UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

bioAffinity Technologies, Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

46-5211056 (I.R.S. Employer Identification No.)

22211 W. Interstate 10, Suite 1206, San Antonio, Texas (Address of Principal Executive Offices)

78257 (Zip Code)

bioAffinity Technologies, Inc. Amended and Restated 2014 Equity Incentive Plan (Full title of the plan)

Maria Zannes
President and Chief Executive Officer
22211 W Interstate 10
Suite 1206
San Antonio, Texas 78257
(210) 698-5334

(Name and address of agent for service) (Telephone number, including area code, of agent for service)

> With copies to: Leslie Marlow, Esq. Melissa Palat Murawsky, Esq. Blank Rome LLP 1271 Avenue of the Americas New York, New York 10020 (212) 885-5358

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	Accelerated filer	
Non-accelerated filer	Smaller reporting company	\boxtimes
	Emerging growth company	\boxtimes

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

REGISTRATION OF ADDITIONAL SHARES PURSUANT TO GENERAL INSTRUCTION E

Pursuant to General Instruction E of Form S-8, the Registrant hereby makes the following statement: This Registration Statement on Form S-8 is being filed by the Registrant to register an additional 574,253 shares of its common stock which, pursuant to an amendment to the Registrant's Amended and Restated 2014 Equity Incentive Plan (the "Plan"), are issuable upon the grant, exercise or vesting of awards under the Plan. These 574,253 shares are in addition to the 1,043,552 shares of the Registrant's common stock which were previously registered pursuant to the Registrant's Registration Statement on Form S-8 (Commission File No. 333-271332) filed with the Securities and Exchange Commission (the "SEC") on April 19, 2023 (the "Prior Registration Statement"). Pursuant to Instruction E of Form S-8, the contents of the Prior Registration Statement are hereby incorporated by reference.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 8. Exhibits.

The following exhibits are filed as part of this Registration Statement or, where so indicated have been previously filed and are incorporated herein by reference.

- 3.1 Certificate of Incorporation of the Registrant as filed with the Delaware Secretary of State on March 26, 2014 (incorporated by reference to Exhibit 3.1 of the Registrant's Form S-1 (File No. 333-274608), as filed with the Commission on September 20, 2023).
- 3.2 Amended and Restated Bylaws of Registrant (Incorporated by reference as Exhibit 3.6 to the Registrant's Form S-1/A (File No. 333-264463) filed with the SEC on June 16, 2022)
- 3.3 Certificate of Amendment to the Certificate of Incorporation of Registrant, as filed with the Delaware Secretary of State on May 31, 2016 (incorporated by reference to Exhibit 3.3 of the Registrant's Form S-1 (File No. 333-274608), as filed with the Commission on September 20, 2023).
- 2.4 Certificate of Designation of Series A Convertible Preferred Stock of the Registrant filed with the Delaware Secretary of State on July 13, 2017 (Incorporated by reference as Exhibit 3.4 to the Registrant's Form S-1/A (File No. 333-264463) filed with the SEC on May 25, 2022)
- 2.5 Certificate of Amendment to the Certificate of Incorporation of Registrant, as filed with the Delaware Secretary of State on November 29, 2021(incorporated by reference to Exhibit 3.5 of the Registrant's Form S-1 (File No. 333-274608), as filed with the Commission on September 20, 2023).
- 3.6 Certificate of Amendment to the Certificate of Incorporation of Registrant, as filed with the Delaware Secretary of State on June 23, 2022 (Incorporated by reference as Exhibit 3.2 to the Registrant's Form S-1/A (File No. 333-264463) filed with the SEC on May 25, 2022)
- 3.7 Certificate of Amendment to the Certificate of Incorporation of Registrant, as filed with the Delaware Secretary of State on June 6, 2023 (Incorporated by reference as Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-41463) filed with the SEC on June 7, 2023)
- 4.1 bioAffinity Technologies, Inc. Amended and Restated 2014 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K, as filed with the Commission on June 7, 2023).
- 5.1 <u>Opinion of Blank Rome LLP.</u>
- 23.1 <u>Consent of WithumSmith+Brown, PC.</u>
- 23.2 <u>Consent of Blank Rome LLP (included in Exhibi 5.1).</u>
- 24.1 Power of Attorney (included on the signature page of this Registration Statement).
- 107.1 <u>Filing Fee Table</u>

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SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Antonio, Texas, on October 18, 2023.

bioAffinity Technologies, Inc.

By: /s/ Maria Zannes

Maria Zannes

President and Chief Executive Officer

POWER OF ATTORNEY

Each of the undersigned officers and directors of the Company hereby constitutes and appoints Steven Girgenti and Maria Zannes, and each of them, as his or her true and lawful attorneys-in-fact and agents, severally, with full power of substitution and resubstitution, in his or her name and on his or her behalf, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement, and to file the same, with all exhibits thereto and all documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-facts and agents full power of authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, thereby ratifying and confirming all that said attorneys-in-fact and agents, or their substitute or substitutes, may lawfully do or cause to be done.

