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

**SCHEDULE 14A INFORMATION**

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

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

Check the appropriate box:

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

**FIBROBIOLOGICS, INC.**

(Name of Registrant as Specified In Its Charter)

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(Name of Person(s) Filing Proxy Statement if Other Than the Registrant)

Payment of Filing Fee (Check all boxes that apply)

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

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

**NOTICE OF ANNUAL MEETING OF STOCKHOLDERS**

**To Be Held On June 12, 2025**

Dear Stockholder:

You are cordially invited to attend the Annual Meeting of Stockholders of **FIBROBIOLOGICS, INC.**, a Delaware corporation, or the Annual Meeting. The meeting will be held on Thursday, June 12, 2025 at 11:00 a.m. Central Time virtually via the Internet at [www.virtualshareholdermeeting.com/FBLG2025](http://www.virtualshareholdermeeting.com/FBLG2025), originating from Houston, Texas. **You will not be able to attend the Annual Meeting in person.** At the Annual Meeting, you will be asked to consider and vote upon the following proposals:

1. To elect the two nominees named in the accompanying proxy statement as Class II directors, to hold office until the 2028 Annual Meeting of Stockholders.
2. To ratify the appointment of WithumSmith+Brown, PC as our independent registered public accounting firm for the year ending December 31, 2025.
3. To approve the adoption of an amendment to the Amended and Restated Certificate of Incorporation to increase the authorized capital stock.
4. To approve, for purposes of Nasdaq Listing Rule 5635(d), the issuance of shares of common stock to YA II PN, LTD., a Cayman Islands exempt limited company, pursuant to the Standby Equity Purchase Agreement, in excess of 7,013,635 shares of common stock.
5. To conduct any other business properly brought before the Annual 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 May 2, 2025. The Notice will describe how to access and review our proxy materials, including our proxy statement and annual report to stockholders. 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 Annual Meeting will be accessible during normal business hours for ten days prior to the Annual Meeting at our principal place of business, 455 E. Medical Center Blvd., Suite 300, Houston, Texas 77598.

The record date for the Annual Meeting is April 14, 2025. Only stockholders of record at the close of business on that date are entitled to receive notice of and to vote at the Annual Meeting or any postponement or adjournment thereof. Instructions on how to participate in the Annual Meeting and demonstrate proof of stock ownership are posted at [www.virtualshareholdermeeting.com/FBLG2025](http://www.virtualshareholdermeeting.com/FBLG2025). The webcast of the Annual Meeting will be archived for one year after the date of the Annual Meeting at [www.virtualshareholdermeeting.com/FBLG](http://www.virtualshareholdermeeting.com/FBLG). Whether or not you plan to attend the Annual Meeting, please vote as soon as possible.

By Order of the Board of Directors,

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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 Thursday, June 12, 2025 at 11:00 a.m. Central Time.**

The proxy statement, notice and annual report to stockholders  
are available at [www.proxyvote.com](http://www.proxyvote.com).

**Whether or not you expect to attend the Annual 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 Annual Meeting. You may also vote through our virtual web conference if you attend the Annual 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 2025 ANNUAL 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 2025 Annual Meeting of Stockholders, or the Annual 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 May 2, 2025 to all stockholders of record entitled to vote at the Annual 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 May 12, 2025.

**How do I attend the Annual Meeting?**

Stockholders as of the record date and/or their authorized representatives are permitted to attend the Annual Meeting. The Annual Meeting will be held on Thursday, June 12, 2025 at 11:00 a.m. Central Time virtually via the Internet at [www.virtualshareholdermeeting.com/FBLG2025](http://www.virtualshareholdermeeting.com/FBLG2025). Instructions on how to participate in the Annual Meeting and demonstrate proof of stock ownership are posted at [www.virtualshareholdermeeting.com/FBLG2025](http://www.virtualshareholdermeeting.com/FBLG2025). You will not be able to attend the Annual Meeting in person.

**Why a Virtual-Only Online Meeting?**

The virtual format for the Annual 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 Annual Meeting so they can ask questions of the Board, management, and a representative from our independent registered public accounting firm. 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 Annual Meeting?**

We will have technicians ready to assist you with any technical difficulties you may have accessing the virtual Annual Meeting, voting at the Annual Meeting or submitting questions at the Annual Meeting. If you encounter any difficulties accessing the virtual Annual Meeting during the check-in or meeting time, please refer to the technical support information located on the login screen at [www.virtualshareholdermeeting.com/FBLG2025](http://www.virtualshareholdermeeting.com/FBLG2025).

### **Who can vote at the Annual Meeting?**

Only stockholders of record at the close of business on April 14, 2025 will be entitled to vote at the Annual Meeting. On this record date, there were (i) [37,735,300] 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. 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, par value \$0.00001 per share, or the 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 April 14, 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 Annual Meeting by going to [www.virtualshareholdermeeting.com/FBLG2025](http://www.virtualshareholdermeeting.com/FBLG2025) and following the instructions regarding voting. Whether or not you plan to attend the Annual 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 April 14, 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 Annual 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 Annual Meeting. Beneficial holders who attend the Annual Meeting may also vote during the Annual Meeting by going to [www.virtualshareholdermeeting.com/FBLG2025](http://www.virtualshareholdermeeting.com/FBLG2025) 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 currently in effect, or the Amended and Restated 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 [46.3]% of the total votes eligible to be cast at the Annual Meeting, FOR each of the director nominees and the proposals described in this proxy statement.

### What am I voting on?

There are four matters scheduled for a vote:

- Election of the two Class II directors named in this proxy statement (Proposal 1);
- Ratification of the appointment of WithumSmith+Brown, PC as our independent registered public accounting firm for the year ending December 31, 2025 (Proposal 2);
- Approval of an amendment to the Amended and Restated Certificate of Incorporation to increase the authorized capital stock (Proposal 3); and
- Approval, for purposes of Nasdaq Listing Rule 5635(d), of the issuance of shares of common stock to YA II PN, LTD., a Cayman Islands exempt limited company, or Yorkville, pursuant to the Standby Equity Purchase Agreement, or the SEPA, in excess of 7,013,635 shares of common stock, or the Exchange Cap (Proposal 4).

### What are the Board's voting recommendations?

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

| <b>Matter</b>   | <b>Page</b> | <b>Board<br/>Recommends</b>               | <b>Vote Required for<br/>Approval</b>           | <b>Effect of<br/>Abstentions</b> | <b>Effect of<br/>Broker Non-Votes</b> |
|---|-------------|---|---|----------------------------------|---------------------------------------|
| Election of two Class II directors  | 7           | <b>FOR</b> each Class II director nominee | More <b>FOR</b> than <b>AGAINST</b> votes       | None                             | None                                  |
| Ratification of the appointment of WithumSmith+Brown, PC as our independent registered public accounting firm for the year ending December 31, 2025               | 10          | <b>FOR</b>                                | Majority of shares present and entitled to vote | Against                          | N/A                                   |
| Approval of an amendment to the Amended and Restated Certificate of Incorporation to increase the authorized capital stock  | 11          | <b>FOR</b>                                | Holders of a majority in voting power           | Against                          | N/A                                   |
| Approval, for purposes of Nasdaq Listing Rule 5635(d), of the issuance of shares of common stock to Yorkville pursuant to the SEPA in excess of the Exchange Cap. | 12          | <b>FOR</b>                                | Majority of shares present and entitled to vote | Against                          | None                                  |

### What if another matter is properly brought before the Annual Meeting?

The Board knows of no other matters that will be presented for consideration at the Annual Meeting. If any other matters are properly brought before the Annual 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 nominees to the Board or you may “Abstain” from voting for any nominee you specify. For the other matters to be voted on, you may vote “For” or “Against” or “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 Annual Meeting by going to [www.virtualshareholdermeeting.com/FBLG2025](http://www.virtualshareholdermeeting.com/FBLG2025) 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 Annual Meeting, we urge you to vote by proxy to ensure your vote is counted. You may still attend the Annual Meeting and vote by going to [www.virtualshareholdermeeting.com/FBLG2025](http://www.virtualshareholdermeeting.com/FBLG2025) and following the instructions regarding voting even if you have already voted by proxy.

- To vote at the Annual Meeting, go to [www.virtualshareholdermeeting.com/FBLG2025](http://www.virtualshareholdermeeting.com/FBLG2025) 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 Annual 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 June 11, 2025 to be counted.
- To vote through the Internet, go to [www.virtualshareholdermeeting.com/FBLG2025](http://www.virtualshareholdermeeting.com/FBLG2025) 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 June 11, 2025 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 Annual Meeting may also vote during the Annual Meeting by going to [www.virtualshareholdermeeting.com/FBLG2025](http://www.virtualshareholdermeeting.com/FBLG2025) 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 April 14, 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 director nominee and each of the proposals described in this proxy statement, which constitutes [46.3]% of the total votes eligible to be cast at the Annual Meeting.

### **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 Annual 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 Annual 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 ratification of the appointment of WithumSmith+Brown, PC as our independent registered public accounting firm for the year ending December 31, 2025 (Proposal 2) and the amendment to the Amended and Restated Certificate of Incorporation to increase the authorized capital stock (Proposal 3) are matters 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 2 or Proposal 3.

The election of directors (Proposal 1) and the approval, for purposes of Nasdaq Listing Rule 5635(d), of the issuance of shares of common stock to Yorkville pursuant to the SEPA in excess of the Exchange Cap (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 1 and Proposal 4.

### **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 Annual 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 Annual Meeting **and** vote. Simply attending the Annual 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 meeting, who will separately count, for the proposal to ratify the appointment of our independent registered public accounting firm (Proposal 2) and the amendment to the Amended and Restated Certificate of Incorporation to increase the authorized capital stock (Proposal 3), votes "For," "Against" and abstentions and, with respect to the election of directors (Proposal 1) and the approval, for purposes of Nasdaq Listing Rule 5635(d), of the issuance of shares of common stock to Yorkville pursuant to the SEPA in excess of the Exchange Cap (Proposal 4), votes "For," "Against," abstentions and broker non-votes. Broker non-votes have no effect on the outcome of Proposal 1 and Proposal 4, and will not be counted towards the vote total for the proposals.

## 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 four proposals, the ratification of the appointment by the Audit Committee of the Board of WithumSmith+Brown, PC as our independent registered accounting firm for the year ending December 31, 2025 (Proposal 2) and the amendment to the Amended and Restated Certificate of Incorporation to increase the authorized capital stock (Proposal 3), are "routine" matters. The other two proposals are "non-routine."

## 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) [37,735,300] 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 [35,117,651] 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 Annual Meeting?

Preliminary voting results will be announced at the Annual 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 Annual Meeting. If final voting results are not available to us in time to file a Form 8-K within four business days after the Annual 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

### ELECTION OF DIRECTORS

In accordance with our Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws, the Board has fixed the number of directors constituting the Board at six. At the Annual Meeting, the stockholders will vote to elect the two Class II director nominees named in this proxy statement to serve until the 2028 annual meeting of stockholders and until his or her successor has been duly elected and qualified, or, if sooner, until the director's death, resignation, disqualification or removal. The Board has nominated Matthew Link and Victoria Niklas, M.D. for election to the Board. Mr. Link and Dr. Niklas have served on the Board since April 2021.

Directors are elected if they receive more "For" than "Against" votes that are cast by the holders of shares present in person or represented by proxy and entitled to vote on the election of directors. Shares represented by executed proxies will be voted, if authority to do so is not specified, for the election of the two nominees named below. If any nominee becomes unavailable for election as a result of an unexpected occurrence, shares that would have been voted for that nominee will instead be voted for the election of a substitute nominee proposed by the Board. Each person nominated for election has agreed to serve if elected. Our management has no reason to believe that any of the nominees will be unable to serve.

#### DIRECTOR RESIGNATION POLICY

We have a Director Resignation Policy, which is set forth in our Corporate Governance Guidelines, a copy of which is posted on our website at <https://ir.fibrobiologics.com> under "Governance." The policy establishes that any director nominee who receives more "against" votes than "for" votes in an election of directors is required to tender his or her resignation promptly following the certification of the election results. Broker non-votes, if any, are not counted as either an "against" or "for" vote.

The Governance and Nominating Committee, or the Nominating Committee, will consider the tendered resignation and make a recommendation to the Board. The Board will then act on the recommendation of the Nominating Committee. If a director's tendered resignation is rejected by the Board, the director will continue to serve for the remainder of their term and until their successor is duly elected and qualified, or their earlier death, resignation, disqualification, or removal.

#### INFORMATION REGARDING DIRECTOR NOMINEES AND CONTINUING DIRECTORS

The Board is divided into three classes, each of which consists of two directors, with members of each class holding office for staggered three-year terms. There are currently two Class I directors, whose terms expire at the 2027 annual meeting of stockholders; two Class II directors, who are up for election at the Annual Meeting for a term expiring at the 2028 annual meeting of stockholders; and two Class III directors, whose terms expire at the 2026 annual meeting of stockholders.

