies this notice.

In accordance with rules established by the Securities and Exchange Commission, we are providing you access to our proxy materials over the Internet. Accordingly, we plan to mail a Notice of Internet Availability of Proxy Materials, or the Notice, to our stockholders on or about December 29, 2025. The Notice will describe how to access and review our proxy materials, including our proxy statement. The Notice as well as the printed copy of proxy cards

will also describe how you may submit your proxy via the Internet or by telephone. If you received a Notice by mail and would like to receive a printed copy of our proxy materials, you should follow the instructions for requesting such materials included in the Notice. In accordance with Delaware law, a list of stockholders entitled to vote at the Special Meeting will be accessible during normal business hours for ten days prior to the Special Meeting at our principal place of business, 455 E. Medical Center Blvd., Suite 300, Houston, Texas 77598.

The record date for the Special Meeting is December 26, 2025. Only stockholders of record at the close of business on that date are entitled to receive notice of and to vote at the Special Meeting or any postponement or adjournment thereof. Instructions on how to participate in the Special Meeting and demonstrate proof of stock ownership are posted at www.virtualshareholdermeeting.com/FBLG2026SM. The webcast of the Special Meeting will be archived for one year after the date of the Special Meeting at www.virtualshareholdermeeting.com/FBLG2026SM. Whether or not you plan to attend the Special Meeting, please vote as soon as possible.

By Order of the Board of Directors,

Pete O’Heeron

Founder, Chief Executive Officer, and Chairperson

Houston, Texas

, 2025

**Important Notice Regarding the Availability of Proxy Materials for the Stockholders’ Meeting to Be Held
on Friday, February 20, 2026 at 11:00 a.m. Central Time.**

The proxy statement and Notice are available at www.proxyvote.com.

Whether or not you expect to attend the Special Meeting, please vote by telephone or the Internet as instructed in these materials, or if you request or we deliver to you a proxy card in the mail, you may complete, date, sign and return that proxy. Regardless of the method used, please vote as promptly as possible in order to ensure your representation at the Special Meeting. You may also vote through our virtual web conference if you attend the Special Meeting, even if you have voted by proxy.

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FIBROBIOLOGICS, INC.

455 E. Medical Center Blvd., Suite 300
Houston, Texas 77598
281-671-5150

PROXY STATEMENT FOR THE SPECIAL MEETING OF STOCKHOLDERS

QUESTIONS AND ANSWERS ABOUT THESE PROXY MATERIALS AND VOTING

Why did I receive a notice regarding the availability of proxy materials on the Internet?

Pursuant to rules adopted by the Securities and Exchange Commission, or the SEC, we have elected to provide access to our proxy materials over the Internet. Accordingly, we have sent you a Notice of Internet Availability of Proxy Materials, or the Notice, because the Board of Directors, or the Board, of FibroBiologics, Inc., or FibroBiologics, the Company, we, us or our, is soliciting your proxy to vote at the 2026 Special Meeting of Stockholders, or the Special Meeting, including at any adjournments or postponements of the meeting. All stockholders will have the ability to access the proxy materials on the website referred to in the Notice or request to receive a printed set of the proxy materials. Instructions on how to access the proxy materials over the Internet or to request a printed copy may be found in the Notice.

We intend to mail the Notice on or about December 29, 2025 to all stockholders of record entitled to vote at the Special Meeting.

Will I receive any other proxy materials by mail?

We may send you a proxy card, along with a second Notice, on or after January 9, 2026.

How do I attend the Special Meeting?

Stockholders as of the record date and/or their authorized representatives are permitted to attend the Special Meeting. The Special Meeting will be held on Friday, February 20, 2026 at 11:00 a.m. Central Time virtually via the Internet at www.virtualshareholdermeeting.com/FBLG2026SM. Instructions on how to participate in the Special Meeting and demonstrate proof of stock ownership are posted at www.virtualshareholdermeeting.com/FBLG2026SM. You will not be able to attend the Special Meeting in person.

Why a Virtual-Only Online Meeting?

The virtual format for the Special Meeting will enhance, rather than constrain, stockholder access and participation by allowing our stockholders to participate fully, and equally, from any location around the world at no cost. Stockholder rights are not affected. The virtual meeting format also allows stockholders to communicate with us during the Special Meeting so they can ask questions of the Board and management. During the live Q&A session, we will answer appropriate questions as they come in, as time permits. Given the above listed factors, we feel a virtual-only meeting is the right choice for FibroBiologics and its stockholders at this time.

What happens if there are technical difficulties during the Special Meeting?

We will have technicians ready to assist you with any technical difficulties you may have accessing the virtual Special Meeting, voting at the Special Meeting or submitting questions at the Special Meeting. If you encounter any difficulties accessing the virtual Special Meeting during the check-in or meeting time, please refer to the technical support information located on the login screen at www.virtualshareholdermeeting.com/FBLG2026SM.

Who can vote at the Special Meeting?

Only stockholders of record at the close of business on December 26, 2025 will be entitled to vote at the Special Meeting. On this record date, there were (i) 66,519,722 shares of common stock, par value \$0.00001 per share, or Common Stock, outstanding and entitled to vote and (ii) 2,500 shares of our Series C Preferred Stock, par value \$0.00001 per share, or the Series C Preferred Stock, outstanding and entitled to vote. Subject to certain exceptions described herein, each share of Common Stock is entitled to one vote on each matter to be voted on. Each share of our Series C Preferred Stock is entitled to 13,000 votes on each matter to be voted on.

Stockholder of Record: Shares Registered in Your Name

If on December 26, 2025 your shares were registered directly in your name with our transfer agent, VStock Transfer LLC, then you are a stockholder of record. As a stockholder of record, you may vote by proxy or vote at the Special Meeting by going to www.virtualshareholdermeeting.com/FBLG2026SM and following the instructions regarding voting. Whether or not you plan to attend the Special Meeting, we urge you to fill out and return the enclosed proxy card to ensure your vote is counted.

Beneficial Owner: Shares Registered in the Name of a Broker or Bank

If on December 26, 2025 your shares were held, not in your name, but rather in an account at a brokerage firm, bank, dealer or other similar organization, then you are the beneficial owner of shares held in “street name” and the Notice is being forwarded to you by that organization. The organization holding your account is considered to be the stockholder of record for purposes of voting at the Special Meeting. As a beneficial owner, you have the right to direct your broker or other agent regarding how to vote the shares in your account. You are also invited to attend the Special Meeting. Beneficial holders who attend the Special Meeting may also vote during the Special Meeting by going to www.virtualshareholdermeeting.com/FBLG2026SM and following the instructions regarding voting.

What is the impact of the 2,500 shares of Series C Preferred Stock with super voting rights?

Pete O’Heeron, our founder, Chief Executive Officer, or CEO, and Chairperson, holds all 2,500 shares of outstanding Series C Preferred Stock. Each share of Series C Preferred Stock is entitled to 13,000 votes.

The shares of Series C Preferred Stock are subject to an irrevocable proxy issued by Mr. O’Heeron in favor and for the benefit of, the Board, granting the Board the irrevocable proxy, for as long as the Series C Preferred Stock remains outstanding, to vote all of the shares of Series C Preferred Stock on all matters on which the shares of Series C Preferred Stock are entitled to vote, in any manner that the Board may determine in its sole and absolute discretion; *provided, however*, that such irrevocable proxy does not, without the written consent of Mr. O’Heeron, permit the Board to vote the Series C Preferred Stock with respect to any proposal to amend, delete or waive any rights of Mr. O’Heeron with respect to the Series C Preferred Stock as set forth in our Amended and Restated Certificate of Incorporation, as amended, currently in effect, or the Certificate of Incorporation. In light of the superior voting rights associated with the Series C Preferred Stock, the irrevocable proxy is intended to ensure that such superior voting

rights are utilized in our best interest and to avoid or mitigate conflicts that may arise in the future for Mr. O’Heeron as an individual stockholder employee.

The Board will exercise the irrevocable proxy to cast 32,500,000 votes, which constitutes 32.8% of the total votes eligible to be cast at the Special Meeting, FOR each of the proposals described in this proxy statement.

What am I voting on?

There are five matters scheduled for a vote:

- Approval of an amendment to the Certificate of Incorporation to effect a reverse stock split of our issued and outstanding Common Stock and preferred stock, par value \$0.00001 per share, or the Preferred Stock, at a ratio not less than 1-for-5 and not greater than 1-for-30, or the Reverse Stock Split, with the exact ratio to be set within that range at the discretion of our Board without further approval or authorization of our stockholders, prior to the one-year anniversary of the date on which the Reverse Stock Split is approved by stockholders at the Special Meeting (Proposal 1);
- Approval, for purposes of Nasdaq Listing Rule 5635(d), of the issuance of up to 12,110,203 shares of Common Stock pursuant to the November 18 SPA (Proposal 2);
- Approval, for purposes of Nasdaq Listing Rule 5635(d), of the issuance of up to 4,477,614 shares of Common Stock pursuant to the November 24 SPA and up to 313,433 shares of Common Stock pursuant to the Engagement Letter in connection with the November 24 SPA (Proposal 3);
- Approval, for purposes of Nasdaq Listing Rule 5635(d), of the issuance of up to 5,227,275 shares of Common Stock pursuant to the December SPA and up to 365,909 shares of Common Stock pursuant to the Engagement Letter in connection with the December SPA; (Proposal 4) and
- Approval of the adjournments of the Special Meeting from time to time (Proposal 5).

What are the Board’s voting recommendations?

A summary of the Special Meeting proposals is below. **Every stockholder’s vote is important. The Board urges you to vote your shares FOR each of the proposals.**

Matter	Page	Board Recommends	Vote Required for Approval	Effect of Abstentions	Effect of Broker Non-Votes
Approval of an amendment to our Certificate of Incorporation to effect the Reverse Stock Split.	8	FOR	Holders of a majority in voting power	Against	N/A
Approval, for purposes of Nasdaq Listing Rule 5635(d), of the issuance of up to 12,110,203 shares of Common Stock pursuant to the November 18 SPA.	17	FOR	Majority of shares present and entitled to vote	Against	None
Approval, for purposes of Nasdaq Listing Rule 5635(d), of the issuance of up to 4,477,614 shares of Common Stock pursuant to the November 24 SPA and up to 313,433 shares of Common Stock pursuant to the Engagement Letter in connection with the November 24 SPA.	20	FOR	Majority of shares present and entitled to vote	Against	None

Approval, for purposes of Nasdaq Listing Rule 5635(d), of the issuance of up to 5,227,275 shares of Common Stock pursuant to the December SPA and up to 365,909 shares of Common Stock pursuant to the Engagement Letter in connection with the December SPA.	23	FOR	Majority of shares present and entitled to vote	Against	None
Approval of the adjournments of the Special Meeting from time to time.	26	FOR	Majority of shares present and entitled to vote	Against	N/A

What if another matter is properly brought before the Special Meeting?

The Board knows of no other matters that will be presented for consideration at the Special Meeting. If any other matters are properly brought before the Special Meeting, it is the intention of the persons named in the accompanying proxy to vote on those matters in accordance with their best judgment.

How do I vote?

You may either vote “For” or “Against” each of the proposals or you may “Abstain” from voting.

The procedures for voting are fairly simple:

Stockholder of Record: Shares Registered in Your Name

If you are a stockholder of record, you may vote at the Special Meeting by going to www.virtualshareholdermeeting.com/FBLG2026SM and following the instructions regarding voting or vote by proxy (i) over the telephone, (ii) through the Internet or (iii) using a proxy card that you may request or that we may elect to deliver at a later time. Whether or not you plan to attend the Special Meeting, we urge you to vote by proxy to ensure your vote is counted. You may still attend the Special Meeting and vote by going to www.virtualshareholdermeeting.com/FBLG2026SM and following the instructions regarding voting even if you have already voted by proxy.

- To vote at the Special Meeting, go to www.virtualshareholdermeeting.com/FBLG2026SM and follow the instructions regarding voting.
- To vote using the proxy card, simply complete, sign and date the proxy card that may be delivered and return it promptly in the envelope provided. If you return your signed proxy card to us before the Special Meeting, we will vote your shares as you direct.
- To vote over the telephone, dial toll-free 1-800-690-6903 using a touch-tone phone and follow the recorded instructions. You will be asked to provide our company number and control number from the Notice. Your vote must be received by 11:59 p.m. ET on February 19, 2026 to be counted.
- To vote through the Internet, go to www.virtualshareholdermeeting.com/FBLG2026SM to complete an electronic proxy card. You will be asked to provide our company number and control number from the Notice. Your vote must be received by 11:59 p.m. ET on February 19, 2026 to be counted.