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title(s)	Date				
/s/ Maria Zannes Maria Zannes	President and Chief Executive Officer (Principal Executive Officer) and Director	October 18, 2023				
/s/ Michael Dougherty Michael Dougherty	Chief Financial Officer (Principal Financial and Accounting Officer)	October 18, 2023				
/s/ Steven Girgenti Steven Girgenti	Director	October 18, 2023				
/s/ Robert A. Anderson Robert A. Anderson	Director	October 18, 2023				
/s/ Stuart Diamond Stuart Diamond	Director	October 18, 2023				
/s/ Peter S. Knight Peter S. Knight	Director	October 18, 2023				
/s/ Mohsin Y. Meghji Mohsin Y. Meghji	Director	October 18, 2023				
/s/ Gary Rubin Gary Rubin	Director	October 18, 2023				
/s/ Roby Joyce, MD Roby Joyce, MD	Director	October 18, 2023				

BLANKROME

1271 Avenue of the Americas | New York, New York 10020 Blankrome.com

October 18, 2023

bioAffinity Technologies, Inc. 22211 W. Interstate 10, Suite 1206, San Antonio, Texas 78257

Gentlemen and Ladies:

We have acted as counsel to bioAffinity Technologies, Inc., a Delaware corporation (the "Company"), in connection with the preparation of a Registration Statement on Form S-8 (the "Registration Statement") to be filed by the Company under the Securities Act of 1933, as amended (the "Act"), relating to the offer and sale of up to 574,253 shares of the Company's common stock, par value \$.007 per share (the "Award Shares"), issuable upon the grant, exercise or vesting of awards ("Awards") under the Company's Amended and Restated 2014 Equity Incentive Plan (the "Plan"). The Award Shares were authorized for issuance under the Plan as a result of an amendment to the Plan. This opinion is furnished pursuant to the requirements of Item 601(b)(5) of Regulation S-K.

In rendering this opinion, we have examined copies of only the following documents: (i) the Company's Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws, each as amended as of the date hereof; (ii) resolutions adopted by the Board of Directors and shareholders of the Company; (iii) the Registration Statement; and (iv) the Plan, as amended. We have not performed any independent investigation other than the document examination described. We have assumed and relied, as to questions of fact and mixed questions of law and fact, on the truth, completeness, authenticity and due authorization of all certificates, documents, and records examined and the genuineness of all signatures.

In rendering this opinion, we have assumed that (i) the Award Shares will be issued in accordance with the terms and conditions of the Plan, (ii) at the time of issuance of any Award Shares, there shall be a sufficient number of duly authorized and unissued shares of the Company's common stock to accommodate the issuance of the Award Shares and (iii) the per share consideration received by the Company in exchange for the issuance of any Award Shares shall not be less than the par value per share of the Company's common stock.

This opinion is limited to the laws of the State of Delaware. In rendering this opinion, we have assumed compliance with all other laws, including federal laws and state securities laws.

Based upon and subject to the foregoing and the qualifications and limitations set forth below, we are of the opinion that the Award Shares, when sold, paid for and issued as contemplated by the terms of the Plan, will be validly issued, fully paid and nonassessable.

This opinion is given as of the date hereof. We assume no obligation to update or supplement this opinion to reflect any facts or circumstances that may hereafter come to our attention or any changes in laws that may hereafter occur.

This opinion is strictly limited to the matters stated herein and no other or more extensive opinion is intended, implied or to be inferred beyond the matters stated herein

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement. In giving this consent, we do not thereby concede that we come within the categories of persons whose consent is required by the Act or the General Rules and Regulations promulgated thereunder.

Very truly yours,

/s/ Blank Rome LLP BLANK ROME LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated March 31, 2023, relating to the consolidated financial statements of bioAffinity Technologies, Inc. which are contained in the bioAffinity Technologies, Inc. Annual Report on Form 10-K for the year ended December 31, 2022.

/s/ WithumSmith+Brown, PC WithumSmith+Brown, PC

New York, New York October 18, 2023

Calculation of Filing Fee Table

Form S-8 (Form Type)

bioAffinity Technologies, Inc.

(Exact Name of Registrant as Specified in its Charter)

Newly Registered Securities

Security Type Security Class Title		Fee Calculation Rule	Amount Registered ⁽¹⁾	M: O Pi	roposed aximum offering rice Per Unit ⁽³⁾	A	laximum ggregate Offering Price		Fee Rate		nount of istration Fee	
		Common stock, par value \$.007 per share	Rule 457(c) and									
	Equity	("Common Stock")	Rule 457(b)	574,253(2)	\$	1.405	\$	806,826	S	0.00014760	\$	120
	Equity	Total Offering Amounts	reale 457(II)	374,233(2)	Ψ	1.403	\$	806,826	Ψ	0.00014700	\$	120
		Total Fee Offsets						,			_	_
		Net Fee Due									\$	120

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended ("Securities Act"), this Registration Statement shall also cover any additional shares of the Registrant's Common Stock that become issuable in respect of the securities identified in the above table by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without the Registrant's receipt of consideration that results in an increase in the number of the outstanding shares of the Registrant's Common Stock.
- (2) Represents additional shares of the Registrant's Common Stock reserved for issuance under the Registrant's Amended and Restated 2014 Equity Incentive Plan ("Plan") as a result of an amendment to the Plan. Does not include 282,890 shares which were issued pursuant to Section 4(a)(2) of the Securities Act.
- (3) Estimated in accordance with Rules 457(c) and (h) of the Securities Act solely for the purpose of calculating the registration fee based on the average of the high and low prices of the Registrant's Common Stock as reported on the Nasdaq Capital Market on October 17, 2023