Biographical and other information as of the date of this proxy statement regarding our director nominees and directors continuing in office, including the primary skills and experiences considered by the Nominating Committee in determining to recommend them as nominees, is set forth below.

| Name  | Class | Age | Position                     |
|---|-------|-----|------------------------------|
| Pete O'Heeron, MSHA                         | III   | 61  | Founder, CEO and Chairperson |
| Richard Cilento, Jr., MBA <sup>(1)(2)</sup> | I     | 63  | Independent Director         |
| Stacy Coen <sup>(1)(2)(3)</sup>             | III   | 54  | Independent Director         |
| Robert E. Hoffman                           | I     | 59  | Interim CFO and Director     |
| Victoria Niklas, M.D. <sup>(1)(3)</sup>     | II    | 66  | Independent Director         |
| Matthew Link <sup>(2)(3)</sup>              | II    | 50  | Independent Director         |

(1) Member of the Audit Committee

(2) Member of the Compensation Committee

(3) Member of the Nominating Committee

## CLASS II NOMINEES FOR ELECTION FOR A THREE-YEAR TERM EXPIRING AT THE 2028 ANNUAL MEETING

**Matthew Link.** Matthew Link has served on the Board since April 2021. Mr. Link has more than 20 years of experience in the healthcare and medical technology industries and currently serves as Chief Commercial Officer for Sight Sciences, an eyecare technology company. From 2021 to 2023 he served as managing partner at Orion Healthcare Advisors, LLC, a consulting services provider. From 2006 to 2021 Mr. Link served in regional and executive leadership positions at NuVasive Inc., a global leader in surgical implants and enabling technology for spine surgery and orthopedics. As President of NuVasive, Inc., his responsibilities included oversight of global business units in spine, neurophysiology, and orthopedics. Prior to NuVasive, Inc., Mr. Link held commercial leadership roles at Depuy Orthopedics and Depuy Spine. He also currently serves as chairman of the board of directors at Galen Robotics and as a member of the board of directors of Springbok Analytics and DinamicOR, and the Coulter Translational Research Endowment at the University of Virginia. Mr. Link received a BSEd in Physical Education and Sports Medicine from the University of Virginia. We believe Mr. Link's extensive medical technology industry and executive experience qualifies him to serve on the Board.

**Victoria Niklas, M.D.** Victoria Niklas has served on the Board since April 2021. Dr. Niklas has a distinguished career spanning more than two decades in translational research, clinical care, and teaching at academic health centers, and is currently the Chief Medical Officer of Oak Hill Bio, a clinical-stage neonatology and rare disease therapeutics company, a position she has held since 2022. Prior to joining Oak Hill Bio, Dr. Niklas served in Global Medical Affairs and as Global Program Leader of the OHB-607 program in Rare Disease and Hematology at Takeda Pharmaceuticals. Before Takeda, she was Chief Medical and Scientific Officer at Prolacta Bioscience, a neonatal nutritional product development company based on human donor milk. Dr. Niklas has nearly 30 years of experience as an academic neonatologist with expertise in developmental and acquired inflammatory disorders of the gut, the lung, and the mucosal immune system with relevance to diseases across the lifespan. She has nearly 10 years of experience in industry holding executive positions as well as program leadership roles. She has also held leadership positions in academic medicine service as Chief, Division of Newborn Medicine at Nemours Children's Hospital, Chief of Neonatology at UCLA Olive View Medical Center, and Visiting Professor of Clinical Pediatrics at the David Geffen School of Medicine at UCLA. Dr. Niklas is board certified in Perinatal and Neonatal Medicine and holds a California medical license. In addition to being a co-author on numerous scientific and clinical publications, she has helped lead the development of patented products and has served as a board member for multiple biotech and early-stage companies in functional foods. Dr. Niklas received her MD from Harvard Medical School, her MA in Biochemistry and Molecular Biology from Harvard University, and her bachelor's in Biological Sciences from Goucher College. We believe Dr. Niklas' extensive experience and knowledge in the biotechnology sector qualifies her to serve on the Board.

## CLASS I DIRECTORS CONTINUING IN OFFICE UNTIL THE 2027 ANNUAL MEETING

**Robert E. Hoffman.** Robert Hoffman has served on the Board since April 2021 and as our Interim Chief Financial Officer since October 2024. Mr. Hoffman previously served as President, CEO and Chairperson of the board of directors of Kintara Therapeutics, Inc. (Nasdaq: KTRA), a clinical stage, biopharmaceutical company focused on the development and commercialization of new cancer therapies, from November 2021 to October 2024, when it merged with TuHURA Biosciences, Inc. (Nasdaq: HURA), or TuHURA. Prior to that, Mr. Hoffman served as Senior Vice President and Chief Financial Officer of Heron Therapeutics, Inc., (Nasdaq: HRTX), a commercial-stage biotechnology company, from April 2017 to October 2020, and as Chief Financial Officer of AnaptysBio, Inc. (Nasdaq: ANAB), a specialty pharmaceutical company, from July 2015 to September 2016. From June 2012 to July 2015, Mr. Hoffman served as the Senior Vice President, Finance and Chief Financial Officer of Arena Pharmaceuticals, Inc., or Arena, a biopharmaceutical company, prior to its acquisition by Pfizer Inc. in March 2022. From August 2011 to June 2012 and previously from December 2005 to March 2011, Mr. Hoffman served as Arena's Vice President, Finance and Chief Financial Officer and in a number of various roles of increasing responsibility from 1997 to December 2005. He is a member of the board of directors of ASLAN Pharmaceuticals Limited (Nasdaq: ASLN), a dermatology-focused biotechnology company, TuHURA, a Phase 3 registration-stage immuno-oncology company, and of Esperion Therapeutics, Inc., a commercial stage biopharmaceutical company. Mr. Hoffman formerly served as a member of the board of directors of Saniona AB, a biopharmaceutical company, from September 2021 to May 2022, and as a member of the board of directors of Kura Oncology, Inc. (Nasdaq: KURA), a cancer research company, from March 2015 to August 2021. He also previously served as a member of the board of directors of CombiMatrix Corporation, a molecular diagnostics company, MabVax Therapeutics Holdings, Inc., a biopharmaceutical company, and Aravive, Inc. (Nasdaq: ARAV), a clinical stage biotechnology company. Mr. Hoffman serves as a member of the steering committee of the Association of Bioscience Financial Officers. Mr. Hoffman formerly served as a director and President of the San Diego Chapter of Financial Executives International and was an advisor to the Financial Accounting Standard Board, or FASB, from 2010 to 2020, advising the U.S. accounting rulemaking organization on emerging issues and new financial guidance. Mr. Hoffman holds a B.B.A. from St. Bonaventure University. We believe Mr. Hoffman's financial and executive business experience qualifies him to serve on the Board.

**Richard Cilento, Jr., MBA.** Richard Cilento has served on the Board since April 2021. Mr. Cilento is the founder, Chairperson of the board of directors and Chief Executive Officer of GlycosBio Inc., a life sciences research and development company. Mr. Cilento was the founder, President and Chief Executive Officer of FuelQuest, Inc., a provider of information technology, supply chain management and tax automation technologies, which was acquired by Saracen Energy Advisors LP in May 2007. Mr. Cilento has held senior-management positions with several technology firms, including Xerox Corporation, where he served as Vice President of Strategic Services of Xerox Connect. Prior to that, he was the Vice President of Corporate Services for XLConnect Solutions, where he served as the lead technologist for advanced systems and supported the organization through its initial public offering and its eventual merger with Xerox. An aeronautical and astronomical engineer, Mr. Cilento began his career at the U.S. National Aeronautics and Space Administration (NASA), where he and his team built space shuttle flight plans for the U.S. Department of Defense Star Wars program and a diverse set of government-funded technology and life science experimentation. Mr. Cilento was a lead engineer who designed and planned the space station assembly sequences for the construction of the International Space Station. Mr. Cilento holds a BS degree in Aeronautical and Astronomical Engineering from the University of Illinois and an MBA at the University of Houston, Clear Lake. We believe Mr. Cilento's business experience across a broad set of technical industries and executive-level knowledge of capital markets, including venture capital, private equity, and public markets, qualifies him to serve on the Board.

**CLASS III DIRECTORS CONTINUING IN OFFICE UNTIL THE 2026 ANNUAL MEETING**

**Stacy Coen, MBA.** Stacy Coen has served as a member of the Board since July 2021. Ms. Coen has over 25 years of business and corporate development experience from leading oncology and rare disease companies. She most recently served as Chief Business Officer for ImmunoGen, Inc., a company that was developing the next generation of antibody-drug conjugates to improve outcomes for cancer patients, which has now been acquired by AbbVie, Inc. Prior to ImmunoGen, Ms. Coen worked at Editas Medicine, Inc., a biotechnology company developing therapies for rare diseases, where she served as Vice President, Business Development and was responsible for business development, strategy, transactions and alliance management. Prior to joining Editas, Ms. Coen served in multiple roles of increasing responsibility at Genzyme Corporation (now Sanofi), including as Vice President, Head of Rare Disease Business Development and Licensing, and as Vice President, Global Head of Strategy and Business Development, Multiple Sclerosis, among others. Ms. Coen currently serves on the Huntington's Disease Society of America's Center Programs & Education Advisory Committee. Ms. Coen received a BS in Finance and Economics from the University of Massachusetts and an MBA from the Darden Graduate School of Business at the University of Virginia. We believe Ms. Coen's extensive executive-level experience in the biotechnology industry qualifies her to serve on the Board.

**Pete O'Heeron, MSHA.** Pete O'Heeron is our founder and has served as our Chief Executive Officer and as Chairman of the Board since our inception in April 2021. Mr. O'Heeron is a seasoned leader in his field, with over 25 years of experience in medical technology and biotech development. He is also the founder of FibroGenesis, a regenerative medicine company and our former parent company, and has served as its Chief Executive Officer since January 2006. Since September 2012, Mr. O'Heeron has also served as Chairman of the Board, Secretary and Treasurer of Liberty Star Uranium & Metals Corp., a company engaged in the acquisition and exploration of mineral properties. Prior to FibroGenesis, in 2006 Mr. O'Heeron founded an operational investment group, Advanced Medical Technologies, LLC, that identified early-stage opportunities in the medical field with strong intellectual property potential, and in 1998 he founded NeoSurg Technologies, which developed the T2000 Minimally Invasive Access System and was sold to Cooper Surgical in 2006. Mr. O'Heeron also previously served in a variety of executive-level positions at Christus Health Care Corporation from 1988 until 1995 and has provided strategic advisory services to healthcare companies in the areas of biologics, advanced surgical instrumentation, and telemedicine. Mr. O'Heeron is a preeminent biopharma inventor, with over 300 patents issued and pending in the areas of biologics, cell therapy and medical devices. Mr. O'Heeron received his Bachelor's Degree in Healthcare Administration from Texas State University, his Masters in Healthcare Administration from the University of Houston Clear Lake, and his Executive Management Certification in Mergers and Acquisition from the University of Chicago. We believe Mr. O'Heeron is qualified to serve as a member of the Board based on our review of his experience, qualifications, attributes, and skills, including co-founding our company and his executive leadership experience in the biotechnology industry.

**THE BOARD RECOMMENDS  
A VOTE IN FAVOR OF EACH CLASS II NOMINEE SET FORTH ABOVE.**

## PROPOSAL 2

### RATIFICATION OF APPOINTMENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Audit Committee has selected WithumSmith+Brown, PC, or Withum, as our independent registered public accounting firm for the year ending December 31, 2025 and recommended management submit the appointment of its independent registered public accounting firm for ratification by the stockholders at the Annual Meeting. Representatives of Withum are expected to attend the Annual Meeting via the live webcast. They will have an opportunity to make a statement if they so desire and will be available to respond to appropriate questions.

Neither our Amended and Restated Bylaws nor other governing documents or law require stockholder ratification of the appointment of Withum as our independent registered public accounting firm. However, the Board is submitting the appointment of Withum to the stockholders for ratification as a matter of good corporate practice. If the stockholders fail to ratify the appointment, the Board will reconsider whether or not to retain that firm. Even if the appointment is ratified, the Board in its discretion may direct the appointment of different independent auditors at any time during the year if they determine that such a change would be in our best interests and of our stockholders.

#### FEES BILLED BY INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM IN 2024 AND 2023

The following table presents fees for professional audit services and other services rendered to us by Withum for our fiscal years ended 2024 and 2023.

*WithumSmith+Brown, PC*

|                       | Year Ended December 31, |            |
|-----------------------|-------------------------|------------|
|                       | 2024                    | 2023       |
| Audit Fees(1)         | \$ 364,520              | \$ 268,482 |
| Audit-Related Fees(2) | —                       | —          |
| Tax Fees(3)           | —                       | —          |
| All Other Fees        | —                       | —          |
| Total Fees            | \$ 364,520              | \$ 268,482 |

- (1) Audit fees consist of fees for professional services for the audit of our annual financial statements, including the review of interim financial statements, audits, and related services that are normally provided in connection with registration statements, including consents. The audit fees for the fiscal year ended December 31, 2023 include fees associated with our direct listing on January 31, 2024, or the Direct Listing.
- (2) Audit-related fees include fees for assurance and related services that traditionally are performed by the independent accountant. More specifically, these services would include, among others: employee benefit plan audits, due diligence related to mergers and acquisitions, accounting consultations and audits in connection with acquisitions, internal control reviews, attest services related to financial reporting that are not required by statute or regulation, and consultation concerning financial accounting and reporting standards. There were no audit-related fees incurred in 2024 or 2023.
- (3) Tax fees include fees billed for professional services rendered by the principal accountant for tax compliance, tax advice, and tax planning. There were no tax fees incurred in 2024 or 2023.