Beneficial Owner: Shares Registered in the Name of Broker or Bank

If you are a beneficial owner of shares registered in the name of your broker, bank, or other agent, you should have received a Notice containing voting instruction from that organization rather than from FibroBiologics. Simply follow the voting instructions in the Notice to ensure that your vote is counted. Beneficial holders who attend the Special

Meeting may also vote during the Special Meeting by going to www.virtualshareholdermeeting.com/FBLG2026SM and following the instructions regarding voting.

Internet proxy voting may be provided to allow you to vote your shares online, with procedures designed to ensure the authenticity and correctness of your proxy vote instructions. However, please be aware that you must bear any costs associated with your Internet access, such as usage charges from Internet access providers and telephone companies.

How many votes do I have?

If you own shares of our Common Stock, then on each matter to be voted upon, you have one vote for each share of Common Stock you own as of December 26, 2025.

Our founder, CEO and Chairperson, Pete O’Heeron, owns 2,500 shares of our Series C Preferred Stock and has 13,000 votes for each share of Series C Preferred Stock. The Series C Preferred Stock is subject to an irrevocable proxy issued to the Board. The Board will exercise the irrevocable proxy to cast 32,500,000 votes “For” each of the proposals described in this proxy statement, which constitutes 32.8% of the total votes eligible to be cast at the Special Meeting.

Notwithstanding the foregoing, in accordance with Nasdaq Listing Rule 5635(d), the 3,540,000 shares of common stock issued to the Purchaser in the November 18 Offering are not entitled to vote on Proposal 2, the 4,477,614 shares of common stock issued to the investors in the November 24 Offering are not entitled to vote on Proposal 3, and the 5,227,275 shares of common stock issued to the investors in the December Offering are not entitled to vote on Proposal 4.

What happens if I do not vote, or if I return a proxy card or otherwise vote without giving specific voting instructions?

Stockholder of Record: Shares Registered in Your Name

If you are a stockholder of record and do not vote through the Internet, by telephone, by completing a proxy card that may be delivered to you, or at the Special Meeting, your shares will not be voted. If you return a signed and dated proxy card without giving specific voting instructions, then the proxy holders will vote your shares in the manner recommended by the Board on all matters presented in this proxy statement and as the proxy holders may determine in their discretion with respect to any other matters properly presented for a vote at the Special Meeting.

Beneficial Owner: Shares Registered in the Name of a Broker or Bank

If you are a beneficial owner of shares held in “street name” and you do not provide the organization that holds your shares with specific instructions, the organization that holds your shares may still be able to vote your shares in its discretion. In this regard, under the rules of the New York Stock Exchange, or NYSE, brokers, banks and other securities intermediaries that are subject to NYSE rules may use their discretion to vote, including with respect to Nasdaq-listed companies, your “uninstructed” shares with respect to matters considered to be “routine” under NYSE rules, but not with respect to “non-routine” matters. Accordingly, if the organization that holds your shares does not receive instructions from you on how to vote your shares on a non-routine matter, the organization that holds your shares will inform our inspector of elections that it does not have the authority to vote on this matter with respect to your shares. This is generally referred to as a “broker non-vote.” When our inspector of elections tabulates the votes for any particular matter, broker non-votes will be counted for purposes of determining whether a quorum is present, but will not be counted toward the vote total for any proposal. We encourage you to provide voting instructions to the organization that holds your shares to ensure that your vote is counted on all proposals.

Which proposals are considered “routine” or “non-routine”?

If the beneficial owner does not provide voting instructions, such beneficial owner’s broker or nominee can still vote the shares with respect to matters that are considered to be “routine,” but not with respect to “non-routine” matters.

The amendment to the Certificate of Incorporation to effect the Reverse Stock Split (Proposal 1) and the approval of the adjournment of the Special Meeting (Proposal 5) are matters that are considered to be routine. A broker or other nominee may generally vote on routine matters, and therefore broker non-votes are not expected on Proposal 1 and Proposal 5.

The approval, for purposes of Nasdaq Listing Rule 5635(d), of the issuance of up to 12,110,203 shares of Common Stock pursuant to the November 18 SPA (Proposal 2), the approval, for purposes of Nasdaq Listing Rule 5635(d), of the issuance of up to 4,477,614 shares of Common Stock pursuant to the November 24 SPA and up to 313,433 shares of Common Stock pursuant to the Engagement Letter in connection with the November 24 SPA (Proposal 3), and the approval, for purposes of Nasdaq Listing Rule 5635(d), of the issuance of up to 5,227,275 shares of Common Stock pursuant to the December SPA and up to 365,909 shares of Common Stock pursuant to the Engagement Letter in connection with the December SPA (Proposal 4), are matters considered non-routine under applicable rules. A broker or other nominee cannot vote without instructions on non-routine matters, and therefore we expect broker non-votes on Proposal 2, Proposal 3, and Proposal 4.

What are “broker non-votes”?

Broker non-votes occur when a beneficial owner of shares held in “street name” does not give instructions to the broker or nominee holding the shares as to how to vote on matters deemed “non-routine.” Generally, if shares are held in street name, the beneficial owner of the shares is entitled to give voting instructions to the broker or nominee holding the shares. If the beneficial owner does not provide voting instructions, the broker or nominee can still vote the shares with respect to matters that are considered to be “routine,” but not with respect to “non-routine” matters. Under the rules and interpretations of the NYSE, “non-routine” matters are matters that may substantially affect the rights or privileges of stockholders, such as mergers, stockholder proposals, elections of directors (even if not contested) and executive compensation, including the advisory stockholders vote on executive compensation. Of the five proposals, the amendment to the Certificate of Incorporation to effect the Reverse Stock Split (Proposal 1) and the approval of the adjournment of the Special Meeting from time to time (Proposal 5) are “routine” matters. The other three proposals are “non-routine.”

Who is paying for this proxy solicitation?

We will pay for the entire cost of soliciting proxies. In addition to these proxy materials, our directors and employees may also solicit proxies in person, by telephone, or by other means of communication. Directors and employees will not be paid any additional compensation for soliciting proxies. We may also reimburse brokerage firms, banks, and other agents for the cost of forwarding proxy materials to beneficial owners. Certain of our directors, officers and employees may participate in the solicitation of proxies, including electronically or by mail or telephone, without additional compensation.

What does it mean if I receive more than one Notice?

If you receive more than one Notice, your shares may be registered in more than one name or in different accounts. Please follow the voting instructions on the Notices to ensure that all of your shares are voted.

Can I change my vote after submitting my proxy?

Stockholder of Record: Shares Registered in Your Name

Yes. You can revoke your proxy at any time before the final vote at the Special Meeting. If you are the record holder of your shares, you may revoke your proxy in any one of the following ways:

- You may submit another properly completed proxy card with a later date.
- You may grant a subsequent proxy by telephone or through the Internet.

- You may send a timely written notice that you are revoking your proxy to FibroBiologics' Secretary at 455 E. Medical Center Blvd., Suite 300, Houston, TX 77598.
- You may attend the Special Meeting **and** vote. Simply attending the Special Meeting will not, by itself, revoke your proxy.

Your most current proxy card or telephone or Internet proxy is the one that is counted.

Beneficial Owner: Shares Registered in the Name of Broker or Bank

If your shares are held by your broker or bank as a nominee or agent, you should follow the instructions provided by your broker or bank.

How are votes counted?

Votes will be counted by the inspector of election appointed for the Special Meeting, who will separately count, for the amendment to the Certificate of Incorporation to effect the Reverse Stock Split (Proposal 1) and the approval of the adjournment of the Special Meeting from time to time (Proposal 5), votes "For," "Against" and abstentions and, with respect to the approval, for purposes of Nasdaq Listing Rule 5635(d), of the issuance of up to 12,110,203 shares of Common Stock pursuant to the November 18 SPA (Proposal 2), the approval, for purposes of Nasdaq Listing Rule 5635(d), of the issuance of up to 4,477,614 shares of Common Stock pursuant to the November 24 SPA and up to 313,433 shares of Common Stock pursuant to the Engagement Letter in connection with the November 24 SPA (Proposal 3), and the approval, for purposes of Nasdaq Listing Rule 5635(d), of the issuance of up to 5,227,275 shares of Common Stock pursuant to the December SPA and up to 365,909 shares of Common Stock pursuant to the Engagement Letter in connection with the December SPA (Proposal 4), votes "For," "Against," abstentions and broker non-votes. Broker non-votes have no effect on the outcome of the proposals and will not be counted towards the vote total for Proposal 1 and Proposal 5.

What is the quorum requirement?

A quorum of stockholders is necessary to hold a valid meeting. A quorum will be present if stockholders holding at least a majority in voting power of the outstanding shares entitled to vote are present at the meeting in person or represented by proxy. On the record date, there were (i) 66,519,722 shares of Common Stock outstanding and entitled to vote and (ii) 2,500 shares of our Series C Preferred Stock outstanding and entitled to vote, with each share of Common Stock entitled to one vote and each share of Series C Preferred Stock entitled to 13,000 votes. Thus, the holders of shares representing 49,509,862 votes must be present in person or represented by proxy at the meeting to have a quorum.

Your shares will be counted towards the quorum only if you submit a valid proxy (or one is submitted on your behalf by your broker, bank, or other nominee) or if you vote at the meeting. Abstentions and broker non-votes will be counted towards the quorum requirement. If there is no quorum, the Chairperson of the Board or the majority of the Board may adjourn the meeting to another date.

How can I find out the results of the voting at the Special Meeting?

Preliminary voting results will be announced at the Special Meeting. In addition, final voting results will be published in a current report on Form 8-K that we expect to file within four business days after the Special Meeting. If final voting results are not available to us in time to file a Form 8-K within four business days after the Special Meeting, we intend to file a Form 8-K to publish preliminary results and, within four business days after the final results are known to us, file an additional Form 8-K to publish the final results.

PROPOSAL 1

APPROVAL OF THE REVERSE STOCK SPLIT PROPOSAL

Background and Proposed Amendment

Our Certificate of Incorporation currently authorizes the Company to issue a total of 310,000,000 shares of capital stock, consisting of 300,000,000 shares of Common Stock and 10,000,000 shares of Preferred Stock, of which 2,500 shares are designated as Series C Preferred Stock.

On December 17, 2025, subject to stockholder approval, the Board approved an amendment to our Certificate of Incorporation to, at the discretion of the Board, effect the Reverse Stock Split of our Common Stock at a ratio between 1-for-5 to 1-for-30, inclusive, with the exact ratio within such range to be determined by the Board at its discretion.

Pursuant to Article FOURTH, Section C.8. of the Certificate of Incorporation, upon the effectiveness of the Reverse Stock Split, the aggregate number of outstanding shares of Series C Preferred Stock will be proportionately adjusted at the same ratio.

The primary goal of the Reverse Stock Split is to increase the per share market price of our Common Stock to meet the minimum per share bid price requirement for continued listing on The Nasdaq Capital Market, or Nasdaq. We believe that a range of Reverse Stock Split ratios provides us with the most flexibility to achieve the desired results of the Reverse Stock Split. The Reverse Stock Split is not intended as, and will not have the effect of, a “going private transaction” covered by Rule 13e-3 promulgated under the Securities Exchange Act of 1934, as amended, or the Exchange Act. The Reverse Stock Split is not intended to modify the rights of existing stockholders in any material respect.

If the Reverse Stock Split Proposal is approved by our stockholders and the Reverse Stock Split is effected, up to every thirty (30) shares of our outstanding Common Stock and Series C Preferred Stock would be combined and reclassified into one share of Common Stock and Series C Preferred Stock, respectively. The actual timing for implementation of the Reverse Stock Split would be determined by the Board based upon its evaluation as to when such action would be most advantageous to the Company and its stockholders. Notwithstanding approval of the Reverse Stock Split Proposal by our stockholders, the Board will have the sole authority to elect whether or not and when to amend our Certificate of Incorporation to effect the Reverse Stock Split. If the Reverse Stock Split Proposal is approved by our stockholders, the Board will make a determination as to whether effecting the Reverse Stock Split is in the best interests of the Company and its stockholders in light of, among other things, compliance with the conditions the Company has to meet to regain compliance with the Nasdaq continued listing standards, the Company’s ability to increase the trading price of our Common Stock to meet the minimum stock price standards of Nasdaq without effecting the Reverse Stock Split, the per share price of the Common Stock immediately prior to the Reverse Stock Split and the expected stability of the per share price of the Common Stock following the Reverse Stock Split. If the Board determines that it is in the best interests of the Company and its stockholders to effect the Reverse Stock Split, it will determine the ratio of the Reverse Stock Split. For additional information concerning the factors the Board expects to consider in deciding whether to effect the Reverse Stock Split, see “—Determination of the Reverse Stock Split Ratio” and “—Board Discretion to Effect the Reverse Stock Split.”

