

May 25, 2022

U.S. Securities and Exchange Commission Division of Corporate Finance Office of Trade & Services 100 F Street, N.E. Washington, D.C. 20549 Attention: Taylor Beech and Katherine Bagley

> Re: bioAffinity Technologies, Inc. Registration Statement on Form S-1 Filed April 25, 2022 File No. 333-264463

Dear Ms. Beech and Ms. Bagley:

This response letter (this "Response") is submitted on behalf of bioAffinity Technologies, Inc., (the 'Company") in response to the comments that the Company received from the staff of the Division of Corporation Finance (the "Staff") of the U.S. Securities and Exchange Commission (the 'SEC") in a letter addressed to Ms. Maria Zannes, dated May 10, 2022 (the "Comment Letter"), with respect to the Company's registration statement on Form S-1, filed with the SEC on April 25, 2022 (the "Registration Statement"). The Company is concurrently submitting an amendment to the Registration Statement (the "Amendment No. 1"), which reflects the changes discussed as part of the Company's responses to the Staff's comments in this letter and other updates.

Dykema Gossett PLLC

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Weston Centre

VIA EDGAR

For reference purposes, the Company's responses are included below each of the Staff's bolded numbered comments, the text of which have been reproduced from the Comment Letter. All capitalized terms used but not defined in this Response have the meanings ascribed to them in the Amendment No. 1.

The responses below are based on information provided to Dykema Gossett PLLC by the Company.

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Registration Statement on Form S-1 Filed April 25, 2022

Underwriters' Compensation, page 10

1. We note your amended disclosure in response to comment 11, including that "if more than twenty-five percent (25.0%) of the shares offered hereby are sold to existing investors in the Company, then the cash fee to the underwriters will be reduced to four percent (4.0%) of the aggregate gross proceeds from the existing investors." Please amend your disclosure to clarify whether any of your current shareholders have indicated an interest in purchasing shares in the offering, and if so, disclose the estimated percentage of the offering these shareholders currently intend to purchase.

RESPONSE: The Company is aware that certain of its current shareholders have indicated an interest in purchasing shares in the offering. The Company has amended its disclosure to address this comment. (see prospectus cover page of the Amendment No. 1)

Capitalization, page 44

2. Please revise to place a double line below the cash line in the tabular disclosure.

RESPONSE: The Company has revised the Registration Statement to address this comment. (see p. 44 of the Amendment No. 1).

Business, page 54

3. We note your revised disclosure in response to our prior comment 16. Please further revise to disclose the termination provisions of the Company's agreement with GO2 Partners. Please also discuss the material terms of you licensing agreement with Precision Pathology Services, including any revenue sharing terms related to Precision Pathology Services' sales of your tests. Finally, please file the licensing agreement as an exhibit to your registration statement, or tell us why you believe you are not required to do so.

RESPONSE: The Company has revised its disclosure to disclose that the Company's agreement with GO2 Partners does not contain any express termination provisions. The Company has also added disclosure discussing the material terms of the agreement with Precision Pathology Services. Such agreement is actually styled as a "Joint Development Agreement" and the disclosure has been revised to reflect that. The agreement is filed as an exhibit to Amendment No. 1. (see p. 62 and Exhibit 10.8 of the Amendment No. 1)

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Certain Relationships and Related Party Transactions, page 97

4. We note you have revised this section to cover the period since January 1, 2021. Please revise to also include disclosure with respect to the fiscal year preceding the company's last fiscal year. Refer to Instruction 2 to Item 404(d) of Regulation S-K.

RESPONSE: We note Instruction 2 to Item 404(d) and the Company has revised the disclosure to include transactions occurring during the year ended December 31, 2020. (see p. 98 of the Amendment No. 1)

Description of Securities, page 98

5. Please include in this section a description of the exclusive forum provision mentioned in your risk factor on page 41.

RESPONSE: The Company has revised the Registration Statement to address this comment. (see p. 104 of the Amendment No. 1)

Notes to Consolidated Financial Statements

Note 7. Fair Value Measurements, page F-14

6. Please revise to include a reconciliation from the opening balances to the closing balances, disclosing separately changes during the periods presented in accordance with ASC 820-10-50-2(c).

RESPONSE: The Company has revised the Registration Statement to address this comment. (see Note 7 to the Financial Statements on p. F-31 of the Amendment No. 1)

General

7. We note your response to our prior comment 6 and reissue our comment. Please ensure that where you present data from your clinical trials and test validation trials throughout your filing, you include a balanced description of each clinical trial, including the number of participants in the trial, length of the trial and number of follow ups, and specify the test data used. In this regard, we note your reference to many test validation trials throughout your filing, as well as the CyPath Lung Studies and Clinical Trials chart on page 59, but it is not clear which trial you are discussing in each instance, and the disclosure in each instance does not consistently address the number of participants in the trial, length of the trial and number of follow-ups, and test data used.

RESPONSE: The Company has revised the Registration Statement to address this comment. (see pages 5, 8, 57, and 59 of the Amendment No. 1)

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8. It appears from your filing fee table that you are registering warrants to purchase a number of securities equal to 8% of the shares of Common Stock sold in this offering at an exercise price equal to 115% of the public offering price per share. Please tell us if these are the warrants issued in connection with the Bridge Notes referenced on page F-20, and if so, please revise your registration statement to reflect the fact that such warrants will be offered for resale. If not, please more specifically identify the warrants being registered.

RESPONSE: The warrants to purchase a number of securities equal to 8% of the shares of Common Stock sold in this offering at an exercise price equal to 115% of the public offering price per share mentioned in the Staff's comment above are not the warrants that were issued by the Company in connection with the Bridge Notes. The Company has revised the filing fee table to clarify. (see Exhibit 107 to the Amendment No. 1)

However, we also want to point out that Amendment No. 1 has been separately revised to reflect that the Company is now planning to register Units consisting of one share of the Company's Common Stock at an exercise price equal to 120% of the public offering price.

* * *

Thank you for your review and consideration of the matters set forth in this Response and in the Amendment No. 1. If you have any questions, please contact the undersigned at (210) 554-5414 or which will be a contact

Sincerely,

Dykema Gossett PLLC

/s/ Wilhelm E. Liebmann

Wilhelm E. Liebmann, Esq.

bioAffinity Technologies, Inc.

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