#### PRE-APPROVAL POLICIES AND PROCEDURES

Our Audit Committee has established a policy governing our use of the services of our independent registered public accounting firm. Under the policy, our Audit Committee is required to pre-approve all audit and permissible non-audit services performed by our independent registered public accounting firm in order to ensure that the provision of such services does not impair such accounting firm's independence. All services provided by Withum for our fiscal years ended December 31, 2024 and 2023 were pre-approved by our Audit Committee.

Pre-approval may be given as part of the Audit Committee's approval of the scope of the engagement of the independent registered public accounting firm or on an individual explicit case-by-case basis.

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

### PROPOSAL 3

#### APPROVAL OF AN AMENDMENT TO THE AMENDED AND RESTATED CERTIFICATE OF INCORPORATION TO INCREASE THE AUTHORIZED CAPITAL STOCK

The Board has approved and submitted for stockholder approval an amendment, or the Authorized Capital Increase, to our Amended and Restated Certificate of Incorporation to increase the number of shares of our authorized capital stock to 310,000,000 shares, consisting of 300,000,000 shares of common stock and 10,000,000 shares of preferred stock.

#### BACKGROUND AND REASONS FOR THE AUTHORIZED CAPITAL INCREASE

Under our Amended and Restated Certificate of Incorporation, we are currently authorized to issue up to 110,000,000 shares of stock, consisting of 100,000,000 shares of common stock and 10,000,000 shares of preferred stock. As of the close of business on April 4, 2025, there were 37,735,300 shares of common stock and 2,500 shares of Series C Preferred Stock issued and outstanding.

Other than as described in Proposal 4, we have no current definitive plans, arrangements, or understandings to issue any of the additional authorized shares of common stock. The Board believes it is appropriate to increase our authorized shares of common stock so that we have shares of common stock available to provide additional flexibility to promptly and appropriately use our common stock for strategic, business and financial purposes in the future, as well as to have sufficient shares available to provide appropriate equity incentives for our employees, officers and/or directors. The additional shares of common stock, if approved, may be used for various purposes without further stockholder approval. These purposes may include raising capital; providing equity incentives to employees, officers, and/or directors; establishing collaborative or partnering arrangements with other companies; and other corporate purposes.

#### FORM OF AMENDMENT TO AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

A form of the certificate of amendment to the Amended and Restated Certificate of Incorporation, or the Capital Increase Amendment, that would be filed with the Delaware Secretary of State to effect the Authorized Capital Increase is set forth in Appendix A. If the stockholders approve the Capital Increase Amendment, we intend to file the Capital Increase Amendment with the Delaware Secretary of State as soon as practicable following the Annual Meeting, and the Capital Increase Amendment will be effective upon such filing. However, if at any time prior to the effectiveness of the filing of the Capital Increase Amendment with the Delaware Secretary of State, the Board determines that it would not be in the best interests of our company and stockholders to effect the Authorized Capital Increase, in accordance with Delaware law and notwithstanding the approval of the stockholders of the Capital Increase Amendment, the Board may abandon it without further action by the stockholders.

#### RISKS AND EFFECTS OF THE AUTHORIZED CAPITAL INCREASE

The additional shares of common stock to be authorized by approval of the Authorized Capital Increase would have rights identical to our current shares of outstanding common stock. Adoption of the Authorized Capital Increase and issuance of additional shares of common stock would not affect the rights of the holders of shares of currently outstanding common stock, except for effects incidental to increasing the number of shares of the common stock outstanding, such as dilution of the earnings per share and voting rights of current holders of shares of common stock. The additional shares of common stock authorized by the approval of this proposal could be issued by the Board without further vote of our stockholders except as may be required in particular cases by our Amended and Restated Certificate of Incorporation, applicable law, regulatory agencies, or Nasdaq listing rules. Under our Amended and Restated Certificate of Incorporation, stockholders do not have pre-emptive rights to subscribe to additional securities that may be issued by us, which means that current stockholders do not have a prior right thereunder to purchase any new issue of common stock in order to maintain their proportionate ownership interests in the Company.

The increase in our authorized shares of common stock could also have an anti-takeover effect, in that additional shares could be issued (within the limits imposed by applicable law) in one or more transactions that could make a change in control or takeover of the Company more difficult. For example, additional shares could be issued by us so as to dilute the stock ownership or voting rights of a person seeking to obtain control of the Company. Similarly, the issuance of additional shares to certain persons affiliated with our management could have the effect of making it more difficult to remove our management by diluting the stock ownership or voting rights of persons seeking to cause such removal. Although this Authorized Capital Increase to increase the total number of authorized shares of common stock has been prompted by business and financial considerations and not by the threat of any hostile takeover attempt (nor is the Board currently aware of any such attempts directed at us), and the Board does not intend or view the proposed increase in the number of authorized shares of our common stock as an anti-takeover measure, stockholders should nevertheless be aware that approval of this proposal could facilitate future efforts by us to deter or prevent changes in control, including transactions in which our stockholders might otherwise receive a premium for their shares over then-current market prices.

#### NO APPRAISAL RIGHTS

Stockholders have no rights under the Delaware General Corporation Law, or the DGCL, or under our Amended and Restated Certificate of Incorporation or Amended and Restated Bylaws to exercise dissenters' rights of appraisal with respect to the Authorized Capital Increase.

#### THE BOARD RECOMMENDS A VOTE IN FAVOR OF PROPOSAL 3.

## PROPOSAL 4

### APPROVAL, FOR PURPOSES OF NASDAQ LISTING RULE 5635(D), OF THE ISSUANCE OF SHARES OF COMMON STOCK TO YORKVILLE PURSUANT TO THE SEPA IN EXCESS OF THE EXCHANGE CAP

The Board has approved and submitted for stockholder approval a proposal to approve, for purposes of Nasdaq Listing Rule 5635(d), the issuance of shares of common stock to Yorkville, pursuant to the SEPA and upon conversions of the Promissory Notes (defined below), in excess of the Exchange Cap.

#### BACKGROUND AND REASONS FOR THE YORKVILLE SHARE ISSUANCE

As previously disclosed, on December 20, 2024, or the Effective Date, we entered into the SEPA with Yorkville. Pursuant to the SEPA, Yorkville agreed to advance us, subject to the satisfaction of certain conditions as set forth therein, the principal amount of \$15 million, or the Pre-Paid Advance, which will be evidenced by convertible promissory notes, or the Promissory Notes, in three equal tranches. The Promissory Notes accrue interest on the outstanding principal balance at an annual rate equal to 0%, which will increase to an annual rate of 18% upon the occurrence of an Event of Default (as defined in the Promissory Notes) for so long as such event remains uncured. The Promissory Notes will mature on December 20, 2025, which may be extended at our option to January 19, 2026 by paying an extension fee of \$100,000, and to February 18, 2026 by paying an additional extension fee of \$100,000. The maturity date may also be extended at the option of Yorkville.

On December 20, 2024, the first tranche of the Pre-Paid Advance was disbursed and we issued a convertible promissory note to Yorkville in the principal amount of \$5.0 million, or the First Note. On December 30, 2024, the second tranche of the Pre-Paid Advance was disbursed and we issued a convertible promissory note to Yorkville in the principal amount of \$5 million, or the Second Note. We expect the third tranche of the Pre-Paid Advance in the amount of \$5 million to be advanced on the second trading day after stockholders approve this Proposal 4, subject to the satisfaction of certain additional conditions.

Pursuant to the SEPA, and upon the satisfaction of the conditions to Yorkville's purchase obligation set forth in the SEPA, we have the right, from time to time, until December 20, 2026, to require Yorkville to purchase up to an additional \$10 million of our common stock by delivering written notice to Yorkville, or the Advance Notice. If there is no balance outstanding under the Promissory Notes, we may, in our sole discretion, select the amount of each issuance and sale by us to Yorkville under the SEPA, or an Advance. If there is a balance outstanding under the Promissory Notes, we may only submit an Advance Notice (i) if an Amortization Event (as defined in the Promissory Notes) has occurred and our obligation to make prepayments under the Promissory Notes has not ceased, and (ii) the aggregate purchase price owed to us from such Advances will be paid by Yorkville by offsetting such amount against an equal amount outstanding under the Promissory Notes.

For so long as there is a balance outstanding under the Promissory Notes, Yorkville, at its sole discretion, may deliver to us a notice, or an Investor Notice, to cause an Advance Notice to be deemed delivered to Yorkville and the issuance of shares of our common stock to Yorkville pursuant to an Advance. Yorkville may select the amount of the Advance pursuant to an Investor Notice which shall not exceed the limitations set forth in the SEPA, provided that the amount of the Advance selected will not exceed the balance owed under the Promissory Notes outstanding on the date of delivery of the Investor Notice. Yorkville will pay the purchase price for such shares to be issued pursuant to the Investor Notice by offsetting the amount of the purchase price against an amount outstanding under the Promissory Notes.

The sale and issuance of shares of our common stock to Yorkville pursuant to the SEPA or conversions of Promissory Notes is subject to certain limitations, including that Yorkville cannot purchase any shares that would result in it beneficially owning more than 4.99% of our then-outstanding shares of common stock. Under the applicable rules of The Nasdaq Stock Market LLC, or the Nasdaq Rules, and pursuant to the SEPA, in no event may we issue or sell to Yorkville shares of common stock in excess of the Exchange Cap, which is 19.99% of the shares of common stock outstanding immediately prior to the Effective Date, unless we obtain stockholder approval to issue shares of common stock in excess of the Exchange Cap. In any event, we may not issue or sell any shares of common stock under the SEPA if such issuance or sale would breach any applicable Nasdaq Rules.

From December 20, 2024 through the close of business on April 4, 2025, we issued 2,530,591 shares of common stock pursuant to Yorkville's conversion of \$3.6 million in principal amount of the Second Note. Additionally, we issued 118,991 shares of common stock to Yorkville in payment of a commitment fee, or the Commitment Fee, pursuant to the terms of the SEPA.

On April 4, 2025, \$5.0 million in principal amount of the First Note and \$1.4 million in principal amount of the Second Note were outstanding.

The 2,649,582 shares of common stock issued to Yorkville in satisfaction of the Commitment Fee and upon conversions of the Second Note through the close of business on April 4, 2025 are not entitled to vote on this Proposal 4 in accordance with Nasdaq Listing Rule 5635(d).

The foregoing description of the SEPA is qualified in its entirety by reference to the SEPA, a copy of which is filed as Exhibit 10.1 to our Current Report on Form 8-K filed with the SEC on December 23, 2024.

#### **REASONS FOR SEEKING STOCKHOLDER APPROVAL**

Nasdaq Listing Rule 5635(d) requires us to obtain stockholder approval prior to the sale, issuance or potential issuance of common stock (or securities convertible into or exercisable for common stock) in connection with a transaction other than a public offering at a price less than the minimum price which either 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. On December 20, 2024, the execution date of the SEPA, the applicable "minimum price" was \$2.03 per share. Stockholder approval of this proposal will constitute stockholder approval for purposes of Nasdaq Listing Rule 5635(d).

The Board has determined that the SEPA and our ability to issue shares of common stock thereunder in excess of the Exchange Cap are in the best interests of us and our stockholders because the ability to sell shares of common stock to Yorkville provides us with a reliable source of capital for general corporate purposes. Furthermore, the SEPA provides us with future flexibility to enhance our liquidity in an opportunistic and efficient manner.

We cannot predict the price of our common stock at any future date and therefore cannot predict the number of shares of common stock to be issued under the SEPA. Therefore, we are seeking stockholder approval under this proposal to issue shares of common stock in excess of the Exchange Cap, if necessary, to Yorkville under the terms of the SEPA and upon conversion of the Promissory Notes.

#### **POTENTIAL CONSEQUENCES IF THE YORKVILLE SHARE ISSUANCE PROPOSAL IS NOT APPROVED**

The failure of the Company's stockholders to approve this proposal will prevent us from selling shares of common stock to Yorkville under the SEPA and the Promissory Notes in excess of the Exchange Cap.

If we are limited in our ability to raise additional capital under the SEPA, we may not be able to execute on our strategic plans, and we may need to seek alternative sources of capital to fund our operations, which may not be available to us on favorable terms, or at all. We can provide no assurance that we would be successful in raising funds in the future or that such funds could be raised at prices that would not create substantial dilution for our existing stockholders. If we are unable to raise additional capital, then we may have difficulty entering into liquidity transactions, which would lead to a decrease in revenues and adversely affect our operations and business plans. Accordingly, our Board believes that providing us the flexibility to issue shares of common stock in excess of the Exchange Cap is advisable and in the best interests of us and our stockholders.