The text of the proposed amendment to the Certificate of Incorporation to effect the Reverse Stock Split, or the Reverse Stock Split Amendment, is included as Annex A to this proxy statement. If the Reverse Stock Split Proposal is approved by the Company’s stockholders, the Company will have the authority to file the Reverse Stock Split Amendment with the Secretary of State of the State of Delaware, which will become effective upon its filing; provided, however, that the Reverse Stock Split Amendment is subject to revision to include such changes as may be required by the office of the Secretary of State of the State of Delaware and as the Board deems necessary and advisable. The Board has determined that the Reverse Stock Split Amendment is advisable and in the best interests of the Company and its stockholders and has submitted the Reverse Stock Split Amendment for consideration by its stockholders at the Special Meeting.

Reasons for the Reverse Stock Split Amendment

Maintain Nasdaq Listing

On the date of the mailing of the Notice, our Common Stock was listed on Nasdaq under the symbol “FBLG.” The continued listing requirements of Nasdaq, among other things, require that our Common Stock must maintain a closing bid price in excess of \$1.00 per share. We currently do not meet the continued listing requirements. On July 1, 2025, we received a notification letter from the Listing Qualifications Staff, or the Staff, of The Nasdaq Stock Market LLC notifying us that the closing bid price of our Common Stock was below the minimum closing bid price of \$1.00 per share during the preceding 30 consecutive trading days, as required for continued listing on Nasdaq under Nasdaq Listing Rule 5550(a)(2).

In accordance with Nasdaq Listing Rule 5810(c)(3)(A), we have been provided an initial period of 180 calendar days, or until December 29, 2025, to regain compliance with this requirement. To regain compliance, the closing bid price of our Common Stock must be \$1.00 per share or more for a minimum of 10 consecutive business days at any time before December 29, 2025. If we do not regain compliance with Rule 5550(a)(2) by December 29, 2025, we may be eligible for an additional 180 calendar day compliance period. To qualify, we will be required to meet the continued listing requirement for market value of publicly held shares and all other initial listing standards for Nasdaq, except the bid price requirement, and will need to provide written notice to The Nasdaq Stock Market LLC of our intention to cure the deficiency during the second compliance period. On August 4, 2025, we received a notification letter from the Staff notifying us that we do not meet the requirement in Nasdaq Listing Rule 5550(b)(2) to maintain a minimum market value of listed securities, or MVLS, of \$35.0 million that is required for continued listing on Nasdaq. In accordance with Nasdaq Listing Rule 5810(c)(3)(C), we have a period of 180 calendar days, or until February 2, 2026, to regain compliance with this requirement. To regain compliance, our MVLS must close at \$35.0 million or more for a minimum of 10 consecutive trading days at any time before February 2, 2026. If we do not regain compliance with the MVLS requirement by December 29, 2025, we will not be automatically eligible for the additional 180 calendar day compliance period to satisfy the bid price requirement of Nasdaq Listing Rule 5550(a)(2). If it appears to the Staff that we will not be able to cure the bid price deficiency, or if we are otherwise not eligible for the additional 180 calendar day compliance period, The Nasdaq Stock Market LLC will notify us that our securities will be subject to delisting. In the event of such notification, we may appeal the Staff’s determination to delist our securities, but there can be no assurance the Staff will grant our request for continued listing.

If our Common Stock is delisted from Nasdaq, the Board believes that the trading market for our Common Stock could become significantly less liquid, which could reduce the trading price of our Common Stock and increase the transaction costs of trading in shares of our Common Stock.

If the Reverse Stock Split Amendment is effected, it would cause a decrease in the total number of shares of our Common Stock and Series C Preferred Stock outstanding and increase the market price of our Common Stock. The Board intends to effect the Reverse Stock Split only if it believes that a decrease in the number of shares outstanding is in the best interests of the Company and our stockholders and is likely to improve the trading price of our Common Stock and improve the likelihood that we will be allowed to maintain our listing on Nasdaq. Accordingly, our Board approved the Reverse Stock Split Amendment as being in the best interests of the Company.

Risks Associated with the Reverse Stock Split

The Reverse Stock Split May Not Increase the Price of our Common Stock over the Long-Term and our Common Stock May Be Delisted.

As noted above, the principal purpose of the Reverse Stock Split is to increase the trading price of our Common Stock to meet the minimum stock price standards of Nasdaq. However, the effect of the Reverse Stock Split on the market price of our Common Stock cannot be predicted with any certainty, and we cannot assure you that the Reverse Stock Split will accomplish this objective for any meaningful period of time, or at all. While we expect that the reduction in the number of outstanding shares of Common Stock will proportionally increase the market price of our Common Stock, we cannot assure you that the Reverse Stock Split will increase the market price of our Common Stock by a multiple of the Reverse Stock Split ratio, or result in any permanent or sustained increase in the market price of our Common Stock sufficient to regain compliance with the minimum stock price standards of Nasdaq. The market price of our Common Stock may be affected by other factors which may be unrelated to the number of shares outstanding, including our business and financial performance, general market conditions, and prospects for future success.

There can be no assurance that we will ultimately regain compliance with all applicable requirements for continued listing on Nasdaq and maintain listing of our Common Stock. If we are delisted from Nasdaq, among other things, it will increase the difficulty in our ability to raise money through the sale of our securities. A delisting of our Common Stock from Nasdaq could materially reduce the liquidity of our Common Stock and result in a corresponding material reduction in the price of our Common Stock. In addition, delisting could harm our ability to raise capital through alternative financing sources on terms acceptable to us, or at all, and may result in the potential loss of confidence by investors, suppliers, customers and employees and fewer business development opportunities.

The Reverse Stock Split May Decrease the Liquidity of our Common Stock.

The Reverse Stock Split will reduce the total number of outstanding shares of our Common Stock and Series C Preferred Stock, which may lead to reduced trading and a smaller number of market makers for our Common Stock, particularly if the price per share of our Common Stock does not increase as a result of the Reverse Stock Split.

The Reverse Stock Split May Result in Some Stockholders Owning “Odd Lots” That May Be More Difficult to Sell or Require Greater Transaction Costs per Share to Sell.

If the Reverse Stock Split is implemented, it will increase the number of stockholders who own “odd lots” of less than 100 shares of our Common Stock. A purchase or sale of less than 100 shares of our Common Stock (an “odd lot” transaction) may result in incrementally higher trading costs through certain brokers, particularly “full service” brokers. Therefore, those stockholders who own fewer than 100 shares of our Common Stock following the Reverse Stock Split may be required to pay higher transaction costs if they sell their Common Stock.

The Reverse Stock Split May Lead to a Decrease in our Overall Market Capitalization.

The Reverse Stock Split may be viewed negatively by the market and, consequently, could lead to a decrease in our overall market capitalization. If the per share market price of our Common Stock does not increase in proportion to the Reverse Stock Split ratio, or following such increase does not maintain or exceed such price, then our value, as measured by our market capitalization, will be reduced. Additionally, any reduction in our market capitalization may be magnified as a result of the smaller number of total shares of our Common Stock outstanding following the Reverse Stock Split.

Potential Consequences if the Reverse Stock Split Proposal is Not Approved

If the Reverse Stock Split Proposal is not approved by our stockholders, our Board will not have the authority to effect the Reverse Stock Split Amendment to, among other things, regain compliance with the continued listing standards for the continued listing of our Common Stock on Nasdaq by increasing the per share trading price of our Common Stock to help provide a share price high enough to satisfy the \$1.00 per share minimum bid price requirement. Any inability of our Board to effect the Reverse Stock Split could expose us to delisting from Nasdaq.

Determination of the Reverse Stock Split Ratio

The Board believes that stockholder approval of a range of potential Reverse Stock Split ratios is in our and our stockholders’ best interests because it is not possible to predict market conditions at the time the Reverse Stock Split would be implemented. We believe that a range of Reverse Stock Split ratios provides us with the most flexibility to achieve the desired results of the Reverse Stock Split. The Reverse Stock Split ratio to be selected by our Board will be not more than 1-for-30.

The selection of the specific Reverse Stock Split ratio will be based on several factors, including, among other things:

- our ability to regain and maintain the listing of our Common Stock on Nasdaq;
- the per share price of our Common Stock immediately prior to the Reverse Stock Split;
- the expected stability of the per share price of our Common Stock following the Reverse Stock Split;
- the likelihood that the Reverse Stock Split will result in increased marketability and liquidity of our Common Stock;

- prevailing market conditions;
- general economic conditions in our industry; and
- our market capitalization before, and anticipated market capitalization after, the Reverse Stock Split.

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

Board Discretion to Effect the Reverse Stock Split

If the Reverse Stock Split proposal is approved by our stockholders, the Board will have the discretion to implement the Reverse Stock Split or to not effect the Reverse Stock Split at all. If the trading price of our Common Stock increases without effecting the Reverse Stock Split, the Reverse Stock Split may not be necessary. Following the Reverse Stock Split, if implemented, there can be no assurance that the market price of our Common Stock will rise in proportion to the reduction in the number of outstanding shares resulting from the Reverse Stock Split or that the market price of the post-split Common Stock can be maintained above \$1.00. There also can be no assurance that our Common Stock will not be delisted from Nasdaq for other reasons.

If our stockholders approve the Reverse Stock Split proposal at the Special Meeting, the Reverse Stock Split will be effected, if at all, only upon a determination by the Board that the Reverse Stock Split is in our and our stockholders best interests at that time. No further action on the part of the stockholders will be required to either effect or abandon the Reverse Stock Split. If our Board does not implement the Reverse Stock Split prior to the one-year anniversary of the date on which the Reverse Stock Split is approved by the Company's stockholders at the Special Meeting, the authority granted in this proposal to implement the Reverse Stock Split will terminate and the Reverse Stock Split Amendment will be abandoned.

The market price of our Common Stock is dependent upon our performance and other factors, some of which are unrelated to the number of shares outstanding. If the Reverse Stock Split is effected and the market price of our Common Stock declines, the percentage decline as an absolute number and as a percentage of our overall market capitalization may be greater than would occur in the absence of the Reverse Stock Split. Furthermore, the reduced number of shares that will be outstanding after the Reverse Stock Split could significantly reduce the trading volume and otherwise adversely affect the liquidity of our Common Stock.

We have not proposed the Reverse Stock Split in response to any effort of which we are aware to accumulate our shares of Common Stock or obtain control of the Company, nor is it a plan by management to recommend a series of similar actions to our Board or our stockholders. Notwithstanding the decrease in the number of outstanding shares of Common Stock following the Reverse Stock Split, our Board does not intend for this transaction to be the first step in a "going private transaction" within the meaning of Rule 13e-3 of the Exchange Act.

Effectiveness of the Reverse Stock Split

The Reverse Stock Split Amendment, if approved by our stockholders, will become effective upon the filing with the Secretary of State of the State of Delaware of a Certificate of Amendment to our Certificate of Incorporation in substantially the form of the Reverse Stock Split Amendment attached to this proxy statement as Annex A. The exact timing of the filing of the Reverse Stock Split Amendment will be determined by the Board based upon the conditions the Company has to meet to regain compliance with the continued listing requirements on Nasdaq and its evaluation of when such action will be most advantageous to the Company and our stockholders. The Board reserves the right, notwithstanding stockholder approval and without further action by our stockholders, to elect not to proceed with the Reverse Stock Split if, at any time prior to filing such Reverse Stock Split Amendment, the Board, in its sole discretion, determines that it is no longer in the best interests of the Company and our stockholders. If our Board does not implement the Reverse Stock Split prior to the one-year anniversary of the date on which the Reverse Stock Split is approved by the Company's stockholders at the Special Meeting, the authority granted in this proposal to implement the Reverse Stock Split will terminate and the Reverse Stock Split Amendment to effect the Reverse Stock Split will be abandoned.

Effects of the Reverse Stock Split on Common Stock

Pursuant to the Reverse Stock Split Amendment, each holder of our Common Stock outstanding immediately prior to the effectiveness of the Reverse Stock Split, or the Old Common Stock, will become the holder of fewer shares of our Common Stock after consummation of the Reverse Stock Split, or the New Common Stock.

