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March 15, 2024

VIA EDGAR

Office of Life Sciences Division of Corporation Finance Securities and Exchange Commission 100 F Street, N.E. Washington, D.C. 20549 Attention: Jimmy McNamara Laura Crotty

> Re: FibroBiologics, Inc. Registration Statement on Form S-1 Filed February 12, 2024 File No. 333-277019

Ladies and Gentlemen:

This letter is submitted on behalf of FibroBiologics, Inc. (the "Company") in response to comments of the staff (the "Staff") of the U.S. Securities and Exchange Commission (the "Commission") with respect to the Company's Registration Statement on Form S-1 filed on February 12, 2024 (the "Registration Statement"), as set forth in the Staff's letter dated February 26, 2024 (the "Comment Letter").

Set forth below are the Company's responses to the Staff's comments in the Comment Letter. For reference purposes, the text of the Staff's comments are reproduced in bold below, followed by the Company's response to the comment. The numbered paragraphs below correspond to the numbered comments in the Comment Letter.

Additionally, the Company is concurrently filing Amendment No. 1 to the Registration Statement ("Amendment No. 1"), which reflects revisions in response to the Comment Letter and certain other updates. For the convenience of the Staff, we are also sending, by overnight courier, copies of this letter and copies of Amendment No. 1, marked to show changes to the Registration Statement as originally filed.

Cover Page

1. Please revise the cover page to identify the parties comprising the "Registered Stockholders". In this regard we note that the table on page 115 lists only GEM Global Yield LLC SCS under the heading "Registered Stockholders" and no other parties. In the event GEM Global Yield LLC SCS is the only selling stockholder, please clarify this point throughout the prospectus.

Company Response: In response to the Staff's comment, the Company has revised the cover page and pages 112-113 of Amendment No. 1 to identify GEM Global Yield LLC SCS and GEM Yield Bahamas Limited as the Registered Stockholders.



Exhibit Index, page II-5

2. Please ensure each exhibit is in the proper text-searchable format. See Item 301 of Regulation S-T. Please re-file the respective exhibits to your registration statement.

Company Response: In response to the Staff's comment, the Company has re-filed the exhibits or restored links to the exhibits as needed to ensure that each exhibit is in proper text-searchable format.

General

- 3. Please revise your prospectus to disclose the following information with respect to the Share Purchase Agreement by and among the company and GEM Global Yield LLC SCS and GEM Yield Bahamas Limited:
 - the material terms of the agreement, including the full discounted price (or formula for determining it) at which GEM will receive the shares.
 - the material risks of an investment in the company and in the offering, including:
 - the dilutive effect of the formula or pricing mechanism on the company's share price;
 - o the possibility that the company may not have access to the full amount available to it under the agreement; and
 - whether an investor can engage in short-selling activities and, if so, how any sales activities after announcement of a put may negatively affect the company's share price.
 - the material market activities of GEM, including:
 - o any short selling of the company's securities or other hedging activities that GEM may or has engaged in, including prior to entering into the agreement and prior to the receipt of any shares pursuant to the terms of the agreement; and
 - o how GEM intends to distribute the securities it owns or will acquire.
 - how the provisions of Regulation M may prohibit GEM and any other distribution participants that are participating in the distribution of the company's securities from:
 - engaging in market making activities (e.g., placing bids or making purchases to stabilize the price of the common stock) while the agreement is in effect; and
 - o purchasing shares in the open market while the agreement is in effect.

Company Response: In response to the Staff's comment, the Company has revised Amendment No. 1 in the Risk Factors and Plan of Distribution to disclose the additional information requested above with respect to the GEM Share Purchase Agreement.

4. We note the company issued a draw-down notice under the GEM SPA to have GEM purchase up to 900,000 shares of common stock at a draw-down threshold price of no less than \$15.00 per share, and that the company submitted a closing notice after 65,447 shares of common stock were purchased in a private placement at \$15.00 per share. Please revise your disclosure, where appropriate, to explain why GEM did not purchase the entire 900,000 shares contained in the draw-down notice.

Company Response: In response to the Staff's comment, the Company has revised Amendment No.1 on the cover page and elsewhere to disclose why GEM did not purchase the entire 900,000 shares contained in the draw-down notice.

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Should the Staff have additional questions or comments regarding this submission, please do not hesitate to contact the undersigned at (713) 651-5557 or brian.fenske@nortonrosefulbright.com.

Sincerely,

NORTON ROSE FULBRIGHT US LLP

/s/ Brian P. Fenske

Brian P. Fenske

Enclosure cc: Pete O'Heeron, Chief Executive Officer Mark Andersen, Chief Financial Officer **FibroBiologics, Inc.**

Lee McIntyre

Norton Rose Fulbright US LLP