#### **EFFECT ON CURRENT STOCKHOLDERS**

We registered the resale or other disposition of up to 41,489,581 shares of our common stock by Yorkville, or the Registered Shares. These shares of our common stock have been or may be issued by us to Yorkville pursuant to the SEPA or upon conversions of the Promissory Notes. Such shares of common stock include (i) up to 36,945,812 shares of common stock that may be issued to Yorkville pursuant to the Promissory Notes, (ii) 118,991 shares of common stock we issued to Yorkville in payment of the Commitment Fee, and (iii) up to 4,424,778 shares of common stock that may be issued to Yorkville under Advances pursuant to the SEPA. The number of Registered Shares were calculated using an assumed conversion price of \$0.406 for the Promissory Notes and \$2.26 for sales under an Advance.

If approved, this proposal will provide for the issuance upon the conversion of Promissory Notes and sales under Advances of up to the number of Registered Shares or, if the applicable price of our common stock is lower than the price assumptions used to calculate the number of Registered Shares, additional shares following registration of such additional shares with the SEC. However, the number of shares we can issue upon conversion of the Promissory Notes and Advances would be limited by the number of authorized shares of common stock from time to time, which was 100 million shares as of April 4, 2025, and of which approximately 50 million shares were available and either reserved for future issuances under the SEPA and upon conversion of the Promissory Notes or unreserved for future issuance as of such date. The issuance of shares of common stock to Yorkville will dilute the percentage ownership interest of all stockholders, could dilute the book value per share of the common stock and will increase the number of our outstanding shares, which could cause the market price of our common stock to decrease. Depressed trading prices of our common stock could further impair our ability to raise sufficient capital from our operations to carry on our business in the ordinary course.

#### **NO APPRAISAL RIGHTS**

Stockholders have no rights under the DGCL or under our Amended and Restated Certificate of Incorporation or Amended and Restated Bylaws to exercise dissenters' rights of appraisal with respect to the Yorkville Share Issuance.

#### **THE BOARD RECOMMENDS A VOTE IN FAVOR OF PROPOSAL 4.**

## CORPORATE GOVERNANCE

Our business affairs are managed under the direction of the Board. The Board has adopted Corporate Governance Guidelines as a framework for our company's governance, which is posted on our website at <https://ir.fibrobiologics.com> under "Governance."

### Our Governance Structure and Philosophy

Our governance practices are designed to support our focus on developing and commercializing fibroblast-based therapies for patients suffering from chronic diseases with significant unmet medical needs, including wound healing, multiple sclerosis, degenerative disc disease, psoriasis and certain cancers, and potential human longevity applications including thymic involution reversal. We are a clinical-stage biotechnology company in an evolving industry that is developing our product candidates through internal research efforts. The Board believes our current governance structure enables the management team to focus on delivering long-term value to stockholders and protects minority investors from the interests of potentially short-sighted investors who may seek to act opportunistically and not in the best interests of our company or stockholders generally. Our governance structure includes several elements, including:

#### *Staggered Board*

The Board is divided into three classes, each of which consists of two directors, with members of each class holding office for staggered three-year terms. Consequently, only 1/3 of the Board, rather than the entire Board, is elected at each annual meeting. This structure provides stability and continuity, allowing directors to develop and share institutional knowledge and focus on the long term, and encourages stockholders to engage directly with the Board and management team regarding significant corporate transactions.

#### *Supermajority Voting*

The voting standard for most items is a majority of shares present and entitled to vote on the matter, but this standard increases to 66 2/3% in voting power of our stock entitled to vote on the matter in the case of amendments to certain provisions of our Amended and Restated Certificate of Incorporation and to remove directors for cause. This helps protect against a small group of stockholders acting to amend our governing documents or to remove directors for reasons that may not be in the best interests of all stockholders.

#### *Super Voting Rights*

Each share of our 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 remain outstanding, to vote all of the shares of Series C Preferred Stock on all matters on which the 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 Pete 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. 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 FOR each of the director nominees and the proposals described in this proxy statement, which constitutes [46.3]% of the total votes eligible to be cast at the Annual Meeting. The existence of, and voting rights associated with, our Series C Preferred Stock, either alone or in conjunction with certain of the other provisions of our Amended and Restated Certificate of Incorporation, such as the requirement to have a staggered board, could also have the effect of delaying, deterring or preventing a change in our control or make the removal of our management more difficult. This structure provides stability and continuity and encourages stockholders to engage directly with the Board and management team regarding significant corporate transactions.

### *Stockholders Cannot Act By Written Consent*

Our Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws do not permit stockholders to act by written consent. This helps avoid unnecessary diversion of Board and management time from executing on our long-term strategy.

The Board recognizes that our operating environment is an evolving one and that governance practices should not be static. The Board annually evaluates our governance structure to confirm it remains in the best interests of our company and our stockholders.

### **Composition of the Board**

#### *Director Nomination Process*

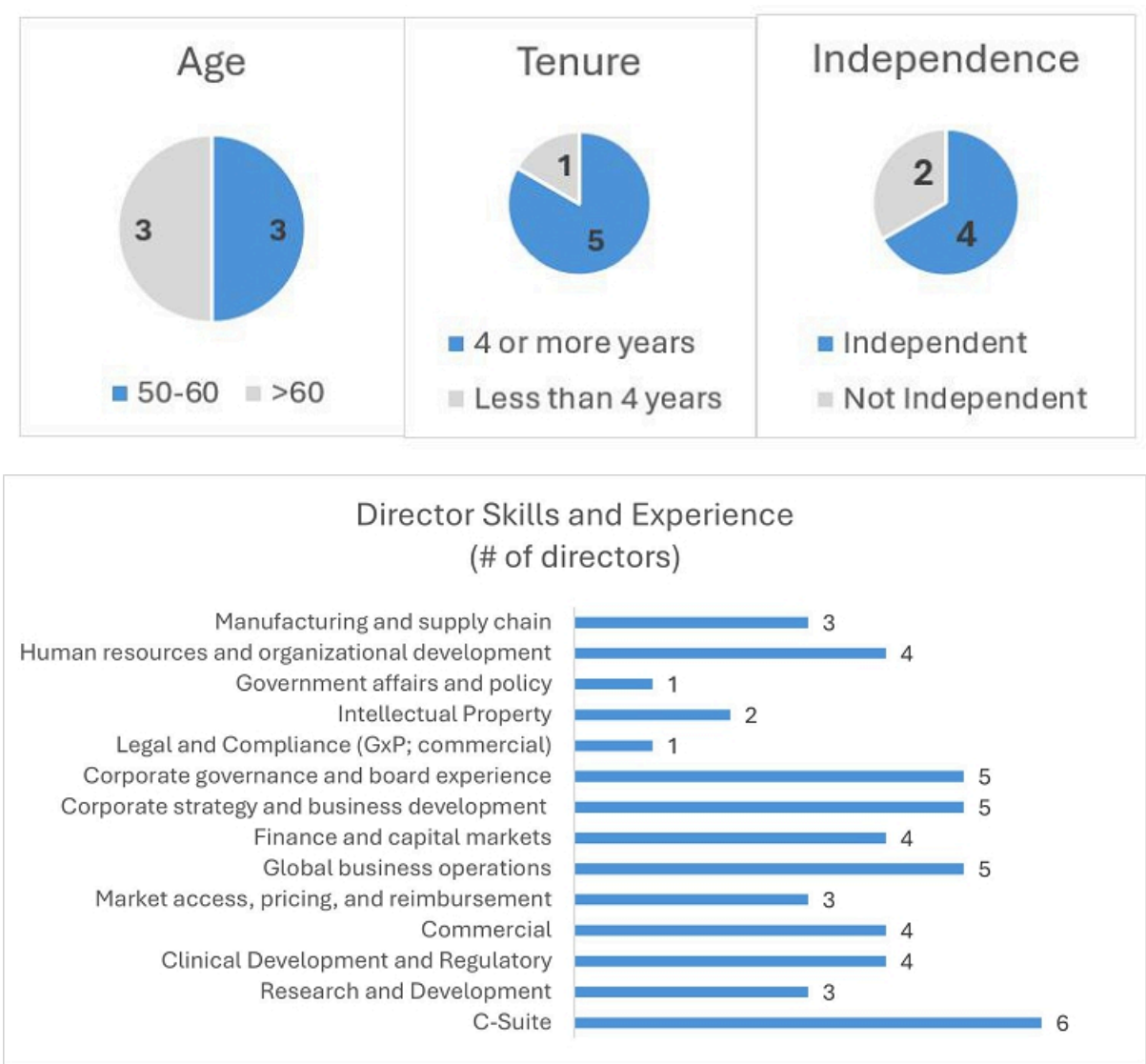
The Nominating Committee believes that candidates for director should have certain minimum qualifications, including the ability to read and understand basic financial statements, being over 21 years of age and having the highest personal integrity and ethics. The Nominating Committee also intends to consider such factors as possessing relevant expertise upon which to be able to offer advice and guidance to management, having sufficient time to devote to our affairs, demonstrated excellence in his or her field, having the ability to exercise sound business judgment and having the commitment to rigorously represent the long-term interests of our stockholders. However, the Nominating Committee retains the right to modify these qualifications from time to time. Candidates for director nominees are reviewed in the context of the current composition of the Board, our operating requirements, and the long-term interests of stockholders. In conducting this assessment, the Nominating Committee typically considers diversity of background, age, skills, and such other factors as it deems appropriate given our needs and those of the Board, to maintain a balance of knowledge, experience and capability. In the case of incumbent directors whose terms of office are set to expire, the Nominating Committee reviews these directors' overall service to us during their terms, including the number of meetings attended, level of participation, quality of performance and any other relationships and transactions that might impair the directors' independence. In the case of new director candidates, the Nominating Committee also determines whether the nominee is independent for Nasdaq purposes, which determination is based upon applicable Nasdaq listing standards, applicable SEC rules and regulations and the advice of counsel, if necessary. The Nominating Committee may, as it deems appropriate, use its network of contacts to compile a list of potential candidates, or engage a professional search firm. The Nominating Committee conducts any appropriate and necessary inquiries into the backgrounds and qualifications of possible candidates after considering the function and needs of the Board. The Nominating Committee meets to discuss and consider the candidates' qualifications and then selects a nominee for recommendation to the Board.

The Nominating Committee, to date, has not adopted a formal policy with regard to the consideration of director candidates recommended by stockholders, and will consider director candidates recommended by stockholders on a case-by-case basis, as appropriate. The Nominating Committee does not intend to alter the manner in which it evaluates candidates, including the minimum criteria set forth above, based on whether or not the candidate was recommended by a stockholder. The Nominating Committee believes that it is in the best position to identify, review, evaluate and select qualified candidates for Board membership, based on the comprehensive criteria for Board membership approved by the Board. Stockholders who wish to recommend individuals for consideration by the Nominating Committee to become nominees for election to the Board may do so by delivering a written recommendation to our Secretary at the following address: 455 E. Medical Center Blvd., Suite 300, Houston, Texas 77598, no earlier than 120 days prior and no later than 90 days prior to the anniversary date of the mailing of our proxy statement for the last annual meeting of stockholders. Submissions must include the information set forth in our Amended and Restated Bylaws. Any such submission must be accompanied by the written consent of the proposed nominee to be named as a nominee and to serve as a director if elected.

#### *Criteria for Board Membership*

When considering whether directors have the experience, qualifications, attributes or skills, taken as a whole, to enable the Board to satisfy its oversight responsibilities effectively in light of our business and structure, the Board focuses primarily on each person's background and experience as reflected in the information discussed in each of the directors' individual biographies set forth above. We believe that our directors provide an appropriate mix of experience and skills relevant to the size and nature of our business.

The Board and the Nominating Committee are committed to ensuring that the Board is comprised of a highly capable group of directors who collectively provide a significant breadth of experience, knowledge and ability to effectively represent the interest of stockholders, drive stockholder value and reflect our corporate values of integrity, honesty and adherence to high ethical standards. The following charts illustrate certain attributes of our directors, including age, tenure, independence, and experience.



Independence of the Board

The Board has determined that all members of the Board, except for Messrs. O’Heeron and Hoffman, are independent directors for purposes of the rules of Nasdaq and the SEC. In making this determination, the Board considered the relationships that each non-employee director has with us and all other facts and circumstances that the Board deemed relevant.

The composition and functioning of the Board and each of our committees complies with all applicable requirements of Nasdaq and the rules and regulations of the SEC.

Board Leadership Structure

The Board is currently chaired by our founder, CEO and Chairperson, Pete O’Heeron. We do not have a policy regarding whether the roles of the Chairperson of the Board and the CEO should be separate or combined, and the Board believes that we should maintain our flexibility to select the Chairperson and CEO and determine the appropriate leadership structure, from time to time, based on criteria that are in our best interests and the best interests of our stockholders, including in connection with its ordinary course succession planning in respect of the Chairperson and/or the CEO. We do not have a lead independent director. The Board periodically reviews its leadership structure to evaluate whether the structure remains appropriate for us.