The Reverse Stock Split will affect all holders of Old Common Stock equally and will not affect any holder of Old Common Stock's proportionate equity interest in the Company, except for those holders of Old Common Stock who receive an additional share of our Common Stock in lieu of a fractional share. None of the rights currently accruing to holders of our Common Stock will be affected by the Reverse Stock Split. Following the Reverse Stock Split, each share of New Common Stock will entitle the holder thereof to one vote per share and will otherwise be identical to Old Common Stock. The Reverse Stock Split also will have no effect on the number of authorized shares of our Common Stock. The shares of New Common Stock will be fully paid and non-assessable.

The par value per share of the Common Stock will remain unchanged at \$0.00001 per share after the Reverse Stock Split. As a result, on the effective date of the Reverse Stock Split, if any, the stated capital on our balance sheet attributable to the Common Stock will be reduced proportionately based on the Reverse Stock Split ratio, from its present amount, and the additional paid-in capital account will be credited with the amount by which the stated capital is reduced. After the Reverse Stock Split, net income or loss per share and other per share amounts will be increased because there will be fewer shares of our Common Stock outstanding. In future financial statements, net income or loss per share and other per share amounts for periods ending before the Reverse Stock Split would be recast to give retroactive effect to the Reverse Stock Split. As described below under "Effects of the Reverse Stock Split on Outstanding Equity Awards and Warrants to Purchase Common Stock," we anticipate that the per share exercise price of outstanding option awards and warrants would be increased proportionately, and the number of shares of our Common Stock issuable upon the exercise of outstanding options and warrants, or that relate to other equity awards (e.g., restricted stock awards) would decrease proportionately, in each case based on the Reverse Stock Split ratio selected by the Board. The Company does not anticipate that any other accounting consequences would arise as a result of the Reverse Stock Split.

We are currently authorized to issue a maximum of 300,000,000 shares of our Common Stock. As of the record date, there were 66,519,722 shares of our Common Stock issued and outstanding. Although the number of authorized shares of our Common Stock will not change as a result of the Reverse Stock Split, the number of shares of our Common Stock issued and outstanding will be reduced in proportion to the ratio selected by the Board. Thus, the Reverse Stock Split will effectively increase the number of authorized and unissued shares of our Common Stock available for future issuance by the amount of the reduction effected by the Reverse Stock Split. Conversely, with respect to the number of shares reserved for issuance under, for example, the FibroBiologics, Inc. 2022 Stock Plan, or the Stock Plan, we anticipate that our Board will proportionately reduce such reserve in accordance with the terms of the Stock Plan. As of the record date, there were 12,500,000 shares of Common Stock reserved for issuance under the Stock Plan, of which 6,783,761 remained available for future awards, and following the Reverse Stock Split, if any, we anticipate that such reserve will be reduced to between approximately 416,666 to 2,500,000 shares of Common Stock, of which between approximately 226,125 to 1,356,752 shares will be available for future awards.

Following the Reverse Stock Split, the Board will have the authority, subject to applicable securities laws, to issue all authorized and unissued shares without further stockholder approval, upon such terms and conditions as the Board deems appropriate. We do not currently have any plans, proposals or understandings to issue the additional shares that would be available if the Reverse Stock Split is approved and effected, but some of the additional shares underlie warrants, which could be exercised or converted after the Reverse Stock Split Amendment is effected.

Effects of the Reverse Stock Split on Series C Preferred Stock

There is only one holder of our Series C Preferred Stock. Because the Reverse Stock Split would be applied proportionately to the outstanding shares of Series C Preferred Stock as the application of the Reverse Stock Split would be applied to the outstanding shares of Common Stock, the proposed Reverse Stock Split would not alter the Series C Preferred Stock holder's percentage ownership of the outstanding shares of Series C Preferred Stock or the outstanding shares of Common Stock and Series C Preferred Stock, in the aggregate. Such holder will continue to

hold one hundred percent (100%) of the voting power of the outstanding shares of our Series C Preferred Stock immediately after the Reverse Stock Split. Such holder will also continue to hold the same percentage of the voting power of the outstanding shares of our Common Stock and Series C Preferred Stock, in the aggregate, after the Reverse Stock Split. One share of Series C Preferred Stock shall continue to carry the same voting rights as 13,000 shares of Common Stock. The Reverse Stock Split would not change the number of authorized shares of our Preferred Stock, nor will it change the number of shares of Preferred Stock designated as Series C Preferred Stock. The Reverse Stock Split will have the effect of creating unreserved designated shares of Series C Preferred Stock. We have no current arrangements or understandings providing for the issuance of the additional shares of Series C Preferred Stock that would be made available for issuance upon effectiveness of the Reverse Stock Split.

Effects of the Reverse Stock Split on Outstanding Equity Awards and Warrants to Purchase Common Stock

If the Reverse Stock Split is effected, we anticipate that the number of shares subject to outstanding options entitling their holders to purchase Common Stock and any other equity awards granted pursuant to the Stock Plan, will be proportionately reduced, in accordance with the terms of the Stock Plan, based on the same ratio as the reduction in the number of shares of outstanding Common Stock, except that any fractional shares resulting from such reduction will be rounded down to the nearest whole share to comply with the requirements of Sections 409A and 424 of the Internal Revenue Code of 1986, as amended, or the Code. Correspondingly, we anticipate that the per share exercise price of any such options will be increased in direct proportion to the Reverse Stock Split ratio (rounded up to the nearest whole cent), so that the aggregate dollar amount payable for the purchase of the shares subject to the options will remain materially unchanged. For example, assuming that we effect the Reverse Stock Split at a ratio of 1-for-5, and that an optionee holds options to purchase 2,000 shares of our Common Stock at an exercise price of \$1.00 per share, following the effectiveness of the Reverse Stock Split at such ratio, we anticipate that the number of shares of the Common Stock subject to that option would be reduced to 400 and the exercise price would be proportionately increased to \$5.00 per share.

As of the record date, there were warrants to purchase up to (i) 10,321 shares of Common Stock at an exercise price of \$20.00 per share, (ii) 12,110,203 shares of Common Stock at an exercise price of \$0.3303 per share, (iii) 8,570,203 shares of Common Stock at an exercise price of \$0.00001 per share, (iv) 4,477,614 shares of Common Stock at an exercise price of \$0.335 per share, (v) 313,433 shares of Common Stock at an exercise price of \$0.4188 per share, (vi) 5,227,275 shares of Common Stock at an exercise price of \$0.33 per share, and (vii) 365,909 shares of Common Stock at an exercise price of \$0.4125 per share, issued and outstanding. If the Reverse Stock Split is effected, the number of shares subject to outstanding warrants will automatically be reduced in the same ratio as the reduction in the number of shares of outstanding Common Stock. Correspondingly, the per share exercise price of such warrants will be increased in direct proportion to the Reverse Stock Split ratio, so that the aggregate dollar amount payable for the purchase of the shares subject to the warrants will remain unchanged.

Effect on Registered and Beneficial Stockholders

Upon the Reverse Stock Split, the Company intends to treat stockholders holding shares of our Common Stock in “street name” (that is, held through a bank, broker or other nominee) in the same manner as stockholders of record whose shares of Common Stock are registered in their names. Banks, brokers or other nominees will be instructed to effect the Reverse Stock Split for their beneficial holders holding shares of our Common Stock in “street name”; however, these banks, brokers or other nominees may apply their own specific procedures for processing the Reverse Stock Split. If you hold your shares of our Common Stock with a bank, broker or other nominee, and have any questions in this regard, the Company encourages you to contact your nominee.

Effect on “Book-Entry” Stockholders of Record

The Company’s stockholders of record may hold some or all of their shares electronically in book-entry form. These stockholders will not have stock certificates evidencing their ownership of our Common Stock and/or Series C Preferred Stock. They are, however, provided with a statement reflecting the number of shares of Common Stock and/or Series C Preferred Stock registered in their accounts.

If you hold registered shares of Old Common Stock or Old Series C Preferred Stock in a book-entry form, you do not need to take any action to receive your shares of New Common Stock or New Series C Preferred Stock, as applicable,

in registered book-entry form, if applicable. A transaction statement will automatically be sent to your address of record as soon as practicable after the effective time of the Reverse Stock Split indicating the number of shares of New Common Stock and New Series C Preferred Stock you hold.

Effect on Registered Certificated Shares

Some stockholders of record hold their shares of our Common Stock in certificate form or a combination of certificate and book-entry form. If any of your shares of our Common Stock are held in certificate form, you will receive a transmittal letter from the Company's transfer agent as soon as practicable after the effective time of the Reverse Stock Split, if any. The transmittal letter will be accompanied by instructions specifying how to exchange your certificate representing the Old Common Stock for a statement of holding or a certificate of New Common Stock.

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

Shares of Common Stock and Series C Preferred Stock Issued and Outstanding

With the exception of the number of shares issued and outstanding, the rights and preferences of the shares of our Common Stock and Series C Preferred Stock prior and subsequent to the Reverse Stock Split will remain the same. After the effectiveness of the Reverse Stock Split, we do not anticipate that our financial condition, the percentage ownership of management, the number of our stockholders, or any aspect of our business would materially change as a result of the Reverse Stock Split.

Our Common Stock is currently registered under Section 12(b) of the Exchange Act, and as a result, we are subject to the periodic reporting and other requirements of the Exchange Act. If effected, the proposed Reverse Stock Split will not affect the registration of our Common Stock under the Exchange Act or our periodic or other reporting requirements thereunder.

Anti-Takeover Effects

In addition, we have not proposed the Reverse Stock Split, with its corresponding increase in the authorized and unissued number of shares of Common Stock and Series C Preferred Stock, with the intention of using the additional shares for anti-takeover purposes, although we could theoretically use the additional shares to make more difficult or to discourage an attempt to acquire control of the Company.

We do not believe that our officers or directors have interests in this proposal that are different from or greater than those of any other of our stockholders.

Fractional Shares

Fractional shares will not be issued in connection with the Reverse Stock Split. Each stockholder who would otherwise hold a fractional share of Common Stock or Series C Preferred Stock as a result of the Reverse Stock Split will receive one share of Common Stock or Series C Preferred Stock, as applicable, in lieu of such fractional share. If such shares of Common Stock are subject to an award granted under the Stock Plan, we anticipate that each fractional share of Common Stock will be rounded down to the nearest whole share of Common Stock in order to comply with the requirements of Sections 409A and 424 of the Code.

Appraisal Rights

Under the Delaware General Corporation Law, our stockholders are not entitled to appraisal or dissenter's rights with respect to the Reverse Stock Split, and we will not independently provide our stockholders with any such rights.

Regulatory Approvals

The Reverse Stock Split will not be consummated, if at all, until after approval of the Company's stockholders is obtained. The Company is not obligated to obtain any governmental approvals or comply with any state or federal

regulations prior to consummating the Reverse Stock Split other than the filing of the Reverse Stock Split Amendment with the Secretary of State of the State of Delaware.

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

The following is a discussion of certain material U.S. federal income tax consequences of the Reverse Stock Split to U.S. holders (as defined below). This discussion is included for general information purposes only, does not purport to address all aspects of U.S. federal income tax law that may be relevant to U.S. holders in light of their particular circumstances, and does not describe the Medicare tax on net investment income, gift or estate taxes, or any potential state, local, or foreign tax consequences. This discussion is based on the Code, current Treasury Regulations and administrative and court decisions and interpretations, all as in effect as of the date hereof, and all of which are subject to change, possibly on a retroactive basis, or different interpretation. Any such changes could affect the continuing validity of this discussion.

STOCKHOLDERS ARE URGED TO CONSULT THEIR TAX ADVISORS AS TO THE PARTICULAR FEDERAL, STATE, LOCAL, OR FOREIGN TAX CONSEQUENCES TO THEM OF THE REVERSE STOCK SPLIT.

This discussion does not address tax consequences to stockholders that are subject to special tax rules, such as banks, insurance companies, regulated investment companies, personal holding companies, stockholders whose functional currency is not the U.S. dollar, partnerships (or other flow-through entities for U.S. federal income purposes and their partners or members), persons who acquired their shares or equity awards in connection with employment or other performance of services (including pursuant to the Stock Plan), broker-dealers, foreign entities, nonresident alien individuals and tax-exempt entities. This summary also assumes that the Old Common Stock and Old Series C Preferred Stock shares were, and the New Common Stock and New Series C Preferred Stock shares will be, held as a “capital asset,” as defined in Section 1221 of the Code.

As used herein, the term “U.S. holder” means a holder that is, for U.S. federal income tax purposes:

- an individual citizen or resident of the United States;
- a corporation or other entity taxed as a corporation created or organized in or under the laws of the United States or any political subdivision thereof;
- an estate the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust (A) if a U.S. court is able to exercise primary supervision over the administration of the trust and one or more “U.S. persons” (as defined in the Code) have the authority to control all substantial decisions of the trust or (B) that has a valid election in effect to be treated as a U.S. person.

