

71,068,767 Shares of Common Stock

This prospectus supplement updates, supersedes and amends certain information contained in the prospectus dated December 29, 2023 (the "Original Prospectus"), relating to the offering on a resale basis of up to (i) 26,207,050 shares of common stock, par value \$0.001 per share (the "Common Stock"), issuable upon conversion of \$40,883,000 principal amount of the 11.00%/13.00% Convertible Senior Secured Notes due 2028 (the "2028 Convertible Notes") of Biora Therapeutics, Inc. (the "Company"), (ii) 27,384,927 shares of Common Stock that may be issuable (A) in respect of interest payments or make-whole amounts on the 2028 Convertible Notes that the Company settles in shares of Common Stock or (B) upon conversion of, or in respect of, interest payments or make-whole amounts on any additional 2028 Convertible Notes issuable with respect to interest payments on the 2028 Convertible Notes that are settled in kind (all such shares, the "Interest Payment and Make-Whole Shares"), (iii) 7,352,941 shares of Common Stock issuable upon the exercise of warrants to purchase Common Stock with a term of five years that are exercisable six months from the date of issuance and an exercise price of \$1.36 per share (the "Commitment Warrants"), (iv) 5,084,613 shares of Common Stock issuable upon the exercise of warrants to purchase Common Stock with a term of five years and an exercise price of \$5.00 per share, and (v) 5,039,236 shares of Common Stock issuable upon the exercise of warrants to purchase Common Stock with a term of five years and an exercise price of \$5.50 per share. Certain of the Commitment Warrants have been amended as described below under "Amendments to Existing Warrants."

This prospectus supplement should be read in conjunction with the Original Prospectus, and is qualified by reference to the Original Prospectus, except to the extent that the information presented herein supersedes the information contained in the Original Prospectus. This prospectus supplement is not complete without, and may only be delivered or used in connection with, the Original Prospectus, including any amendments or supplements thereto. We may amend or supplement the Original Prospectus from time to time by filing amendments or supplements as required. You should read the entire Original Prospectus and any amendments or supplements carefully before you make an investment decision.

Our Common Stock is listed on the Nasdaq Global Market under the symbol "BIOR." On March 28, 2024, the last reported sale price of our Common Stock on the Nasdaq Global Market was \$1.10 per share.

Investing in our securities involves a high degree of risk. See "Risk Factors" in the Original Prospectus and documents incorporated therein by reference for a discussion of such risk factors, which factors should be read carefully in connection with an investment in our securities.

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

AMENDMENTS TO EXISTING WARRANTS

This prospectus supplement is being filed to disclose the following:

On March 31, 2024, we entered into a warrant amendment agreement (the "Warrant Amendment Agreement") with an institutional investor under which the Company agreed to amend certain outstanding warrants, including warrants to purchase up to an aggregate of 2,322,059 shares of Common Stock that were previously issued in December 2023 with an exercise price of \$1.36 per share.

Under the Warrant Amendment Agreement, with respect to Commitment Warrants to purchase up to an aggregate of 2,322,059 shares of Common Stock held by an institutional investor, the Company agreed to (i) lower the exercise price of such Commitment Warrants to \$1.10 per share, (ii) provide that such Commitment Warrants, as amended, will not be exercisable until the Company receives approval from its stockholders with respect to the issuance of shares of Common Stock issuable upon exercise of the amended Commitment Warrants (such date, the "Stockholder Approval Date") and (iii) extend the original expiration date of such Commitment Warrants to be five (5) years following the Stockholder Approval Date. These amendments became effective on March 31, 2024.

Prospectus supplement dated April 2, 2024