

PROSPECTUS SUPPLEMENT NO. 2
(to the prospectus dated April 15, 2024)



bioAffinity Technologies, Inc.

1,632,000 Shares of Common Stock

This prospectus supplement updates, amends and supplements the prospectus contained in our Amendment No. 1 to Form S-1, effective as of April 15, 2024 (as supplemented or amended from time to time, the "Prospectus") (Registration No. 333-278512) relating to the resale from time to time of up to 1,632,000 shares of common stock, par value \$0.007 per share (the "Common Stock"), of bioAffinity Technologies, Inc. (the "Company"), including, in part, 1,600,000 shares of Common Stock issuable upon the exercise of 1,600,000 common warrants to purchase shares of Common Stock (the "Existing Warrants") purchased by investors in a private placement transaction on or about March 8, 2024 (the "Private Placement"). This Prospectus Supplement No. 2 is being filed in connection with an amendment to certain of the Existing Warrants as described below under "Amendments to Existing Warrants." Capitalized terms used in this prospectus supplement and not otherwise defined herein have the meanings specified in the Prospectus.

This prospectus supplement is not complete without the Prospectus. This prospectus supplement should be read in conjunction with the Prospectus, which is to be delivered with this prospectus supplement, and is qualified by reference thereto, except to the extent that the information in this prospectus supplement updates or supersedes the information contained in the Prospectus. Please keep this prospectus supplement with your Prospectus for future reference.

Our shares of Common Stock are listed on the Nasdaq Capital Market under the symbol "BIAF". On August 1, 2024, the closing price for our shares of Common Stock on the Nasdaq Capital Market was \$2.38 per share.

Investing in our securities involves a high degree of risk. Before deciding whether to invest in our securities, you should consider carefully the risks and uncertainties under the heading "Risk Factors" beginning on page 8 of the Prospectus.

Neither the SEC nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of the Prospectus or this prospectus supplement. Any representation to the contrary is a criminal offense.

AMENDMENTS TO EXISTING WARRANTS

This prospectus supplement is being filed to disclose the following:

On August 2, 2024, we entered into an amendment with certain holders of Existing Warrants to purchase up to 1,041,667 shares of Common Stock held in the aggregate by such holders in order to amend the exercise price under such Existing Warrants from \$1.64 to \$1.25 per share.

The date of this Prospectus Supplement is August 2, 2024.