The Reverse Stock Split is intended to be treated as a recapitalization for U.S. federal income tax purposes. Accordingly, other than with respect to any U.S. holder that receives a full share in lieu of a fractional share, a stockholder generally will not recognize a gain or loss by reason of such stockholder’s receipt of shares of New Common Stock or New Series C Preferred Stock pursuant to the Reverse Stock Split solely in exchange for shares of Old Common Stock or Old Series C Preferred Stock, respectively, held by such stockholder immediately prior to the Reverse Stock Split. Subject to the discussion below concerning full shares received in lieu of fractional shares, a stockholder’s aggregate tax basis in the shares of New Common Stock or New Series C Preferred Stock received pursuant to the Reverse Stock Split (including any fractional shares) will equal the stockholder’s aggregate basis in the Old Common Stock or Old Series C Preferred Stock, respectively, exchanged therefore and will be allocated among the shares of New Common Stock or New Series C Preferred Stock, respectively, received in the Reverse Stock Split on a pro-rata basis. Stockholders who have used the specific identification method to identify their basis in the shares of Old Common Stock or Old Series C Preferred Stock, respectively, held immediately prior to the Reverse Stock Split should consult their own tax advisers to determine their basis in the shares of New Common Stock or New Series C Preferred Stock, respectively, received in exchange therefor in the Reverse Stock Split. A stockholder’s holding period in the shares of New Common Stock or New Series C Preferred Stock, respectively, received pursuant to the Reverse Stock Split will include the stockholder’s holding period in the shares of Old

Common Stock or Old Series C Preferred Stock, respectively, surrendered in exchange therefore, provided the shares of Old Common Stock or Old Series C Preferred Stock, respectively, surrendered are held as capital assets at the time of the Reverse Stock Split.

As noted above, we will not issue fractional shares in connection with the Reverse Stock Split. Instead, except with respect to shares of Common Stock that are subject to an award granted under the Stock Plan, stockholders who would be entitled to receive fractional shares because they hold a number of shares not evenly divisible by the Reverse Stock Split ratio generally will automatically be entitled to receive an additional fraction of a share of Common Stock to round up to the next whole share of Common Stock. The U.S. federal income tax consequences of the receipt of such an additional fraction of a share are not clear. A U.S. holder that receives a full share in lieu of a fractional share may be treated as though it received a distribution from us to the extent that the value of the full share exceeds the value of the fractional share the holder otherwise would have received. Such distribution would generally be a dividend to the extent of our current or accumulated earnings and profits. Any amount in excess of earnings and profits would generally reduce the holder's basis in their shares by the amount of such excess. The portion of the full share in excess of the fractional share would generally have a tax basis equal to the amount recognized as a dividend and the holding period for such share would begin on the date of the deemed distribution. Holders are urged to consult their own tax advisors as to the possible tax consequences of receiving an additional fraction of a share in the Reverse Stock Split.

**THE BOARD RECOMMENDS
A VOTE IN FAVOR OF PROPOSAL 1.**

PROPOSAL 2

APPROVAL OF THE NOVEMBER 18 STOCK ISSUANCE PROPOSAL

The Company is asking stockholders to approve the issuance of up to 12,110,203 shares of Common Stock issuable upon the exercise of outstanding warrants issued pursuant to the November 18 SPA, for purposes of Nasdaq Listing Rule 5635(d), as described in more detail below.

GENERAL BACKGROUND

On November 18, 2025, we entered into a securities purchase agreement with a single investor, or the Purchaser, pursuant to which (i) we agreed to issue and sell to the Purchaser, in a registered direct offering, or the November 18 Offering, 3,540,000 shares of Common Stock and pre-funded warrants to purchase up to an aggregate of 8,570,203 shares of Common Stock. Additionally, pursuant to the November 18 SPA, we issued and sold to the Purchaser, in a concurrent private placement, warrants to purchase one share of our Common Stock for each share of Common Stock or pre-funded warrant purchased in the November 18 Offering, for an aggregate of 12,110,203 shares of Common Stock, or the November 18 Warrants. The November 18 Warrants have an exercise price of \$0.3303 per share of Common Stock. The November 18 Warrants will not be exercisable until, and are subject to, approval by our stockholders of the issuance of the shares underlying the November 18 Warrants and will expire five years following the date of the stockholder approval, if it is obtained. The November 18 Offering and concurrent private placement closed on November 19, 2025.

Subject to limited exceptions, following the date our stockholders approve this Proposal 2 a holder of November 18 Warrants will not have the right to exercise any portion of the November 18 Warrants to the extent that, after giving effect to the exercise, the holder, together with its affiliates, and any other person acting as a group together with the holder or any of its affiliates, would beneficially own in excess of 9.99% of the number of shares of Common Stock outstanding immediately after giving effect to its exercise, or the Beneficial Ownership Limitation.

We are not seeking the approval of stockholders to authorize us to enter into the November 18 SPA or any other transaction agreements, or to issue the November 18 Warrants to the Purchaser. We have already entered into those agreements and completed the issuance, which are binding obligations on us. Accordingly, the failure of our stockholders to approve this Proposal 2 will not affect our obligations under these agreements, which will remain binding on us.

The 3,540,000 shares of Common Stock issued to the Purchaser in the November 18 Offering are not entitled to vote on this Proposal 2 in accordance with Nasdaq Listing Rule 5635(d). Accordingly, although we anticipate that the 3,540,000 shares of common stock held by the Purchaser will be voted in favor of this Proposal 2 for purposes of adopting the proposal, to comply with Nasdaq rules, to the extent such shares are voted, we will instruct the inspector of elections to conduct a separate tabulation that subtracts the 3,540,000 shares held by the Purchaser from the total number of shares voted in favor of Proposal 2 to determine whether the proposal has been adopted in accordance with applicable Nasdaq rules.

For further information regarding the terms of the November 18 Warrants, please refer to the Company's Current Report on Form 8-K filed with the SEC on November 19, 2025. The discussion herein relating to the November 18 Warrants is qualified in its entirety by reference to the November 18 Warrants filed as Exhibit 10.2 to such Form 8-K.

THE NASDAQ STOCKHOLDER APPROVAL RULE

The Common Stock is listed on the Nasdaq Capital Market and, as such, the Company is subject to the Nasdaq Listing Rules.

The Nasdaq 20% Rule. Nasdaq Listing Rule 5635(d) requires 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 the Company of Common Stock (or securities convertible into or exercisable for Common Stock), which alone or together with sales by officers, directors or substantial stockholders of the company, equals 20% or more of the Common Stock

or 20% or more of the voting power outstanding before the issuance, in each case, at a price that is less than the “Minimum Price.” The Minimum Price is the lower of (1) the Nasdaq official closing price (as reflected on Nasdaq.com) immediately preceding the signing of the binding agreement or (2) the average Nasdaq official closing price of the Common Stock (as reflected on Nasdaq.com) for the five trading days immediately preceding the signing of the binding agreement.

The Company is asking stockholders to approve the issuance of up to 12,110,203 shares of Common Stock issuable upon the exercise of outstanding November 18 Warrants, because in the absence of stockholder approval, such issuance would result in the November 18 Offering violating Nasdaq Listing Rule 5635(d).

ADVERSE EFFECTS OF APPROVAL OF THIS PROPOSAL

The approval of this proposal will result in holders of November 18 Warrants being able to exercise such November 18 Warrants, although such holders will have no obligation to do so. The full exercise of the November 18 Warrants would result in the issuance of 12,110,203 additional shares of our Common Stock, which would dilute the ownership interest of our existing stockholders. The exercise of November 18 Warrants and/or the sale of Common Stock received upon such exercise in the open market could materially and adversely affect the market price of our Common Stock, particularly if the trading price of our Common Stock is greater than \$0.3303 at the time.

EFFECTS IF THIS PROPOSAL IS NOT APPROVED

If this proposal is not approved, we will not be able to issue shares of Common Stock to the Purchaser in excess of Nasdaq Listing Rule 5635(d). As a result, any remaining outstanding balance of the November 18 Warrants must be repaid by us in cash. We may not have sufficient cash on hand or available resources to meet such a repayment obligation, which could force us to seek emergency financing or other arrangements which may not be available or, if available, may be on unfavorable terms. In the event we do have sufficient funds available, the cash payment obligations, if triggered, could significantly reduce the cash we have available to fund our operations or make necessary investments. This would adversely affect our financial condition, limit our ability to pursue growth opportunities, and adversely affect our business prospects.

Under the November 18 SPA, we agreed to seek shareholder approval for the matters described in this Proposal 2 within 180 days of the closing date of the November 18 Offering. If we do not obtain shareholder approval of this Proposal 2 within such period, we are required to continue seeking shareholder approval every 90 days thereafter until such shareholder approval is obtained. The process of continuing to hold stockholder meetings to obtain the requisite stockholder approval would cause us to incur significant legal expenses and would divert our management’s attention from the operation of our business, which could materially harm our business.

FACTORS CONSIDERED BY THE BOARD IN ITS RECOMMENDATION

After careful consideration at the time of the November 18 Offering, our Board determined that the November 18 Offering, including the sale of the November 18 Warrants, was in the best interests of the Company in light of the Company’s cash position and liquidity needs at the time. In reaching its determination the Board consulted with members of the Company’s senior management and its legal and strategic advisors, among others, and considered a number of factors.

After further careful consideration, including of the Company’s current cash position and continuing liquidity needs, our Board determined to recommend that our stockholders approve the issuance of Common Stock upon the exercise of the November 18 Warrants. Although there can be no assurance that the holders of November 18 Warrants will exercise all, or any part of, their November 18 Warrants, at an exercise price of \$0.3303 per share of Common Stock, the full exercise of such November 18 Warrants would result in gross proceeds to the Company of approximately \$4.0 million. In connection with any exercise of November 18 Warrants, we currently intend to use the proceeds for working capital and general corporate purposes, as we pursue longer term financing.

NO APPRAISAL RIGHTS

Stockholders have no rights under the DGCL or under our Certificate of Incorporation or Amended and Restated Bylaws to exercise dissenters' rights of appraisal with respect to the issuance of shares of Common Stock upon exercise of the November 18 Warrants.

**THE BOARD RECOMMENDS
A VOTE IN FAVOR OF PROPOSAL 2.**

PROPOSAL 3

APPROVAL OF THE NOVEMBER 24 STOCK ISSUANCE PROPOSAL

The Company is asking stockholders to approve the issuance of (i) up to 4,477,614 shares of Common Stock issuable upon the exercise of outstanding warrants issued pursuant to the November 24 SPA, and (ii) up to 313,433 shares of Common Stock issuable upon the exercise of outstanding warrants issued pursuant to the Engagement Letter in connection with the November 24 Offering, for purposes of Nasdaq Listing Rule 5635(d), as described in more detail below.

GENERAL BACKGROUND

On November 24, 2025, we entered into a securities purchase agreement with a certain institutional investors, or the November Investors, pursuant to which (i) we agreed to issue and sell to the November Investors, in a registered direct offering, or the November 24 Offering, 4,477,614 shares of Common Stock. Additionally, pursuant to the November 24 SPA, we issued and sold to the November Investors, in a concurrent private placement, warrants to purchase one share of our Common Stock for each share of Common Stock purchased in the November 24 Offering, for an aggregate of 4,477,614 shares of Common Stock, or the November 24 Warrants. The November 24 Warrants have an exercise price of \$0.335 per share of Common Stock. The November 24 Warrants will not be exercisable until, and are subject to, approval by our stockholders of the issuance of the shares underlying the November 24 Warrants and will expire five years following the date of the stockholder approval, if it is obtained. The November 24 Offering and concurrent private placement closed on November 25, 2025.

H.C. Wainwright & Co., LLC acted as the exclusive placement agent, or Placement Agent, in connection with the November 24 Offering pursuant to the Engagement Letter. Pursuant to the Engagement Letter, the Placement Agent received (i) a cash fee of 7.0% of the aggregate purchase price paid by the November Investors in the November 24 Offering and (ii) a management fee of 1.0% of the aggregate purchase price paid by the November Investors in the November 24 Offering. In addition, the Company agreed to pay the Placement Agent non-accountable expenses of \$25,000 and clearing fees of \$15,950 for the November 24 Offering. Additionally, the Company issued to the designees of the Placement Agent in a private placement warrants to purchase 7.0% of the number of shares of Common Stock sold in the November 24 Offering (or warrants to purchase up to 313,433 shares of Common Stock), at an exercise price of \$0.4188 per share, or the November Placement Agent Warrants. The November Placement Agent Warrants will not be exercisable until, and are subject to, approval by our stockholders of the issuance of the shares underlying the November Placement Agent Warrants and will expire on November 24, 2030.