The independent directors can meet in executive sessions without management present at every regular Board meeting. The purpose of these executive sessions is to encourage and enhance communications among the independent directors.

Committees of the Board

The Board has established an Audit Committee, a Compensation Committee, and a Nominating Committee, each of which operates pursuant to a charter adopted by the Board. The Board may also establish other committees from time to time to assist the Board. The composition and functioning of all of our committees complies with all applicable requirements of the Sarbanes-Oxley Act, Nasdaq and SEC rules and regulations. Each committee’s charter is available on our website at <https://ir.fibrobiologics.com> under “Governance.” The following table provides membership and meeting information for 2024 for each of the committees of the Board:

| Name | Audit | Compensation | Governance and Nominating |
|------|-------|--------------|---------------------------|
|------|-------|--------------|---------------------------|

|                         |       |       | Governance |
|-------------------------|-------|-------|------------|
| Richard C. Cilento, Jr. | Chair | X     |            |
| Stacy Coen              | X     | X     | Chair      |
| Robert Hoffman (1)      | -     | -     | -          |
| Victoria Niklas, M.D.   | X     | -     | X          |
| Matthew Link            | -     | Chair | X          |
| Meetings in 2024 (#)    | 5     | 6     | 4          |

(1) Mr. Hoffman became our Interim Chief Financial Officer on October 30, 2024, at which point he stepped down from the Board committees on which he served. Prior to October 30, 2024, during 2024 Mr. Hoffman served as the chairperson of the Audit Committee and the Compensation Committee.

#### *Audit Committee*

The members of our Audit Committee are Mr. Cilento, Ms. Coen, and Dr. Niklas. Mr. Cilento serves as chairperson of the committee. The Board has determined that each member of the Audit Committee is “independent” as that term is defined in Nasdaq rules and has sufficient knowledge in financial and auditing matters to serve on the Audit Committee. In addition, the Board has determined that each member of the Audit Committee meets the heightened independence requirements for audit committees required under Section 10A of the Exchange Act and related SEC and Nasdaq rules. The Board has determined that Mr. Cilento is an “audit committee financial expert,” as defined under the applicable rules of the SEC. The Audit Committee’s responsibilities include:

- appointing, approving the compensation of and assessing the independence of our independent registered public accounting firm;
- pre-approving auditing and permissible non-audit services, and the terms of such services, to be provided by our independent registered public accounting firm;
- reviewing the overall audit plan with our independent registered public accounting firm and members of management responsible for preparing our financial statements;
- reviewing and discussing with management and our independent registered public accounting firm our annual and quarterly financial statements and related disclosures as well as critical accounting policies and practices used by us;
- reviewing and discussing with management and our independent registered public accounting firm the adequacy of our internal control over financial reporting;
- overseeing and reviewing our policies and procedures for the receipt and retention of accounting-related complaints and concerns;
- recommending based upon the Audit Committee’s review and discussions with management and our independent registered public accounting firm whether our audited financial statements shall be included in our annual report on Form 10-K;
- overseeing our compliance with legal and regulatory requirements and the implementation and effectiveness of our corporate integrity and compliance programs;
- preparing the audit committee report required by SEC rules to be included in our annual proxy statement;
- reviewing all related person transactions for potential conflict of interest situations and approving, or recommending to the Board for approval, all such transactions; and
- reviewing earnings releases.

#### *Compensation Committee*

The members of our Compensation Committee are Mr. Link, Mr. Cilento, and Ms. Coen. Mr. Link serves as the chairperson of the committee. The Board has determined that each member of the Compensation Committee is “independent” as that term is defined in Nasdaq rules and is a “non-employee director” under Rule 16b-3 under the Exchange Act. In addition, the Board has determined that each member of the Compensation Committee meets the heightened independence requirements for Compensation Committee purposes under SEC and Nasdaq rules. The Compensation Committee’s responsibilities include:

- reviewing and approving our philosophy, policies, and plans with respect to the compensation of our CEO;

- making recommendations to the Board with respect to the compensation of our CEO and making recommendations to the Board with respect to the compensation of our other executive officers or approving such compensation of our other executive officers;
- reviewing and assessing the independence of compensation advisors, as applicable;
- overseeing and administering our equity incentive plans;
- reviewing and making recommendations to the Board with respect to director compensation; and
- preparing the Compensation Committee reports required by the SEC, including our “compensation discussion and analysis” disclosure, as applicable.

The Compensation Committee may, to the extent permitted by our equity compensation plans, delegate to one or more officers the authority to grant awards under our equity compensation plans to eligible individuals who are not (i) subject to the reporting requirements of Section 16 of the Exchange Act or (ii) non-management directors, in each case subject to any applicable laws, rules, or regulations.

#### *Nominating Committee*

The members of our Nominating Committee are Ms. Coen, Dr. Niklas, and Mr. Link. Ms. Coen serves as the chairperson of the committee. The Board has determined that each member of the Nominating Committee is “independent” as defined in Nasdaq rules. The Nominating Committee’s responsibilities include:

- developing and recommending to the Board criteria for Board and committee membership;
- establishing procedures for identifying and evaluating Board candidates, including nominees recommended by stockholders;
- reviewing the composition of the Board to ensure that it is composed of members containing the appropriate skills and expertise to advise us;
- identifying and screening individuals qualified to become members of the Board;
- recommending to the Board the persons to be nominated for election as directors and to each of the Board’s committees;
- developing and recommending to the Board a corporate governance framework and related governance documents; and
- overseeing the evaluation of the Board and management.

#### **Role of the Board in Risk Oversight**

We believe that risk management is an important part of establishing and executing our business strategy. The Board, as a whole and at the committee level, focuses its oversight on the most significant risks we face and on processes to identify, prioritize, assess, manage, and mitigate those risks. The committees oversee specific risk within their purview, as follows:

- the Audit Committee reviews and discusses with management and the Board the guidelines and policies that govern the processes by which we assess and manage our exposure to risk and our major financial and other risk exposures and the steps management has taken to monitor and control such exposures;
- the Compensation Committee reviews and discusses with management the relationship between our compensation policies and practices and our risk management, including the extent to which those policies and practices create risks for us, and reviews management’s conclusion regarding whether any risks arising from our compensation policies and practices are reasonably likely to have a material adverse effect on us; and
- the Nominating Committee reviews and discusses with management risk management strategies, programs, and initiatives, and oversees management of risks related to corporate governance practices.

While each committee is responsible for evaluating certain risks and overseeing the management of such risks, the entire Board is regularly informed through committee reports about such risks.

The Board and its committees receive regular reports from members of our senior management on areas of material risk to us, including strategic, operational, financing, legal and regulatory risks. While the Board has an oversight role, management is principally tasked with direct responsibility for assessing and managing risks, including implementing processes and controls to mitigate their effects on us.

#### **Meetings of the Board**

The Board met ten times in 2024. Except for Dr. Niklas, each director attended or participated in 75% or more of the aggregate of (i) the total number of meetings of the Board and (ii) the total number of meetings held by all committees of the Board on which such director served during 2024, in each case held during the period for which each respective director was serving as a director and/or committee member.

#### **Annual Meeting Attendance**

Directors are encouraged to attend the annual meeting of stockholders. Messrs. O’Heeron and Cilento and Ms. Coen attended the 2024 annual meeting of stockholders.

#### **Stockholder Communications with the Board**

Stockholders and other interested parties may communicate with the Board or a particular director by sending a letter addressed to the Board or a particular director to our Secretary at the address set forth on the first page of this proxy statement. These communications will be compiled and reviewed by our Secretary, who will determine whether the communication is appropriate for presentation to the Board or the particular director. The purpose of this screening is to allow the Board to avoid having to consider irrelevant or inappropriate communications. Our directors have requested that certain items that are unrelated to the Board’s duties, such as advertisements, spam, junk mail, mass mailings, solicitations, resumes, job inquiries, and hostile communications pertaining to matters outside the scope of a person’s duties to the company not be provided to directors and be discarded, as appropriate.

To enable us to speak with a single voice, as a general matter, senior management serves as the primary spokesperson for our company and is responsible for communicating with various constituencies, including stockholders, on behalf of our company. Directors may participate in discussions with stockholders and other constituencies on issues where Board-level involvement is appropriate.

#### **Code of Ethics and Business Conduct**

We have adopted a written Code of Ethics and Business Conduct, or the Code, that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. A current copy of the Code is posted on our website at <https://ir.fibrobiologics.com> under “Governance.” Stockholders may request a free copy of the Code by submitting a written request to: FibroBiologics, Inc., Attention: Investor Relations, 455 E. Medical Center Blvd., Suite 300, Houston, Texas 77598. If we make any substantive amendments to, or grant any waivers from, the Code for any officer or director, we will disclose the nature of such amendment or waiver on our website or in a current report on Form 8-K.

#### **Clawback Policy**

We have adopted a Clawback Policy that is designed to comply with Section 10D of the Exchange Act and the requirements of Nasdaq. This policy applies to our current and former executive officers. In the event we are required to prepare an accounting restatement of our financial statements due to our material noncompliance with any financial reporting requirement under the securities laws, the Board will require us to seek reimbursement or forfeiture reasonably promptly of any erroneously awarded incentive compensation received by any covered executive during the three completed fiscal years immediately preceding the date on which we are required to prepare an accounting restatement and during an applicable transition period.

#### **Insider Trading Policy**

The Company has adopted an insider trading policy that governs the purchase, sale, and/or other transactions of the Company’s securities by its directors, officers and employees, and has implemented processes for the Company, that the Company believes are reasonably designed to promote compliance with insider trading laws, rules and regulations, and applicable Nasdaq listing standards.

#### **Anti-Hedging Policy**

Our insider trading policy prohibits the trading of derivatives or pledges or hedging of our equity securities by members of the Board, executive officers, and employees.



## REPORT OF THE AUDIT COMMITTEE OF THE BOARD

*The material in this report is not “soliciting material,” is not deemed “filed” with the SEC and is not to be incorporated by reference in any filing of FibroBiologics under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.*

The Audit Committee has reviewed and discussed the audited financial statements for the year ended December 31, 2024 with management of FibroBiologics. The Audit Committee has discussed with the independent registered public accounting firm the matters required to be discussed pursuant to SEC regulations and Public Company Accounting Oversight Board Auditing Standard No. 1301, Communications with Audit Committees. The Audit Committee has also received the written disclosures and the letter from the independent registered public accounting firm required by applicable requirements of the PCAOB regarding the independent accountants’ communications with the Audit Committee concerning independence and has discussed with the independent registered public accounting firm the accounting firm’s independence. Based on the foregoing, the Audit Committee recommended to the Board that the audited financial statements be included in FibroBiologics’ Annual Report on Form 10-K for the year ended December 31, 2024.

### *Members of the Audit Committee*

Richard Cilento, Jr., Chair  
Stacy Coen  
Victoria Niklas, M.D.

## EXECUTIVE OFFICERS

The following table sets forth certain information concerning our executive officers as of April 4, 2025:

| Name                | Age | Position                        |
|---------------------|-----|---------------------------------|
| Pete O’Heeron, MSHA | 61  | Founder, CEO and Chairperson    |
| Robert E. Hoffman   | 59  | Interim Chief Financial Officer |
| Hamid Khoja, Ph.D.  | 57  | Chief Scientific Officer        |
| Ruben A. Garcia     | 48  | General Counsel                 |

The following is a biographical summary of the experience of our executive officers, other than Messrs. O’Heeron and Hoffman, whose information is set forth under “Proposal 1 Election of Directors—Information Regarding Director Nominees and Continuing Directors.”

**Hamid Khoja, Ph.D.** Hamid Khoja has served as our Chief Scientific Officer since August 2021. Dr. Khoja has more than 25 years of experience leading scientific teams, developing cell-based genomic, proteomic, and epigenetics assays, and tools, protocols, and technologies for use in drug discovery, and in development and clinical diagnostics. From March 2009 to August 2021, he served as the Principal Scientist at Covaris, LLC, or Corvaris, a privately-held scientific tools company with emphasis in genomics, epigenetics, and proteomics. Prior to Covaris, from March 2002 to March 2009, Dr. Khoja was a Senior Applications Scientist at Genomic Solutions, a startup scientific tools company. Dr. Khoja also previously worked at Eli Lilly and Company from November 1998 to September 1999 and Chiron Corporation from October 1995 to October 1998. Dr. Khoja received his Bachelor of Science in Molecular Biology from the University of Southern California and his Ph.D. in Molecular Biology from Boston University.

**Ruben Garcia.** Ruben Garcia has served as our General Counsel since March 1, 2024. Prior to FibroBiologics, Mr. Garcia most recently served as Senior Vice President, General Counsel and Corporate Secretary at AcelRx Pharmaceuticals, Inc. (n/k/a Talphera, Inc.), a pharmaceutical company, from April 2019 to February 2022. Prior to AcelRx, Mr. Garcia was Senior Corporate Counsel and Assistant Secretary at Ultragenyx Pharmaceutical Inc., a biopharmaceutical company, from November 2016 to April 2019. Prior to Ultragenyx, Mr. Garcia was an attorney at Vinson & Elkins LLP and Jones Day, where he practiced in the areas of capital markets, securities offerings, corporate governance and mergers and acquisitions. Mr. Garcia holds a B.A. in Government and Economics from Georgetown University and a J.D. from Stanford Law School.

