
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

Form S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

BIORA THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

27-3950390
(I.R.S. Employer
Identification No.)

4330 La Jolla Village Drive, Suite 300
San Diego, CA 92122
(833) 727-2841

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Aditya P. Mohanty
Chief Executive Officer
Biora Therapeutics, Inc.
4330 La Jolla Village Drive, Suite 300
San Diego, CA 92122
(833) 727-2841

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

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San Diego, CA 92122
(833) 727-2841

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this registration statement becomes effective, as determined by market conditions and other factors.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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
Non-Accelerated Filer

Accelerated Filer
Smaller Reporting Company
Emerging Growth Company

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.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with section 8(a) of the Securities

Act of 1933 or until the registration statement shall become effective on such date as the Commission acting pursuant to said section 8(a), may determine.

The information in this prospectus is not complete and may be changed. The Selling Stockholders may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED DECEMBER 22, 2023

Prospectus



BIORA THERAPEUTICS, INC.

71,068,767 Shares of Common Stock

This prospectus relates to the offer and resale from time to time by the selling stockholders named herein (the "Selling Stockholders") of up to an aggregate of 71,068,767 shares (the "Shares") of common stock, par value \$0.001 per share, of Biora Therapeutics, Inc., a Delaware corporation ("Biora" or the "Company"). The Shares consist of up to (i) 26,207,050 shares of common stock issuable upon conversion of \$40,883,000 principal amount of the Company's 11.00%/13.00% Convertible Senior Secured Notes due 2028 (the "2028 Convertible Notes"), (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 (the "Additional Warrants"), 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 (the "Exchange Warrants," and collectively with the Commitment Warrants, and the Additional Warrants, the "Warrants"). The Shares offered hereby include any shares of common stock that may be issuable upon exercise of any warrants issuable pursuant to the terms of any 2028 Convertible Notes in lieu of shares otherwise issuable pursuant to the terms of the 2028 Convertible Notes.

We will not receive any of the proceeds from the sale or other disposition of the Shares by the Selling Stockholders. However, upon any cash exercise of the Warrants by the Selling Stockholders, we will receive cash proceeds per share equal to the exercise price of the Warrants. If the Warrants are exercised in a cashless exercise, which may occur if we do not have an effective registration statement on file with respect to the exercise of the Warrants, we will not receive any proceeds from the exercise of the Warrants.

The Selling Stockholders may sell or otherwise dispose of the Shares in a number of different ways and at varying prices. We provide more information about how the Selling Stockholders may sell or otherwise dispose of the Shares in the section entitled "Plan of Distribution" on page 10. Discounts, concessions, commissions and similar selling expenses attributable to the sale of the Shares will be borne by the Selling Stockholders. We will pay all expenses (other than discounts, concessions, commissions and similar selling expenses) relating to the registration of the Shares with the Securities and Exchange Commission.

Our common stock is currently quoted on The Nasdaq Global Market under the symbol "BIOR." On December 20, 2023, the last reported sale price of our common stock on The Nasdaq Global Market was \$1.20 per share. Our principal executive offices are located at 4330 La Jolla Village Drive, Suite 300, San Diego, CA 92122, and our telephone number is (833) 727-2841.

Investing in our securities involves risks. You should carefully consider the [Risk Factors](#) beginning on page 5 of this prospectus before you make 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 adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

This prospectus is dated _____, 2023.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (the “SEC”), utilizing a shelf registration process. Under the shelf registration process, the Selling Stockholders may, from time to time, offer and sell the Shares described in this prospectus in one or more offerings. Information about the Selling Stockholders may change over time.

This prospectus provides you with a general description of the Shares the Selling Stockholders may offer. Each time the Selling Stockholders sell Shares using this prospectus, to the extent necessary and required by law, we will provide a prospectus supplement that will contain specific information about the terms of that offering, including the number of Shares being offered, the manner of distribution, the identity of any underwriters or other counterparties and other specific terms related to the offering. The prospectus supplement may also add, update or change information contained in this prospectus. To the extent that any statement made in a prospectus supplement is inconsistent with statements made in this prospectus, the statements made in this prospectus will be deemed modified or superseded by those made in the prospectus supplement. You should read this prospectus, any applicable prospectus supplement and the information incorporated by reference in this prospectus before making an investment in Shares of our common stock. See “Where You Can Find More Information” and “Information Incorporated by Reference” for more information.

Neither we nor the Selling Stockholders have authorized anyone to provide any information other than that contained in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we may have referred you. Neither we nor the Selling Stockholders take any responsibility for, nor can provide assurance as to the reliability of, any other information that others may give you. Neither we nor the Selling Stockholders have authorized any other person to provide you with different or additional information, and neither of us are making an offer to sell the Shares in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus is accurate only as of the date on the front cover of this prospectus, regardless of the time of delivery of the prospectus or any prospectus supplement or any sale of Shares. Our business, financial condition, results of operations and prospects may have changed since those dates.

For investors outside of the United States, neither we nor the Selling Stockholders have done anything that would permit the offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to the offering and the distribution of this prospectus outside of the United States.