Subject to limited exceptions, following the date our stockholders approve this Proposal 3, a holder of November 24 Warrants or November Placement Agent Warrants will not have the right to exercise any portion of such warrants to the extent that, after giving effect to the exercise, the holder, together with its affiliates, and any other person acting as a group together with the holder or any of its affiliates, would beneficially own in excess of 4.99% of the number of shares of Common Stock outstanding immediately after giving effect to its exercise, or the Beneficial Ownership Limitation. The holder, upon notice to the Company, may increase or decrease the Beneficial Ownership Limitation provisions of such warrants, provided that in no event shall the limitation exceed 9.99% of the number of shares of Common Stock outstanding immediately after giving effect to the exercise of such warrants. Any increase in the Beneficial Ownership Limitation will not be effective until the 61st day after such notice is delivered to the Company.

We are not seeking the approval of stockholders to authorize us to enter into the November 24 SPA, the Engagement Letter or any other transaction agreements, or to issue the November 24 Warrants to the Investors and the November Placement Agent Warrants to designees of the Placement Agent. We have already entered into those agreements and completed the issuances, which are binding obligations on us. Accordingly, the failure of our stockholders to approve this Proposal 3 will not affect our obligations under these agreements, which will remain binding on us.

The 4,477,614 shares of Common Stock issued to the November Investors in the November 24 Offering are not entitled to vote on this Proposal 3 in accordance with Nasdaq Listing Rule 5635(d). Accordingly, although we anticipate that the 4,477,614 shares of Common Stock held by the November Investors will be voted in favor of this Proposal 3 for purposes of adopting the proposal, to comply with Nasdaq rules, to the extent such shares are voted, we will instruct the inspector of elections to conduct a separate tabulation that subtracts the 4,477,614 shares held by

the November Investors from the total number of shares voted in favor of Proposal 3 to determine whether the proposal has been adopted in accordance with applicable Nasdaq rules.

For further information regarding the terms of the November 24 Warrants and the November Placement Agent Warrants, please refer to the Company's Current Report on Form 8-K filed with the SEC on November 25, 2025. The discussion herein relating to the November 24 Warrants and the November Placement Agent Warrants is qualified in its entirety by reference to the November 24 Warrants and the November Placement Agent Warrants filed as Exhibit 4.1 and Exhibit 4.2, respectively, to such Form 8-K.

THE NASDAQ STOCKHOLDER APPROVAL RULE

The Common Stock is listed on the Nasdaq Capital Market and, as such, the Company is subject to the Nasdaq Listing Rules.

The Nasdaq 20% Rule. Nasdaq Listing Rule 5635(d) requires 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 the Company of Common Stock (or securities convertible into or exercisable for Common Stock), which alone or together with sales by officers, directors or substantial stockholders of the company, equals 20% or more of the Common Stock or 20% or more of the voting power outstanding before the issuance, in each case, at a price that is less than the "Minimum Price." The Minimum Price is the lower of (1) the Nasdaq official closing price (as reflected on Nasdaq.com) immediately preceding the signing of the binding agreement or (2) the average Nasdaq official closing price of the Common Stock (as reflected on Nasdaq.com) for the five trading days immediately preceding the signing of the binding agreement.

The Company is asking stockholders to approve the issuance of up to 4,477,614 shares of Common Stock issuable upon the exercise of outstanding November 24 Warrants and up to 313,433 shares of Common Stock issuable upon the exercise of outstanding November Placement Agent Warrants, because in the absence of stockholder approval, such issuances could result in the November 24 Offering violating Nasdaq Listing Rule 5635(d).

ADVERSE EFFECTS OF APPROVAL OF THIS PROPOSAL

The approval of this proposal will result in holders of November 24 Warrants and the November Placement Agent Warrants being able to exercise such warrants, although such holders will have no obligation to do so. The full exercise of the November 24 Warrants would result in the issuance of 4,477,614 additional shares of our Common Stock and the full exercise of the November Placement Agent Warrants would result in the issuance of 313,433 additional shares of our Common Stock, which would dilute the ownership interest of our existing stockholders. The exercise of November 24 Warrants and the November Placement Agent Warrants and/or the sale of Common Stock received upon such exercise in the open market could materially and adversely affect the market price of our Common Stock, particularly if the trading price of our Common Stock is greater than \$0.335, in the case of the November 24 Warrants, and \$0.4188, in the case of the November Placement Agent Warrants, at the time.

EFFECTS IF THIS PROPOSAL IS NOT APPROVED

If this proposal is not approved, we will not be able to issue shares of Common Stock to the November Investors or the designees of the Placement Agent in excess of Nasdaq Listing Rule 5635(d). As a result, any remaining outstanding balance of the November 24 Warrants and the November Placement Agent Warrants must be repaid by us in cash. We may not have sufficient cash on hand or available resources to meet such a repayment obligation, which could force us to seek emergency financing or other arrangements which may not be available or, if available, may be on unfavorable terms. In the event we do have sufficient funds available, the cash payment obligations, if triggered, could significantly reduce the cash we have available to fund our operations or make necessary investments. This would adversely affect our financial condition, limit our ability to pursue growth opportunities, and adversely affect our business prospects.

Under the November 24 SPA, we agreed to seek shareholder approval for the matters described in this Proposal 3 within 90 days of the closing date of the November 24 Offering, or November 25, 2025. If we do not obtain shareholder approval of this Proposal 3 within such period, we are required to continue seeking shareholder approval every 90

days thereafter until such shareholder approval is obtained. The process of continuing to hold stockholder meetings to obtain the requisite stockholder approval would cause us to incur significant legal expenses and would divert our management's attention from the operation of our business, which could materially harm our business.

FACTORS CONSIDERED BY THE BOARD IN ITS RECOMMENDATION

After careful consideration at the time of the November 24 Offering, our Board determined that the November 24 Offering, including the sale of the November 24 Warrants and issuance of the November Placement Agent Warrants, was in the best interests of the Company in light of the Company's cash position and liquidity needs at the time. In reaching its determination the Board consulted with members of the Company's senior management and its legal and strategic advisors, among others, and considered a number of factors.

After further careful consideration, including of the Company's current cash position and continuing liquidity needs, our Board determined to recommend that our stockholders approve the issuance of Common Stock upon the exercise of the November 24 Warrants and the November Placement Agent Warrants. Although there can be no assurance that the holders of November 24 Warrants and the November Placement Agent Warrants will exercise all, or any part of, their warrants, the full exercise of the November 24 Warrants would result in gross proceeds to the Company of approximately \$1.5 million and the full exercise of the November Placement Agent Warrants would result in gross proceeds to the Company of approximately \$131 thousand. In connection with any exercise of the November 24 Warrants and the November Placement Agent Warrants, we currently intend to use the proceeds for working capital and general corporate purposes, as we pursue longer term financing.

NO APPRAISAL RIGHTS

Stockholders have no rights under the DGCL or under our Certificate of Incorporation or Amended and Restated Bylaws to exercise dissenters' rights of appraisal with respect to the issuance of shares of Common Stock upon exercise of the November 24 Warrants or the November Placement Agent Warrants.

THE BOARD RECOMMENDS A VOTE IN FAVOR OF PROPOSAL 3.

PROPOSAL 4

APPROVAL OF THE DECEMBER STOCK ISSUANCE PROPOSAL

The Company is asking stockholders to approve the issuance of (i) up to 5,227,275 shares of Common Stock issuable upon the exercise of outstanding warrants issued pursuant to the December SPA, and (ii) up to 365,909 shares of Common Stock issuable upon the exercise of outstanding warrants issued pursuant to the Engagement Letter in connection with the December Offering, for purposes of Nasdaq Listing Rule 5635(d), as described in more detail below.

GENERAL BACKGROUND

On December 14, 2025, we entered into a securities purchase agreement with certain institutional investors, or the December Investors, pursuant to which (i) we agreed to issue and sell to the December Investors, in a registered direct offering, or the December Offering, 5,227,275 shares of Common Stock. Additionally, pursuant to the December SPA, we issued and sold to the December Investors, in a concurrent private placement, warrants to purchase one share of our Common Stock for each share of Common Stock purchased in the December Offering, for an aggregate of 5,227,275 shares of Common Stock, or the December Warrants. The December Warrants have an exercise price of \$0.33 per share of Common Stock. The December Warrants will not be exercisable until, and are subject to, approval by our stockholders of the issuance of the shares underlying the December Warrants and will expire five years following the date of the stockholder approval, if it is obtained. The December Offering and concurrent private placement closed on December 16, 2025.

H.C. Wainwright & Co., LLC acted as the exclusive placement agent in connection with the December Offering pursuant to the Engagement Letter. Pursuant to the Engagement Letter, the Placement Agent received (i) a cash fee of 7.0% of the aggregate purchase price paid by the December Investors in the December Offering and (ii) a management fee of 1.0% of the aggregate purchase price paid by the December Investors in the December Offering. In addition, the Company agreed to pay the Placement Agent non-accountable expenses of \$25,000 and clearing fees of \$15,950 for the December Offering. Additionally, the Company issued to the designees of the Placement Agent in a private placement warrants to purchase 7.0% of the number of Shares of Common Stock sold in the December Offering (or warrants to purchase up to 365,909 shares of Common Stock), at an exercise price of \$0.4125 per share, or the December Placement Agent Warrants. The December Placement Agent Warrants will not be exercisable until, and are subject to, approval by our stockholders of the issuance of the shares underlying the December Placement Agent Warrants and will expire on December 14, 2030.

Subject to limited exceptions, following the date our stockholders approve this Proposal 4, a holder of the December Warrants and the December Placement Agent Warrants will not have the right to exercise any portion of such warrants to the extent that, after giving effect to the exercise, the holder, together with its affiliates, and any other person acting as a group together with the holder or any of its affiliates, would beneficially own in excess of 4.99% of the number of shares of Common Stock outstanding immediately after giving effect to its exercise, or the Beneficial Ownership Limitation. The holder, upon notice to the Company, may increase or decrease the Beneficial Ownership Limitation provisions of such warrants, provided that in no event shall the limitation exceed 9.99% of the number of shares of Common Stock outstanding immediately after giving effect to the exercise of such warrants. Any increase in the Beneficial Ownership Limitation will not be effective until the 61st day after such notice is delivered to the Company.

We are not seeking the approval of stockholders to authorize us to enter into the December SPA, the Engagement Letter or any other transaction agreements, or to issue the December Warrants to the December Investors and the December Placement Agent Warrants to the designees of the Placement Agent. We have already entered into those agreements and completed the issuances, which are binding obligations on us. Accordingly, the failure of our stockholders to approve this Proposal 4 will not affect our obligations under these agreements, which will remain binding on us.

The 5,227,275 shares of Common Stock issued to the December Investors in the December Offering are not entitled to vote on this Proposal 4 in accordance with Nasdaq Listing Rule 5635(d). Accordingly, although we anticipate that the 5,227,275 shares of Common Stock held by the December Investors will be voted in favor of this Proposal 4 for purposes of adopting the proposal, to comply with Nasdaq rules, to the extent such shares are voted,

we will instruct the inspector of elections to conduct a separate tabulation that subtracts the 5,227,275 shares held by the December Investors from the total number of shares voted in favor of Proposal 4 to determine whether the proposal has been adopted in accordance with applicable Nasdaq rules.

For further information regarding the terms of the December Warrants and the December Placement Agent Warrants, please refer to the Company's Current Report on Form 8-K filed with the SEC on December 15, 2025. The discussion herein relating to the December Warrants and the December Placement Agent Warrants is qualified in its entirety by reference to the December Warrants and the December Placement Agent Warrants filed as Exhibit 4.1 and Exhibit 4.2, respectively, to such Form 8-K.

THE NASDAQ STOCKHOLDER APPROVAL RULE

The Common Stock is listed on the Nasdaq Capital Market and, as such, the Company is subject to the Nasdaq Listing Rules.

The Nasdaq 20% Rule. Nasdaq Listing Rule 5635(d) requires 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 the Company of Common Stock (or securities convertible into or exercisable for Common Stock), which alone or together with sales by officers, directors or substantial stockholders of the company, equals 20% or more of the Common Stock or 20% or more of the voting power outstanding before the issuance, in each case, at a price that is less than the "Minimum Price." The Minimum Price is the lower of (1) the Nasdaq official closing price (as reflected on Nasdaq.com) immediately preceding the signing of the binding agreement or (2) the average Nasdaq official closing price of the Common Stock (as reflected on Nasdaq.com) for the five trading days immediately preceding the signing of the binding agreement.