## EXECUTIVE AND DIRECTOR COMPENSATION

### Executive Compensation

This section discusses the material components of the executive compensation program for our executive officers who are named in the section below titled “—2024 Summary Compensation Table.” For the fiscal year ended December 31, 2024, our “named executive officers” and their positions were as follows:

- Pete O’Heeron, CEO and Chairperson;
- Hamid Khoja, Ph.D., Chief Scientific Officer; and
- Ruben A. Garcia, General Counsel.

This discussion may contain forward-looking statements that are based on our current plans, considerations, expectations, and determinations regarding future compensation programs. Actual compensation programs that we adopt following the filing of this registration statement may differ materially from the currently planned programs summarized in this discussion. As an “emerging growth company” and a “smaller reporting company,” each as defined under SEC rules, we are not required to include a compensation discussion and analysis section and have elected to comply with the scaled disclosure requirements applicable to emerging growth companies and/or smaller reporting companies.

### 2024 Summary Compensation Table

The following table represents information regarding the total compensation awarded to, earned by, or paid to our named executive officers during the fiscal years ended December 31, 2023 and 2024:

| Name and Principal Position                              | Year | Salary<br>(\$) | Bonus<br>(\$) | Option<br>Awards<br>\$(2) | Non-Equity<br>Incentive Plan<br>Compensation<br>\$(3) | All Other<br>Compensation<br>\$(4) | Total<br>(\$) |
|--|------|----------------|---------------|---------------------------|---|------------------------------------|---------------|
| Pete O’Heeron<br><i>Chairperson and CEO</i>              | 2024 | 600,000        | —             | 788,452                   | 390,000   | 26,747                             | 1,805,199     |
|  | 2023 | 600,000        | —             | 3,335,400                 | 300,000   | 50,908                             | 4,286,308     |
| Hamid Khoja, Ph.D.<br><i>Chief Scientific Officer</i>    | 2024 | 325,000        | —             | 341,895                   | 150,000   | 36,751                             | 853,646       |
|  | 2023 | 325,000        | —             | 818,100                   | 113,750   | 50,908                             | 1,307,758     |
| Ruben A. Garcia <sup>(1)</sup><br><i>General Counsel</i> | 2024 | 270,833        | 15,000        | 2,283,274                 | 142,188   | 41,548                             | 2,752,843     |

(1) No information is provided with respect to fiscal 2023 for Mr. Garcia because Mr. Garcia was not a named executive officer prior to fiscal 2024. Mr. Garcia joined the Company as General Counsel on March 1, 2024.

(2) Amounts in this column reflect the aggregate grant date fair value of stock options granted, computed in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718, or ASC 718, rather than the amounts paid to or realized by the named executive officer. For a discussion of valuation assumptions, see Notes 2 and 13 to our financial statements included in our Annual Report on Form 10-K filed with the SEC on March 31, 2025.

(3) The dollar amounts reflect the incentive bonuses earned by the named executive officers for performance in that fiscal year, which were paid in the subsequent fiscal year.

(4) Amounts in the “All Other Compensation” column for 2024 consist of the amounts set forth in the table below. Healthcare benefits include medical, dental and vision.

| Named Executive Officer (2024) | 401(k) Plan<br>Matching<br>Contributions (\$) | Healthcare Benefits<br>(\$) | Relocation Expenses<br>(\$) |
|--------------------------------|---|-----------------------------|-----------------------------|
| Pete O’Heeron                  | —   | 26,747                      | —                           |
| Hamid Khoja, Ph.D.             | —   | 36,751                      | —                           |
| Ruben A. Garcia                | 15,525  | 7,617                       | 18,406                      |

## ***2024 Salaries***

In 2024, our named executive officers received an annual base salary to compensate them for services rendered to us. The base salary payable to each named executive officer is intended to provide a fixed component of compensation reflecting the executive's skill set, experience, role, and responsibilities.

For fiscal year 2024, Mr. O'Heeron's annual base salary rate was \$600,000, Dr. Khoja's annual base salary rate was \$325,000, and Mr. Garcia's annual base salary rate was \$325,000.

## ***2024 Bonuses***

For fiscal year 2024, each named executive officer was eligible to earn his bonus based on the attainment of pre-established annual company and individual performance objectives, as determined by the Board in its discretion. Performance objectives for Mr. O'Heeron focused on financing and business development goals. Dr. Khoja's objectives focused on establishing the manufacturing process, preparing for a clinical trial, completing pre-clinical studies, advancing regulatory pathways and filings, and other research and development matters. Mr. Garcia's objectives focused on managing the contracting life-cycle, facilitating financing and business development efforts, managing regulatory compliance, and managing board processes and corporate governance matters. Mr. O'Heeron was eligible to earn an annual cash bonus targeted at 50% of his base salary, or \$300,000, based on achievement of the aggregate objectives, Dr. Khoja was eligible to earn an annual cash bonus targeted at 35% of base salary, or \$113,750, based on achievement of personal objectives, and Mr. Garcia was eligible to earn an annual cash bonus targeted at 35% of base salary, or \$113,750, based on achievement of personal objectives. All of the named executive officers were eligible for an additional 50% of the bonus target if certain stretch goals relating to research and development activities, business development, and financings were achieved.

Annual bonuses are determined based upon both company performance and individual contributions for the fiscal year and are generally determined and paid out in the first quarter of the subsequent year. In January 2025, the Compensation Committee reviewed performance against the 2024 goals to determine whether, and to what extent, the named executive officers achieved the applicable objectives. Based on the review, the Compensation Committee determined the named executive officers achieved sixty (60) percent of the stretch goals and that Mr. O'Heeron achieved 100% of his personal objectives, Dr. Khoja achieved 78% of his personal objectives, and Mr. Garcia achieved 95% of his personal objectives. In support of the bonus determinations, the Compensation Committee also recognized that the named executive officers accomplished the objectives with limited resources, both human capital and financial.

## ***Role of Compensation Consultant***

For 2024, the Compensation Committee engaged a compensation consultant, Anderson Pay Advisors LLC, to provide the Compensation Committee with a competitive compensation assessment (cash and equity) for our non-employee directors, executives and broad-based employees based on current private and venture capital backed companies and develop a compensation matrix covering base salary ranges, target bonus levels, and equity grant guidelines.

Under its charter, the Compensation Committee has the authority, in its sole discretion, to retain or obtain the advice of compensation consultants, legal counsel or other advisers, and it has direct responsibility for the appointment, compensation and oversight of the work of any such adviser. The Compensation Committee also has the right to receive from the Company appropriate funding for the payment of reasonable compensation to the adviser it retains.

## ***Role of our Management***

In general, our Chief Executive Officer and Chief Financial Officer work together to prepare materials requested by the Compensation Committee. Our Chief Executive Officer typically presents these materials, along with any background information, to the Compensation Committee for review and consideration. The Compensation Committee may approve, modify, or reject the proposals, or may request additional information from management or outside advisors or consultants on those matters.

For setting compensation levels for executives other than our Chief Executive Officer, the Compensation Committee will solicit and consider the recommendations of the Chief Executive Officer, including his review of the officer's performance and contributions in the prior year, and his recommendations for the potential compensation levels that should be set for each executive officer for the coming year.

No executive officer participates directly in approving the amount of any component of his or her own compensation package nor is present during those deliberations.

### ***Equity Compensation***

Dr. Khoja received a commitment in his employment agreement for the equivalent of 7,500 stock options. These options were granted in 2022 after our 2022 Stock Plan was approved and authorized. Dr. Khoja was also awarded 1,250 shares of fully-vested non-voting common stock in 2022 for services performed prior to establishment of the 2022 Stock Plan. The stock options granted to Dr. Khoja in 2022 vest 1/3 on the first anniversary of the date of hire and 1/36<sup>th</sup> each month thereafter until fully vested, subject to continued service, and will accelerate in full upon the occurrence of a “change in control” of our company (as defined in the 2022 Stock Plan).

In 2023, Mr. O’Heeron and Dr. Khoja each received a grant of stock options under the 2022 Stock Plan. Mr. O’Heeron was awarded 1,853,000 stock options and Dr. Khoja was awarded 454,500 stock options. The stock options granted in 2023 vest 1/4th on the first anniversary of the vesting start date, which was January 1, 2023, with the remainder vesting monthly over 36 months.

In 2024, Mr. O’Heeron, Dr. Khoja, and Mr. Garcia each received a grant of stock options under the 2022 Stock Plan. Mr. O’Heeron was awarded 406,339 stock options, Dr. Khoja was awarded 176,200 stock options, and Mr. Garcia was awarded 176,200 stock options. The stock options granted in 2024 vest 1/4th on the first anniversary of the grant date, which was December 27, 2024, with the remainder vesting monthly over 36 months.

In connection with Mr. Garcia’s commencement of service as General Counsel, Mr. Garcia also received a grant of 180,000 stock options under the 2022 Stock Plan, which grant vests as to 1/4 of the shares underlying the stock option on the first anniversary of Mr. Garcia’s date of hire and 1/48<sup>th</sup> per month thereafter, generally subject to Mr. Garcia’s continued employment through the applicable vesting date.

For additional information about the 2022 Stock Plan, please see the section titled “—Equity Compensation Plans” below.

### **Other Elements of Compensation**

#### ***Retirement Plans***

We participate in the Insperity 401(k) retirement savings plan, sponsored by Insperity Holdings, Inc., or the Insperity 401(k) plan, for our employees, including our named executive officers, who satisfy certain eligibility requirements. Our named executive officers are eligible to participate in the Insperity 401(k) plan on the same terms as other full-time employees. In 2023 and 2024, contributions made by participants in the 401(k) plan were matched up to a specified percentage of the employee contributions on behalf of the named executive officers. These matching contributions are fully vested as of the date on which the contribution is made. Our named executive officers continue to participate in this Insperity 401(k) plan on the same terms as other full-time employees.

#### ***Employee Benefits and Perquisites***

*Health/Welfare Plans.* All of our full-time employees, including our named executive officers, are eligible to participate in Insperity’s health and welfare plans, including:

- medical, dental and vision benefits;
- medical and dependent care flexible spending accounts;
- short-term and long-term disability insurance; and
- life insurance.

We subsidize the costs of medical, dental and vision benefits for our executive officers. We believe that the employee benefits described above are necessary and appropriate to provide a competitive compensation package to our named executive officers.

## **Employment Agreements with our Named Executive Officers**

### ***Pete O’Heeron Employment Agreement***

On December 1, 2023, we entered into an employment agreement with Mr. Pete O’Heeron, pursuant to which Mr. O’Heeron agreed to serve as our President and CEO. Mr. O’Heeron’s employment pursuant to the agreement is “at-will” and is terminable by either party for any reason and with or without notice.

Pursuant to the employment agreement, Mr. O’Heeron is entitled to receive an initial base salary of \$600,000, which is to be reviewed annually by the Board or Compensation Committee, but may not be reduced without Mr. O’Heeron’s consent. In addition, the agreement provides that Mr. O’Heeron is eligible to receive an annual performance bonus, as reasonably determined by the Board or, to the extent delegated by the Board, the Compensation Committee, based on one or more performance targets annually determined by the Board or the Compensation Committee, provided that to the extent all performance targets are met, the bonus is required to equal not less than 50% of his base salary. The percentage bonus target is to be reviewed periodically by the Board or the Compensation Committee.

The agreement also provides that Mr. O’Heeron is eligible to participate in the health and welfare benefit plans and programs maintained by us for the benefit of our employees.

Pursuant to the agreement, if Mr. O’Heeron’s employment is terminated by our company without cause (as defined in the agreement) or by Mr. O’Heeron for good reason (as defined in the agreement), then he will be eligible to receive severance in an amount equal to twelve months’ base salary, paid as if he was still employed during such 12 month period, and the amount of the target bonus that would have been due during such 12 month period (payable 60 days after notice of termination). Additionally, Mr. O’Heeron shall continue to vest options during such 12 month period. If the agreement is terminated for any reason, Mr. O’Heeron is due all compensation earned through the date of termination, including unused and accrued vacation, any unpaid bonus which he is due, and a prorated portion of the bonus which would have accrued for the year of termination (with such bonus amounts being paid at the same time as bonuses are paid to other executives of our company).

In the event an involuntary termination of Mr. O’Heeron’s employment occurs during the 12 months following a change in control (as defined in the agreement), or within two months prior to a change in control, or in the event Mr. O’Heeron terminates his employment for any reason not sooner than six months after the occurrence of a change in control, and subject to Mr. O’Heeron entering into a release with us, all stock options and stock-based awards held by Mr. O’Heeron, as of the date of notice of such termination, are to vest and become exercisable or nonforfeitable.

The agreement contains customary assignment of inventions and confidentiality obligations of Mr. O’Heeron, and a 12-month non-compete/non-solicitation prohibition, following the termination of his employment.

The compensation under the employment agreement (including bonus target) may be increased from time to time by the Compensation Committee, or the Board (with the recommendation of the Compensation Committee), which increases do not require the entry into an amended employment agreement.

The Compensation Committee, or the Board, with the recommendation of the Compensation Committee, may also pay or grant discretionary cash bonuses or equity bonuses from time to time. The equity bonus may be in the form of common stock, stock options or other equity consideration, in such amounts and with such terms as may be determined by the Compensation Committee or the Board, with the recommendation of the Compensation Committee, from time to time.

### ***Hamid Khoja, Ph.D. Employment Agreement***

We have entered into an employment agreement with Dr. Khoja, dated July 20, 2021, pursuant to which Dr. Khoja serves as our Chief Scientific Officer. Dr. Khoja’s employment pursuant to the agreement is “at-will” and is terminable by either party for any reason and with or without notice.

Pursuant to his agreement, Dr. Khoja is entitled to receive an initial base salary of \$290,000, which was increased to \$325,000 in 2022. In addition, the agreement provides that Dr. Khoja is eligible to receive an annual performance bonus of up to 35% of his base salary, to be paid based on the achievement of company and/or individual performance goals. In connection with his entry into the agreement, Dr. Khoja was granted a stock option award for 7,500 stock options, which vests as to 1/3 of the shares underlying the stock option on the first anniversary of Dr. Khoja’s date of hire and 1/36<sup>th</sup> per month thereafter until fully vested, subject to continued employment through the applicable vesting date. Pursuant to the agreement, Dr. Khoja was also paid a one-time cash bonus equal to \$15,000 in connection with his commencement of employment and was entitled to payment of up to \$45,000 of relocation expenses. The agreement also provides that Dr. Khoja is eligible to participate in the health and welfare benefit plans and programs maintained by us for the benefit of our employees.

Pursuant to the agreement, if Dr. Khoja’s employment is terminated by us without cause, he will be eligible to receive severance in an amount equal to nine months’ base salary.

### ***Ruben Garcia Employment Agreement***

We have entered into an employment agreement with Mr. Garcia, dated February 29, 2024, pursuant to which Mr. Garcia serves as our General Counsel. Mr. Garcia's employment pursuant to the agreement is "at-will" and is terminable by either party for any reason with or without notice.

Pursuant to his agreement, Mr. Garcia is entitled to receive an initial base salary of \$325,000. In addition, the agreement provides that Mr. Garcia is eligible to receive an annual performance bonus of up to 35% of his base salary, to be paid based on the achievement of company and/or individual performance goals. In connection with his entry into the agreement, Mr. Garcia was granted a stock option award for 180,000 stock options, which vests as to 1/4 of the shares underlying the stock option on the first anniversary of Mr. Garcia's date of hire and 1/48<sup>th</sup> per month thereafter, subject to continued employment through the applicable vesting date. Pursuant to the agreement, Mr. Garcia was also paid a one-time cash bonus equal to \$15,000 in connection with his commencement of employment and was entitled to payment of up to \$30,000 of relocation expenses. The agreement also provides that Mr. Garcia is eligible to participate in the health and welfare benefit plans and programs maintained by us for the benefit of our employees.

Pursuant to the agreement, if Mr. Garcia's employment is terminated by us without cause, he will be eligible to receive severance in an amount equal to nine months' base salary.

### **Equity Compensation Plans**

The following summarizes the material terms of the FibroBiologics, Inc. 2022 Stock Plan, or the 2022 Stock Plan.

#### ***2022 Stock Plan***

Our Board adopted on August 10, 2022, and our stockholders approved on August 18, 2022, our 2022 Stock Plan. The 2022 Stock Plan permits the grant of incentive stock options, non-statutory stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards, and other stock awards. The 2022 Stock Plan, through the grant of stock and option awards, is intended to help us secure and retain the services of eligible award recipients, provide incentives for such persons to exert maximum efforts for our success and provide a means by which the eligible recipients may benefit from increases in value of our common stock.

As of December 31, 2024, there were 7,934,836 shares available for future issuance under the 2022 Stock Plan.

#### **Outstanding Equity Awards at December 31, 2024**

The following table presents information regarding outstanding equity awards held by our named executive officers as of December 31, 2024. All awards were granted under our 2022 Stock Plan.

| <b>Name</b>        | <b>Option awards</b>   |  |   |                                   |
|--------------------|--|--|---|-----------------------------------|
|                    | <b>Number of securities<br/>underlying unexercised<br/>options<br/>(#) exercisable</b> | <b>Number of securities<br/>underlying<br/>unexercised<br/>options<br/>(#) unexercisable</b> | <b>Option<br/>exercise price<br/>(\$)</b> | <b>Option<br/>expiration date</b> |
| Pete O'Heeron      | 887,895  | 965,105 <sup>(1)</sup>   | 2.28                                      | February 16, 2033                 |
|                    | —  | 406,339 <sup>(2)</sup>   | 2.36                                      | December 26, 2034                 |
| Hamid Khoja, Ph.D. | 7,500  | —  | 3.28                                      | September 25, 2032                |
|                    | 217,781  | 236,719 <sup>(1)</sup>   | 2.28                                      | February 16, 2033                 |
|                    | —  | 176,200 <sup>(2)</sup>   | 2.36                                      | December 26, 2034                 |
| Ruben A. Garcia    | —  | 180,000 <sup>(3)</sup>   | 13.00                                     | February 28, 2034                 |
|                    | —  | 176,200 <sup>(2)</sup>   | 2.36                                      | December 26, 2034                 |

(1) Options vest ¼ on January 1, 2024, with the remainder to vest monthly over 36 months.

(2) Options vest ¼ on December 27, 2025, with the remainder to vest monthly over 36 months.

(3) Options vest ¼ on March 1, 2025, with the remainder to vest monthly over 36 months.

Policies and Practices Related to the Grant of Certain Equity Awards

The Compensation Committee approves equity awards granted to our named executive officers on or before the grant date. We do not have a formal policy or practice for the timing of equity award grants; rather, such grants are made when determined appropriate by the Compensation Committee. The Compensation Committee does not take material non-public information into account when determining the timing and terms of such awards. The Company has not timed the disclosure of material non-public information for the purpose of affecting the value of executive compensation.

|                    |            |  |  |  |  | Percentage<br>Change in the<br>Closing Market<br>Price of the<br>Securities<br>Underlying the<br>Award Between<br>the Trading Day<br>Ending<br>Immediately<br>prior to the<br>Disclosure of<br>Material Non-<br>Public<br>Information<br>and the Trading<br>Day Beginning<br>Immediately<br>Following the<br>Disclosure of<br>Material Non-<br>Public<br>Information |
|--------------------|------------|--|--|--|--|--|
| Name               | Grant Date | Number of<br>Securities<br>Underlying the<br>Award | Exercise Price<br>of the Award<br>(\$) | Grant Date Fair<br>Value of the<br>Award<br>(\$) |  |  |
| Pete O’Heeron      | 12/27/2024 | 406,339  | 2.36                                   | 1.94   |  | (11.61)%   |
| Hamid Khoja, Ph.D. | 12/27/2024 | 176,200  | 2.36                                   | 1.94   |  | (11.61)%   |
| Ruben A. Garcia    | 12/27/2024 | 176,200  | 2.36                                   | 1.94   |  | (11.61)%   |
|                    | 03/01/2024 | 180,000  | 13.00                                  | 10.80  |  | (0.08)%  |



## 2024 Director Compensation

### 2024 Non-employee Director Compensation Table

The following table presents the total compensation for each person who served as a non-employee member of the Board during the fiscal year ended December 31, 2024. Other than as set forth in the table and described more fully below, we did not pay any compensation, make any equity awards or non-equity awards to, or pay any other compensation to any of the non-employee members of the Board in 2024 for their services as members of the Board. Mr. O’Heeron, our CEO and Chairperson, received no additional compensation for his service as a director. Mr. Hoffman ceased receiving compensation for his service as a director upon his appointment as our Interim Chief Financial Officer. See the section above titled “—Executive Compensation” for more information on the compensation paid to or earned by Mr. O’Heeron as an employee for the year ended December 31, 2024. See the table below for more information on the compensation paid to or earned by Mr. Hoffman as an employee for the year ended December 31, 2024.

| Name                  | Fees Earned or<br>Paid in Cash<br>(\$) | Option Awards<br>(\$) <sup>(1)(2)</sup> | All Other<br>Compensation<br>(\$) <sup>(3)</sup> | Total<br>(\$) |
|-----------------------|--|---|--|---------------|
| Robert E. Hoffman     | 45,584                                 | 6,800                                   | 176,476  | 228,860       |
| Victoria Niklas, M.D. | 48,000                                 | 6,800                                   | —  | 54,800        |
| Richard Cilento, Jr.  | 50,370                                 | 6,800                                   | —  | 57,170        |
| Stacy Coen            | 58,370                                 | 6,800                                   | —  | 65,170        |
| Matthew Link          | 50,236                                 | 6,800                                   | —  | 57,036        |

- (1) In August 2024, each of our non-employee directors at the time was granted 5,000 stock options with an exercise price of \$1.73 per share.
- (2) The amounts reported represent the aggregate grant date fair value of the stock options awarded to the non-employee directors during fiscal year 2024, calculated in accordance with ASC Topic 718. Such grant date fair value does not take into account any estimated forfeitures. For a discussion of valuation assumptions, see Notes 2 and 13 to our financial statements included in our Annual Report on Form 10-K filed with the SEC on March 31, 2025. The amounts reported in this column reflect the accounting cost for the stock options and do not correspond to the actual economic value that may be received upon exercise of the stock options or any sale of any of the underlying shares of common stock.
- (3) Amounts in the “All Other Compensation” column consist of the compensation paid to Mr. Hoffman following his appointment as our Interim Chief Financial Officer effective October 30, 2024. These amounts include: (i) \$ 95,485 in salary, (ii) \$75,000 in bonus, (iii) \$2,979 in 401(k) Plan matching contributions, and (iv) \$3,012 in medical, dental and vision benefits. Mr. Hoffman’s \$75,000 bonus was not included in the 2024 Non-employee Director Compensation Table included in our Registration Statement on Form S-1 filed on January 10, 2025, because such amount was not yet determinable at the time of such filing.

As of December 31, 2024, Mr. Hoffman and the non-employee members of the Board held the following aggregate number of unexercised options:

| Name                 | Number of Securities Underlying Unexercised Options |
|----------------------|---|
| Robert E. Hoffman    | 195,300   |
| Victoria Niklas      | 195,300   |
| Richard Cilento, Jr. | 195,300   |
| Stacy Coen           | 195,300   |
| Matthew Link         | 195,300   |

Except as set forth above, no non-employee member of the Board held unexercised options or unvested shares of our common stock as of December 31, 2024.

#### ***Non-Employee Director Compensation Policy - 2024***

The Board has adopted a non-employee director compensation policy. The policy is designed to enable us to attract and retain, on a long-term basis, highly qualified non-employee directors. Under the policy, each director who is not an employee is paid cash compensation as set forth below:

| Position                       | Annual Retainer |
|--------------------------------|-----------------|
| <b>Board:</b>                  |                 |
| Members (other than chair)     | \$ 35,000       |
| <b>Audit Committee:</b>        |                 |
| Members (other than chair)     | \$ 8,000        |
| Retainer for chair             | \$ 10,000       |
| <b>Compensation Committee:</b> |                 |
| Members (other than chair)     | \$ 6,000        |
| Retainer for chair             | \$ 10,000       |
| <b>Nominating Committee:</b>   |                 |
| Members (other than chair)     | \$ 5,000        |
| Retainer for chair             | \$ 10,000       |

In addition, the non-employee director compensation policy provides that, upon initial election to the Board, each non-employee director will be granted an equity award the equivalent of 7,500 shares of common stock, or the Initial Grant. Furthermore, on the date of each of our annual meeting of stockholders, each non-employee director who continues as a non-employee director following such meeting will be granted an annual equity award of stock options, to purchase 5,000 shares, or the Annual Grant. The Annual Grant will vest in full upon the earlier of (i) the first anniversary of the date of grant or (ii) the date of the next annual meeting; *provided, however*, that all vesting shall cease if the director resigns from the Board or otherwise ceases to serve as a director, unless the Board determines that the circumstances warrant continuation of vesting. In addition, all vested options remain exercisable for 12 months if the director resigns from the Board or otherwise ceases to serve as a director. Notwithstanding the foregoing, if an outside director was initially elected to the Board within 12 months preceding the annual meeting, then such outside director shall receive an Annual Grant that is pro-rated on a monthly basis for time served as an outside director.