The Company is asking stockholders to approve the issuance of up to 5,227,275 shares of Common Stock issuable upon the exercise of outstanding December Warrants and the issuance of up to 365,909 shares of Common Stock issuable upon the exercise of outstanding December Placement Agent Warrants, because in the absence of stockholder approval, such issuances could result in the December Offering violating Nasdaq Listing Rule 5635(d).

ADVERSE EFFECTS OF APPROVAL OF THIS PROPOSAL

The approval of this proposal will result in holders of the December Warrants and the December Placement Agent Warrants being able to exercise such warrants, although such holders will have no obligation to do so. The full exercise of the December Warrants would result in the issuance of 5,227,275 additional shares of our Common Stock and the full exercise of the December Placement Agent Warrants would result in the issuance of 365,909 additional shares of our Common Stock, which would dilute the ownership interest of our existing stockholders. The exercise of the December Warrants, the December Placement Agent Warrants and/or the sale of Common Stock received upon such exercise in the open market could materially and adversely affect the market price of our Common Stock, particularly if the trading price of our Common Stock is greater than \$0.33, in the case of the December Warrants, and \$0.4125, in the case of the December Placement Agent Warrants, at the time.

EFFECTS IF THIS PROPOSAL IS NOT APPROVED

If this proposal is not approved, we will not be able to issue shares of Common Stock to the December Investors or the designees of the Placement Agent in excess of Nasdaq Listing Rule 5635(d). As a result, any remaining outstanding balance of the December Warrants and the December Placement Agent Warrants must be repaid by us in cash. We may not have sufficient cash on hand or available resources to meet such a repayment obligation, which could force us to seek emergency financing or other arrangements which may not be available or, if available, may be on unfavorable terms. In the event we do have sufficient funds available, the cash payment obligations, if triggered, could significantly reduce the cash we have available to fund our operations or make necessary investments. This would adversely affect our financial condition, limit our ability to pursue growth opportunities, and adversely affect our business prospects.

Under the December SPA, we agreed to seek shareholder approval for the matters described in this Proposal 4 within 90 days of the closing date of the November 24 Offering, or November 25, 2025. If we do not obtain shareholder

approval of this Proposal 4 within such period, we are required to continue seeking shareholder approval every 90 days thereafter until such shareholder approval is obtained. The process of continuing to hold stockholder meetings to obtain the requisite stockholder approval would cause us to incur significant legal expenses and would divert our management's attention from the operation of our business, which could materially harm our business.

FACTORS CONSIDERED BY THE BOARD IN ITS RECOMMENDATION

After careful consideration at the time of the December Offering, our Board determined that the December Offering, including the sale of the December Warrants and the issuance of the December Placement Agent Warrants, was in the best interests of the Company in light of the Company's cash position and liquidity needs at the time. In reaching its determination the Board consulted with members of the Company's senior management and its legal and strategic advisors, among others, and considered a number of factors.

After further careful consideration, including of the Company's current cash position and continuing liquidity needs, our Board determined to recommend that our stockholders approve the issuance of Common Stock upon the exercise of the December Warrants and the December Placement Agent Warrants. Although there can be no assurance that the holders of December Warrants and the December Placement Agent Warrants will exercise all, or any part of, their warrants, the full exercise of December Warrants would result in gross proceeds to the Company of approximately \$1.7 million and the full exercise of the December Placement Agent Warrant would result in gross proceeds to the Company of approximately \$151 thousand. In connection with any exercise of the December Warrants and the December Placement Agent Warrants, we currently intend to use the proceeds for working capital and general corporate purposes, as we pursue longer term financing.

NO APPRAISAL RIGHTS

Stockholders have no rights under the DGCL or under our Certificate of Incorporation or Amended and Restated Bylaws to exercise dissenters' rights of appraisal with respect to the issuance of shares of Common Stock upon exercise of the December Warrants and the December Placement Agent Warrants.

THE BOARD RECOMMENDS A VOTE IN FAVOR OF PROPOSAL 4.

PROPOSAL 5

ADJOURNMENT PROPOSAL

We are asking stockholders for approval to adjourn the Special Meeting from time to time, if necessary or appropriate, including to solicit additional votes in favor of one or more proposals if there are not sufficient votes at the time of the Special Meeting to adopt a proposal or to establish a quorum.

VOTE REQUIRED

The affirmative vote of the majority of votes cast on this proposal is required to approve the Adjournment Proposal. Broker non-votes, if any, and abstentions will be counted in connection with the determination of whether a valid quorum is established but will have no effect on the outcome of the vote on the Adjournment Proposal. We anticipate the Adjournment Proposal to be a “routine” matter on which brokers may vote, and as such we do not anticipate any broker non-votes. Proxies solicited by the Board will be voted for approval of this Adjournment Proposal unless otherwise instructed by you.

THE BOARD RECOMMENDS A VOTE IN FAVOR OF PROPOSAL 5.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth, as of December 26, 2025, certain information regarding the beneficial ownership of our voting securities (being our voting Common Stock and our Series C Preferred Stock) by (i) each person or group of affiliated persons known by us to be the beneficial owner of more than 5% of our voting securities, (ii) each of our named executive officers, (iii) each of our directors and (iv) all of our directors and executive officers as a group. Except as otherwise indicated, all persons listed below have (i) sole voting power and investment power with respect to their Common Stock and Series C Preferred Stock, as applicable, except to the extent that authority is shared by spouses under applicable law, and (ii) record and beneficial ownership with respect to their Common Stock and Series C Preferred Stock, as applicable.

In accordance with the rules of the SEC, beneficial ownership includes voting or investment power with respect to securities and includes the Common Stock issuable pursuant to options and warrants that are exercisable or settled within 60 days of December 26, 2025. Shares of Common Stock issuable pursuant to options and warrants are deemed outstanding for computing the percentage of the class beneficially owned by the person holding such securities but are not deemed outstanding for computing the percentage of the class beneficially owned by any other person.

In the table below, the percentage of beneficial ownership is based on, as applicable: (i) 66,519,722 shares of our Common Stock outstanding; and (ii) 2,500 shares of our Series C Preferred Stock outstanding, each as of December 26, 2025.

Each share of our Series C Preferred Stock is entitled to 13,000 votes per share and each share of our Common Stock is entitled to one vote per share. The percentage of total voting power in the table below is based on the sum of (i) 66,519,722 votes, being the total number of votes associated with 66,519,722 shares of our Common Stock (with each share of Common Stock having one vote) and (ii) 32,500,000 votes, being the total number of votes associated with 2,500 shares of Series C Preferred Stock (with each share of Series C Preferred Stock having 13,000 votes).

Unless otherwise indicated, the business address of each of the individuals and entities named below is c/o FibroBiologics, Inc., 455 E. Medical Center Blvd., Suite 300, Houston, Texas 77598.

Name and address of Beneficial Owner	Common Stock		Series C Preferred Stock		Percentage of Total Voting Power ⁽¹⁾
	Shares	%	Shares	%	
5% Stockholders:					
Pete O`Heeron, MSHA ⁽²⁾	7,445,051	10.9%	2,500	100%	39.7%
Golden Knight Incorporated, L.P. ⁽³⁾	6,749,853	9.99%			6.7%
Named Executive Officers and Directors					
Pete O`Heeron, MSHA ⁽²⁾	7,445,051	10.9%	2,500	100%	39.7%
Hamid Khoja, Ph.D. ⁽⁴⁾	436,813	*	—	—	*
Jason D. Davis	—	*	—	—	*
Ruben A. Garcia ⁽⁵⁾	273,970	*	—	—	*
Robert E. Hoffman ⁽⁶⁾	160,335	*	—	—	*
Victoria Niklas, M.D. ⁽⁷⁾	160,335	*	—	—	*
Richard Cilento, Jr., MBA ⁽⁸⁾	246,060	*	—	—	*
Stacy Coen, MBA ⁽⁹⁾	160,335	*	—	—	*
Matthew Link ⁽¹⁰⁾	160,335	*	—	—	*
Directors and Executive Officers as a Group (9 persons) ⁽¹¹⁾	9,043,234	13.0%	2,500	100%	40.8%

* Less than 1%.

(1) After giving effect to the rights of the Series C Preferred Stock to 13,000 votes per share.

(2) Shares of Common Stock include 5,906,647 shares of Common Stock and 1,538,404 vested stock options to purchase Common Stock. The 2,500 shares of Series C Preferred Stock held constitute the maximum number of

Series C Preferred Stock we are authorized to issue. Each share of Series C Preferred Stock is entitled to 13,000 votes. For as long as they remain outstanding, the shares of Series C Preferred Stock are subject to an irrevocable proxy issued by Pete O’Heeron in favor and for the benefit of the Board, as more particularly described in this proxy statement.

- (3) Shares of Common Stock include 5,674,853 shares of Common Stock and 1,075,000 exercisable warrants to purchase Common Stock. Michael F. Newlin and Cindy L. Newlin, as General Partners of Golden Knight Incorporated, L.P., share discretionary authority to vote and dispose of the shares directly held by Golden Knight Incorporated, L.P. and may be deemed to be the beneficial owners of such shares. The address for Golden Knight Incorporated, L.P. is 907 West Russell Road, Suite 100, Las Vegas, NV 89148.
- (4) Shares of Common Stock include 31,250 shares of Common Stock and 405,563 vested stock options to purchase Common Stock.
- (5) Shares of Common Stock include 140,000 shares of Common Stock and 133,970 vested stock options to purchase Common Stock.
- (6) Shares of Common Stock include 7,500 shares of Common Stock and 152,835 vested stock options to purchase Common Stock.
- (7) Shares of Common Stock include 7,500 shares of Common Stock and 152,835 vested stock options to purchase Common Stock.
- (8) Shares of Common Stock include 93,225 shares of Common Stock and 152,835 vested stock options to purchase Common Stock.
- (9) Shares of Common Stock include 7,500 shares of Common Stock and 152,835 vested stock options to purchase Common Stock.
- (10) Shares of Common Stock include 7,500 shares of Common Stock and 152,835 vested stock options to purchase Common Stock.
- (11) Shares of Common Stock include 6,201,122 shares of Common Stock and 2,842,112 vested stock options to purchase Common Stock. The 2,500 shares of Series C Preferred Stock held constitute the maximum number of Series C Preferred Stock we are authorized to issue. Each share of Series C Preferred Stock is entitled to 13,000 votes. For as long as they remain outstanding, the shares of Series C Preferred Stock are subject to an irrevocable proxy issued by Pete O’Heeron in favor and for the benefit of the Board, as more particularly described in this proxy statement.

Change in Control

Series C Preferred Stock

There is currently one series of designated preferred stock, being the Series C Preferred Stock, 2,500 total shares of which are authorized and all of which are issued, outstanding and held by Pete O’Heeron, our founder, CEO and Chairperson. In January 2024, in conjunction with a direct listing, we issued the 2,500 shares of Series C Preferred Stock with super voting rights to Mr. O’Heeron for no consideration. The outstanding shares of Series C Preferred Stock are fully paid and nonassessable.

The Series C Preferred Stock ranks senior to our Common Stock upon our liquidation, dissolution, winding up or otherwise.

The Series C Preferred Stock is entitled to vote on any matter to be voted on by our stockholders, in each case voting together with the holders of our Common Stock as a single class, and each share of Series C Preferred Stock is entitled to 13,000 votes. The Series C Preferred Stock is entitled to receive the same prior notice of any meeting of stockholders as provided to holders of our Common Stock.

The Series C Preferred Stock is not entitled to any dividend, whether payable in cash, stock, or property.

Subject to the superior rights of other, then outstanding, classes or series of preferred stock, in the event of any liquidation, dissolution or winding up of our company, the Series C Preferred Stock shall be entitled to receive, prior and in preference to any distribution in such liquidation, dissolution or winding up of any of our assets to the holders of our Common Stock, a liquidation preference of \$18.00 per share (subject to appropriate adjustment in the event of any stock split, combination or other similar recapitalization).

The Series C Preferred Stock may be converted at any time as follows:

- At the option of the holder, a share of Series C Preferred Stock may be converted into one share of our Common Stock; and
- Upon the election of the holders of a majority of the then outstanding shares of Series C Preferred Stock, all outstanding shares of Series C Preferred Stock may be converted into an equal number of shares of our Common Stock, on a one-for-one basis.