#### **DELINQUENT SECTION 16(a) REPORTS**

Section 16(a) of the Exchange Act requires our directors, officers and persons who own more than 10% of any class of our equity securities to file reports of ownership and changes in ownership with the SEC. Specific due dates for these reports are prescribed by SEC rules and we are required to report in this proxy statement any failure by directors, officers, or 10% holders to file such reports on a timely basis. Based on our review of such reports and written representations from our directors and officers, we believe that all such filing requirements were timely met during 2024, except for the following due to administrative error and oversight:

- Pete O’Heeron, Hamid Khoja, Mark Andersen, Stacy Coen, Richard Cilento, Robert Hoffman, Matthew Link and Victoria Niklas were each late in filing a Form 3 to report initial holdings upon the Direct Listing.
- Ruben Garcia was late in filing a Form 3 to report initial holdings upon commencement of employment and a Form 4 to report one new hire option grant.

**SECURITY OWNERSHIP OF  
CERTAIN BENEFICIAL OWNERS AND MANAGEMENT**

The following table sets forth, as of April 4, 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 April 4, 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) 37,735,300 shares of our common stock outstanding; and (ii) 2,500 shares of our Series C Preferred Stock outstanding, each as of April 4, 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) 37,735,300 votes, being the total number of votes associated with 37,735,300 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 <sup>(1)</sup> |
|---|--------------|-------|--------------------------|------|---|
|   | Shares       | %     | Shares                   | %    |   |
| 5% Stockholders:  |              |       |                          |      |   |
| Pete O’Heeron, MSHA <sup>(2)</sup>                              | 7,026,167    | 18.1% | 2,500                    | 100% | 55.4%   |
| Golden Knight Incorporated, L.P. <sup>(3)</sup>                 | 2,134,853    | 5.7%  | —                        | —    | 3.0%  |
| Named Executive Officers and Directors                          |              |       |                          |      |   |
| Pete O’Heeron, MSHA <sup>(2)</sup>                              | 7,026,167    | 18.1% | 2,500                    | 100% | 55.4%   |
| Hamid Khoja, Ph.D. <sup>(4)</sup>                               | 285,843      | *     | —                        | —    | *   |
| Ruben A. Garcia <sup>(5)</sup>                                  | 56,250       | *     | —                        | —    | *   |
| Robert E. Hoffman <sup>(6)</sup>                                | 119,452      | *     | —                        | —    | *   |
| Victoria Niklas, M.D. <sup>(7)</sup>                            | 119,452      | *     | —                        | —    | *   |
| Richard Cilento, Jr., MBA <sup>(8)</sup>                        | 205,177      | *     | —                        | —    | *   |
| Stacy Coen, MBA <sup>(9)</sup>                                  | 119,452      | *     | —                        | —    | *   |
| Matthew Link <sup>(10)</sup>                                    | 119,452      | *     | —                        | —    | *   |
| Directors and Executive Officers as a Group (8 persons)<br>(11) | 8,051,245    | 20.3% | 2,500                    | 100% | 56.1%   |

\* 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 1,119,520 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) 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 3773 Howard Hughes Pkwy, Suite 500S, Las Vegas, NV 89189-6014.
- (4) Shares of common stock include 11,250 shares of common stock and 274,593 vested stock options to purchase common stock.
- (5) Shares of common stock include 56,250 vested stock options to purchase common stock.
- (6) Shares of common stock include 7,500 shares of common stock and 111,952 vested stock options to purchase common stock.
- (7) Shares of common stock include 7,500 shares of common stock and 111,952 vested stock options to purchase common stock.
- (8) Shares of common stock include 93,225 shares of common stock and 111,952 vested stock options to purchase common stock.
- (9) Shares of common stock include 7,500 shares of common stock and 111,952 vested stock options to purchase common stock.
- (10) Shares of common stock include 7,500 shares of common stock and 111,952 vested stock options to purchase common stock.
- (11) Shares of common stock include 6,041,122 shares of common stock and 2,010,123 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 our 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 our common stockholders.

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 Amended and Restated 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.

## EQUITY COMPENSATION PLAN INFORMATION

### Equity Compensation Plan Information

The following table provides certain information with respect to our equity compensation plans in effect as of December 31, 2024.

| Plan Category  | Number of securities<br>to be<br>issued upon exercise<br>of outstanding<br>options<br>(A) | Weighted-average<br>exercise<br>price of outstanding<br>options<br>(B) | Number of securities<br>remaining available<br>for future issuance<br>under equity<br>compensation plans<br>(excluding securities<br>reflected in column<br>A)<br>(C) |
|--|---|--|---|
| Equity compensation plans approved by security holders (1) | 4,565,164   | \$ 2.8183  | 7,934,836   |
| Equity compensation plans not approved by security holders | —   | —  | —   |
| Total  | 4,565,164   | \$ 2.8183  | 7,934,836   |

(1) Consists of the 2022 Stock Plan.

## RELATED PERSON TRANSACTIONS

### Certain Relationships and Related Transactions

The following is a summary of transactions or series of transactions since inception, or currently proposed transactions or series of transactions, to which we were, or will be, a party, in which the amount involved exceeded, or will exceed, \$120,000, and in which any of our directors, executive officers, or to our knowledge, beneficial owners of 5% or more of our capital stock or any member of the immediate family of, or entities affiliated with, any of the foregoing persons, had, or will have, a direct or indirect material interest, other than compensation arrangements, described under the section titled “Executive and Director Compensation” and indemnification agreements described below.

#### *Series A Preferred Stock*

In May 2021, as part our formation, we issued the equivalent of 8,750,000 shares of our Series A Preferred Stock to FibroGenesis in exchange for a Patent Assignment Agreement, which assigns certain patents/applications to us, and an Intellectual Property Cross-License Agreement, which provides to us an exclusive license within defined fields of use for patents/applications retained by FibroGenesis and provides to FibroGenesis an exclusive license to the patents/applications assigned to FibroBiologics for all other fields of use.

In connection with the Direct Listing, all of our outstanding shares of Series A Preferred Stock were automatically cancelled, without the payment of additional consideration by or to the holder thereof.

#### *Series C Preferred Stock*

In January 2024, in conjunction with our Direct Listing, we issued 2,500 shares of Series C Preferred Stock to our Chairperson and CEO for no consideration.

#### *FibroGenesis Loans*

In July 2022, we loaned \$300,000 to FibroGenesis at 0% interest and one year maturity date. In October 2022, we loaned an additional \$60,000 to FibroGenesis at 0% interest and one year maturity. The \$60,000 was fully repaid in December 2022 and the \$300,000 was fully repaid in April 2023.

#### *ROFN Agreement*

In January 2023, we entered into an Agreement Regarding Right of First Negotiation with FibroGenesis, or the ROFN Agreement. In exchange for FibroGenesis’ consent to amend our certificate of incorporation to (i) eliminate upon our IPO or sale of our company, the liquidation preference for the Series A Preferred Stock, (ii) make the Series B Preferred Stock liquidation preference equal to that of the Series A Preferred Stock and (iii) provide that upon an IPO or sale of our company, the Series A Preferred Stock will be canceled for no consideration, we agreed to pay to FibroGenesis 15% of the gross proceeds from any equity investments in us prior to an IPO or sale of our company. In addition, we received a five-year right of first negotiation if FibroGenesis decides to license externally any of its technology. We have paid a total of \$2.8 million to FibroGenesis under the ROFN Agreement based upon gross proceeds from equity investments received through January 31, 2024, the date of our Direct Listing, and no further payments are due to FibroGenesis pursuant to the ROFN Agreement.



### ***2021 and 2022 Convertible Notes***

In December 2021, we issued and sold to investors, some of whom hold more than 5% of our capital stock, in a private placement \$1.3 million of our convertible promissory notes, or the 2021 Notes. The 2021 Notes bore interest at an initial interest rate of 6.0% per annum and would have automatically converted into shares of our common stock in the event of a qualified financing. The conversion price of the 2021 Notes was equal to \$200.0 million divided by the total number of equity interests outstanding prior to the dilution from the qualified financing. The 2021 Notes were unsecured and subordinated in right of payment to the prior payment in full to all of our commercial finance lenders, insurance companies, lease financing institutions or other lending institutions approved by the Board and regularly engaged in the business of lending money. In April 2023, \$1.3 million of the 2021 Notes were converted into shares of our Series B Preferred Stock. As of the date of this proxy statement, none of the 2021 Notes are outstanding.

In January 2022 and April 2022, we issued and sold to investors, some of whom hold more than 5% of our capital stock, in a private placement \$0.35 million and \$3.95 million, respectively, of our convertible promissory notes, or the 2022 Notes. The 2022 Notes bore interest at an initial rate of 6.0% per annum, had a one-year maturity, and were convertible at the holder's request into shares of our common stock in the event of a qualified financing. The conversion price of the 2022 Notes was the lesser of (i) a 15% discount to the offering price of our common stock in the event of an IPO or (i) the quotient of \$200.0 million divided by total equity interests prior to the dilution from a qualified financing. The 2022 Notes were unsecured and subordinated in right of payment to the prior payment in full to all of our commercial finance lenders, insurance companies, lease financing institutions or other lending institutions approved by the Board and regularly engaged in the business of lending money. In February 2023 through June 2023, \$4.3 million of the 2022 Notes were converted into shares of our Series B Preferred Stock. As of the date of this proxy statement, none of the 2022 Notes are outstanding.

### ***Equity and Compensation Arrangements***

Our Board adopted on August 10, 2022, and our stockholders approved on August 18, 2022, our 2022 Stock Plan. The 2022 Stock Plan permits the grant of incentive stock options, non-statutory stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards, and other stock awards. The 2022 Stock Plan, through the grant of stock and option awards, is intended to help us secure and retain the services of eligible award recipients, provide incentives for such persons to exert maximum efforts for our success and provide a means by which the eligible recipients may benefit from increases in value of our common stock. As of December 31, 2024, there were 7,934,836 shares available for future issuance under the 2022 Stock Plan.

### ***Indemnification Agreements***

We have entered into indemnification agreements with each of our current directors and officers. These agreements provide for the indemnification of such persons for all reasonable expenses and liabilities incurred in connection with any action or proceeding brought against them by reason of the fact that they are or were serving in such capacity. We believe that these indemnification agreements are necessary to attract and retain qualified persons as directors and officers. Furthermore, we have obtained director and officer liability insurance to cover liabilities our directors and officers may incur in connection with their services to us.

## 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 Annual 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 Annual 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.

### Availability of Additional Information

**We will provide, free of charge, a copy of our Annual Report on Form 10-K for the year ended December 31, 2024, including exhibits, upon the written or oral request of any stockholder of our company.** Please send a written request to our Secretary at the address set forth on the first page of this proxy statement or call the number above.

## CAPITAL INCREASE AMENDMENT

The Certificate of Amendment that becomes effective will not mark changes to the Amended and Restated Certificate of Incorporation as currently in effect, but this Appendix A has marked all such changes for ease of stockholder review. Words with a double-underline are additions to and words with a ~~strikethrough~~ are deletions from the Amended and Restated Certificate of Incorporation as currently in effect.

**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. The first sentence of Article FOURTH of the Amended and Restated Certificate of Incorporation is hereby replaced with the following:  

“The total number of shares of all classes of capital stock that the Corporation is authorized to issue is ~~++0,000,000~~310,000,000 shares, consisting of (i) ~~+00,000,000~~300,000,000 shares of common stock, par value \$0.00001 per share (“Common Stock”), and (ii) 10,000,000 shares of preferred stock, par value \$0.00001 per share (“Preferred Stock”), of which 2,500 shares are designated as Series C Preferred Stock (“Series C Preferred Stock”).”
4. This Certificate of Amendment was duly adopted and approved by the stockholders of this Corporation on the [XX]th day of [XX], 2025 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 , 2025.

FIBROBIOLOGICS, INC.

By: \_\_\_\_\_  
Name: Robert Hoffman  
Title: Interim Chief Financial Officer

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](http://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 June 11, 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.virtuashareholdermeeting.com/FBI.G2025](http://www.virtuashareholdermeeting.com/FBI.G2025)

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 June 11, 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:

V71025-P31554

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:

1. Election of Class II Directors to hold office until 2028

**Nominees:**

1a. Matthew Link

1b. Victoria Niklas, M.D.

2. Ratification of the appointment of WithumSmith+Brown, PC as our independent registered public accounting firm for the year ending December 31, 2025.
3. Approval of an amendment to the Amended and Restated Certificate of Incorporation to increase the authorized capital stock.
4. Approval, for purposes of Nasdaq Listing Rule 5635(d), of the issuance of shares of common stock to YA II PN, LTD., a Cayman Islands exempt limited company, pursuant to the Standby Equity Purchase Agreement, in excess of 7,013,635 shares of common stock.

For Against Abstain

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**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 Annual Meeting:**

The Notice and Proxy Statement and Annual Report are available at [www.proxyvote.com](http://www.proxyvote.com).

V71026-P31554

**FIBROBIOLOGICS, INC.  
Annual Meeting of Stockholders  
June 12, 2025 11:00 AM Central Time  
This proxy is solicited by the Board of Directors**

The stockholder(s) hereby appoint(s) Pete O'Heeron and Robert E. Hoffman, 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 Annual Meeting of Stockholders to be held at 11:00 AM, Central Time on June 12, 2025, at the virtual meeting at: [www.virtualshareholdmeeting.com/FBLG2025](http://www.virtualshareholdmeeting.com/FBLG2025), 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**