In addition, the Series C Preferred Stock is subject to a mandatory conversion upon any transfer of the Series C Preferred Stock. Each share of Series C Preferred Stock shall automatically convert, without the payment of additional consideration by or to the holder thereof, into one fully paid and non-assessable share of our Common Stock, upon any transfer of any share of Series C Preferred Stock, whether or not for value. Any shares of Series C Preferred Stock converted as described above must be retired and cancelled and may not be reissued as shares of such series.

For as long as the Series C Preferred Stock remains outstanding, the aggregate number of shares of Series C Preferred Stock then outstanding, shall be proportionately adjusted for any increase or decrease in the number of issued shares of our Common Stock resulting from a subdivision or combination of our Common Stock or other similar recapitalization, in each case effected without our receipt of consideration.

The Series C Preferred Stock is subject to an irrevocable proxy issued by Pete O’Heeron, the holder of all of the Series C Preferred Stock, in favor and for the benefit of, the Board, granting the Board the irrevocable proxy, for as long as the Series C Preferred Stock remains outstanding, to vote all of the shares of Series C Preferred Stock on all matters on which the shares of Series C Preferred Stock are entitled to vote, in any manner that the Board may determine in its sole and absolute discretion; *provided, however*, that such irrevocable proxy shall not, without the written consent of Pete O’Heeron, permit the Board to vote the shares of Series C Preferred Stock with respect to any proposal to amend, delete or waive any rights of Pete O’Heeron with respect to the Series C Preferred Stock as set forth in our Certificate of Incorporation. In light of the superior voting rights associated with the Series C Preferred Stock, the irrevocable proxy is intended to ensure that such superior voting rights are utilized in our best interest and to avoid or mitigate conflicts that may arise in the future for Pete O’Heeron as an individual stockholder employee.

OTHER MATTERS

Stockholder Proposals for 2026 Annual Meeting

To be included in our proxy statement for the 2026 annual meeting of stockholders, stockholder proposals must comply with the requirements of Rule 14a-8 under the Exchange Act. Except as provided below, stockholder proposals must be received by our Secretary at our principal executive offices no later than December 30, 2025.

In addition to satisfying the requirements under our Amended and Restated Bylaws, 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 comply with the universal proxy rules, which notice must be postmarked or transmitted electronically to us at our principal executive offices no later than April 13, 2026. However, if the date of the 2026 annual meeting is changed by more than 30 calendar days from the anniversary date of the 2025 annual meeting of stockholders, then notice must be provided by the later of 60 calendar days prior to the date of the 2026 annual meeting or the 10th calendar day following the day on which public announcement of the date of the 2026 annual meeting is first made by us.

To be raised at the 2026 annual meeting of stockholders, stockholder proposals must comply with our Amended and Restated Bylaws. Under our Amended and Restated Bylaws, a stockholder must give advance written notice to our Secretary of any business, including nominations of directors for the Board, which the stockholder wishes to raise at the 2026 annual meeting of stockholders. Except as provided below, a stockholder's notice must be delivered to our Secretary at our principal executive offices no earlier than February 12, 2026 and no later than March 14, 2026, in order to be raised at our 2026 annual meeting of stockholders.

Under Rule 14a-8 of the Exchange Act, if the date of the 2026 annual meeting of stockholders changes by more than 30 days from the anniversary of this year's annual meeting, to be included in our proxy statement for such meeting, stockholder proposals must be received by us within a reasonable time before our solicitation is made. Under our Amended and Restated Bylaws, if the date of the 2026 annual meeting of stockholders is more than thirty (30) days before or more than sixty (60) days after the anniversary of the annual meeting, for stockholder proposals that will not be included in our proxy statement for such meeting, notice of such proposal must be delivered no earlier than the close of business on the one hundred twentieth (120) day prior to the 2026 annual meeting, nor later than the close of business on the later of (A) the ninetieth (90) day prior to the 2026 annual meeting or (B) the tenth (10) day following the day on which public announcement of the date of the 2026 annual meeting is first made by us.

Householding of Proxy Materials

The SEC has adopted rules that permit companies and intermediaries (e.g., brokers) to satisfy the delivery requirements for Notices of Internet Availability of Proxy Materials or other Special Meeting materials with respect to two or more stockholders sharing the same address by delivering a single set of Notice of Internet Availability of Proxy Materials or other Special Meeting materials addressed to those stockholders. This process, which is commonly referred to as "householding," potentially means extra convenience for stockholders and cost savings for companies.

This year, a number of brokers with account holders who are FibroBiologics stockholders will be "householding" our proxy materials. A single set of Notice of Internet Availability of Proxy Materials will be delivered to multiple stockholders sharing an address unless contrary instructions have been received from the affected stockholders. Once you have received notice from your broker that they will be "householding" communications to your address, "householding" will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in "householding" and would prefer to receive a separate set of Notice of Internet Availability of Proxy Materials, please notify your broker or FibroBiologics. Direct your written request to Secretary, FibroBiologics, Inc., 455 E. Medical Center Blvd., Suite 300, Houston, Texas 77598, or call our principal office at (281) 671-5150. Stockholders who currently receive multiple copies of the Notices of Internet Availability of Proxy Materials at their addresses and would like to request "householding" of their communications should contact their brokers.

WHERE YOU CAN FIND MORE INFORMATION

We file reports, proxy statements and other information with the SEC as required by the Exchange Act. You can read the Company's SEC filings, including this proxy statement, over the Internet at the SEC's website at <http://www.sec.gov>.

If you would like additional copies of this proxy statement or if you have questions about the proposals, you should contact the Company at the following address and telephone number:

**455 E. Medical Center Blvd., Suite 300
Houston, Texas 77598
281-671-5150
Attention: Ruben A. Garcia, Secretary
Email: legal@fibrobiologics.com**

If you are a stockholder of the Company and would like to request documents, please do so by February 6, 2026, in order to receive them before the Special Meeting. If you request any documents from us, we will mail them to you by first class mail, or another equally prompt means.

All information contained in this proxy statement relating to the Company has been supplied by the Company. Information provided by the Company does not constitute any representation, estimate or projection of any other party. The content contained on, or that can be accessed through, the websites referred to in this proxy statement, including our corporate website, are not deemed to be part of, and are not incorporated by reference into, this proxy statement unless expressly indicated otherwise.

This document is a proxy statement of the Company for the Special Meeting. We have not authorized anyone to give any information or make any representation about the proposals herein or the Company that is different from, or in addition to, that contained in this proxy statement. Therefore, if anyone does give you information of this sort, you should not rely on it. The information contained in this proxy statement speaks only as of the date of this proxy statement, unless the information specifically indicates that another date applies.

ANNEX A
CERTIFICATE OF AMENDMENT TO
AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF FIBROBIOLOGICS, INC.

FibroBiologics, Inc. (the “**Corporation**”), a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the “**DGCL**”), hereby certifies as follows:

1. The name of the Corporation is FibroBiologics, Inc.
2. Pursuant to Section 242 of the DGCL, the amendment herein set forth has been duly approved by the Board of Directors and holders of a majority of the outstanding shares of the Corporation.
3. Paragraph E of Article FOURTH of the Amended and Restated Certificate of Incorporation, as amended, is hereby added as follows:

“E. Upon filing and effectiveness of this Certificate of Amendment with the Secretary of State of Delaware (the “Effective Time”), every [●]¹ issued and outstanding shares of Common Stock shall without further action by this Corporation or the holder thereof be combined into and automatically become one share of Common Stock (the “Reverse Stock Split”). The number of authorized shares of Common Stock of the Corporation and the par value of the Common Stock shall remain as set forth in this Amended and Restated Certificate of Incorporation, as amended. No fractional shares shall be issued in connection with the Reverse Stock Split. In lieu of any fractional shares to which a stockholder would otherwise be entitled (after taking into account all fractional shares of Common Stock otherwise issuable to such holder), all fractional shares resulting from the Reverse Stock Split shall be rounded up to the nearest whole share. The capital of the Corporation will not be reduced under or by reason of any amendment herein certified.”

4. This Certificate of Amendment was duly adopted and approved by the stockholders of this Corporation on the 20th day of February, 2026 in accordance with Section 242 of the DGCL.

* * * * *

IN WITNESS WHEREOF, this Certificate of Amendment has been executed by a duly authorized officer of this Corporation on this day of , 2026.

FIBROBIOLOGICS, INC.

By:

Name: Jason D. Davis

Title: Chief Financial Officer

¹ To be a whole number of shares of Common Stock between and including five (5) and thirty (30). If the Reverse Stock Split Proposal is approved by stockholders, the Certificate of Amendment filed with the Secretary of State of the State of Delaware will include only that reverse stock split ratio determined by the Board to be in the best interests of the Company and its stockholders.

FIBROBIOLOGICS, INC.
455 E MEDICAL CENTER BLVD
SUITE 300
HOUSTON, TX 77058



SCAN TO
VIEW MATERIALS & VOTE



VOTE BY INTERNET

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

Use the Internet to transmit your voting instructions and for electronic delivery of information up until 11:59 p.m. Eastern Time on February 19, 2025. Have your proxy card in hand when you access the web site and follow the instructions to obtain your records and to create an electronic voting instruction form.

During The Meeting - Go to www.virtualshareholdermeeting.com/FBLG2025SM

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 February 19, 2025. Have your proxy card in hand when you call and then follow the instructions.

VOTE BY MAIL

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

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

V82245-52702B

KEEP THIS PORTION FOR YOUR RECORDS

DETACH AND RETURN THIS PORTION ONLY

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

FIBROBIOLOGICS, INC.

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

For Against Abstain

- | | | | |
|--|--------------------------|--------------------------|--------------------------|
| 1. To approve an amendment to our Amended and Restated Certificate of Incorporation, as amended, to effect a reverse stock split of our issued and outstanding common stock and preferred stock at a ratio not less than 1-for-5 and not greater than 1-for-30, with the exact ratio to be set within that range at the discretion of our Board of Directors without further approval or authorization of our stockholders, prior to the one-year anniversary of the date on which the reverse stock split is approved by stockholders at the Special Meeting. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. To approve, in accordance with Nasdaq Listing Rule 5635(d), the issuance of up to 12,110,203 shares of common stock issuable upon the exercise of outstanding common warrants issued pursuant to that certain Securities Purchase Agreement, dated November 18, 2025, between the Company and the purchaser party thereto, or the November 18 SPA. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. To approve, in accordance with Nasdaq Listing Rule 5635(d), the issuance of up to 4,477,614 shares of common stock issuable upon the exercise of outstanding common warrants issued pursuant to those certain Securities Purchase Agreements, each dated November 24, 2025, by and among the Company and the purchasers party thereto, or the November 24 SPA, and up to 313,433 shares of common stock issuable upon the exercise of outstanding common warrants issued pursuant to that certain Engagement Letter, dated November 10, 2025, between the Company and H.C. Wainwright & Co., LLC, or the Engagement Letter, in connection with the November 24 SPA. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. To approve, in accordance with Nasdaq Listing Rule 5635(d), the issuance of up to 5,227,275 shares of common stock issuable upon the exercise of outstanding common warrants issued pursuant to those certain Securities Purchase Agreements, each dated December 14, 2025, by and among the Company and the purchasers party thereto, or the December SPA, and up to 365,909 shares of common stock issuable upon the exercise of outstanding common warrants issued pursuant to the Engagement Letter in connection with the December SPA. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. To approve a proposal to adjourn the Special Meeting from time to time, if necessary or appropriate, including to solicit additional votes in favor of one or more proposals if there are not sufficient votes at the time of the Special Meeting to adopt such proposals or to establish a quorum. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

NOTE: Such other business as may properly come before the meeting or any adjournment thereof.

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

Signature [PLEASE SIGN WITHIN BOX]

Date

Signature (Joint Owners)

Date

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

V82246-527028

**FIBROBIOLOGICS, INC.
Special Meeting of Stockholders
February 20, 2026 11:00 AM Central Time
This proxy is solicited by the Board of Directors**

The stockholder(s) hereby appoint(s) Pete O'Heeron and Jason D. Davis, or either of them, as proxies, each with the power to appoint his substitute, and hereby authorizes them to represent and to vote, as designated on the reverse side of this ballot, all of the shares of common stock of FIBROBIOLOGICS, INC. that the stockholder(s) is/are entitled to vote at the Special Meeting of Stockholders to be held at 11:00 AM, Central Time on February 20, 2026, at the virtual meeting at: www.virtualshareholdermeeting.com/FBLG2026SM, and any adjournment or postponement thereof.

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

Continued and to be signed on reverse side