Unless the context otherwise requires, we use the terms “Biora,” “Company,” “we,” “us,” and “our” in this prospectus to refer to Biora Therapeutics, Inc. and, where appropriate, our subsidiaries.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

We make “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), in this prospectus and any accompanying prospectus supplement, including the documents that we incorporate by reference herein and therein. These forward-looking statements can generally be identified as such because the context of the statement will include words such as “may,” “will,” “intend,” “plan,” “believe,” “anticipate,” “expect,” “estimate,” “predict,” “potential,” “continue,” “likely,” “target,” “forecast,” or “opportunity,” the negative of these words or other similar words. Similarly, statements that describe our plans, strategies, intentions, expectations, objectives, goals or prospects and other statements that are not historical facts are also forward-looking statements. For such statements, we claim the protection of the Private Securities Litigation Reform Act of 1995. Readers of this prospectus are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the time this prospectus was filed with the SEC. These forward-looking statements are based largely on our expectations and projections about future events and future trends affecting our business, and are subject to risks and uncertainties that could cause actual results to differ materially from those anticipated in the forward-looking statements. These risks and uncertainties include, without limitation, the risk factors discussed in the section titled “Risk Factors” and elsewhere and incorporated by reference in this prospectus. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future.

Any forward-looking statements in this prospectus reflect our current views with respect to future events or to our future financial performance and involve known and unknown risks, uncertainties, and other factors that may cause our actual results, performance, or achievements to be materially different from any future results, performance, or achievements expressed or implied by these forward-looking statements.

This prospectus also contains or incorporates by reference estimates, projections, and other information concerning our industry, our business, and the markets for certain diseases, including data regarding the estimated size of those markets, and the incidence and prevalence of certain medical conditions. Information that is based on estimates, forecasts, projections, market research, or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances reflected in this information. Unless otherwise expressly stated, we obtained this industry, business, market, and other data from reports, research surveys, studies, and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data, and similar sources.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus. This summary does not contain all of the information that you should consider before deciding to invest in our common stock. You should read the entire prospectus carefully, including “Risk Factors,” and the consolidated financial statements and related notes and information incorporated by reference into this prospectus, before making an investment decision. Some of the statements in this summary constitute forward-looking statements, see “Special Note Regarding Forward-Looking Statements.”

Our Company

We are a biotechnology company developing oral biotherapeutics that could enable new treatment approaches in the delivery of therapeutics. The Company’s therapeutics pipeline includes two therapeutic delivery platforms:

- NAVICAP™ Targeted Oral Delivery Platform: Targeted oral delivery of therapeutics to the site of disease in the gastrointestinal tract designed to improve outcomes for patients with Inflammatory Bowel Disease; and
- BIOJET™ Systemic Oral Delivery Platform: Systemic oral delivery of biotherapeutics designed to replace injections with needle-free, oral delivery of large molecules for better management of chronic diseases.

Corporate Information

We were incorporated in Delaware in January 2012 under the name Ascendant MDx, Inc., and we later changed our name in August 2013 to Progenity, Inc. We subsequently changed our name in April 2022 to Biora Therapeutics, Inc. Through our predecessor, Ascendant MDx, a California corporation, we commenced our operations in 2010.

Our principal executive offices are located at 4330 La Jolla Village Drive, Suite 300, San Diego, CA 92122, and our telephone number is (833) 727-2841. Our website is www.bioratherapeutics.com. Information contained on or accessible through our website is not a part of this prospectus supplement, and the inclusion of our website address in this prospectus supplement is an inactive textual reference only.

THE OFFERING

We are registering for resale by the Selling Stockholders named herein the Shares as described below:

Securities Offered	Up to 71,068,767 shares of common stock, which are comprised of (i) 26,207,050 shares of common stock issuable upon conversion of the 2028 Convertible Notes, (ii) 27,384,927 shares of common stock that may be issuable as Interest Payment and Make-Whole Shares, (iii) 7,352,941 shares of common stock issuable upon the exercise of the Commitment Warrants, (iv) 5,084,613 shares of common stock issuable upon the exercise of the Additional Warrants, and (v) 5,039,236 shares of common stock issuable upon the exercise of the Exchange Warrants. The Shares offered hereby include any shares of common stock that may be issuable upon exercise of any warrants issuable pursuant to the terms of any 2028 Convertible Notes in lieu of shares otherwise issuable pursuant to the terms of the 2028 Convertible Notes.
Use of Proceeds	We will not receive any of the proceeds from the sale or other disposition of the Shares by the Selling Stockholders, except for the exercise price paid for the Shares issuable upon the exercise of the Warrants. We intend to use any net proceeds from the cash exercise of Warrants for general corporate purposes. See “Use of Proceeds” on page 6 of this prospectus.
Risk Factors	This investment involves a high degree of risk. See “Risk Factors” on page 5 of this prospectus for a discussion of factors you should consider carefully before making an investment decision.
Nasdaq Global Market symbol:	“BIOR”

RISK FACTORS

An investment in our securities involves a significant degree of risk. Before you invest in our securities you should carefully consider those risk factors included in our most recent Annual Report on Form 10-K, any Quarterly Reports on Form 10-Q and any Current Reports on Form 8-K, which are incorporated herein by reference, and those risk factors that may be included in any applicable prospectus supplement, together with all of the other information included in this prospectus, any prospectus supplement and the documents we incorporate by reference, in evaluating an investment in our securities.

If any of the risks discussed in the foregoing documents were to occur, our business, financial condition, results of operations and prospects could be materially adversely affected. Also, please read the cautionary statement in this prospectus under “Special Note Regarding Forward-Looking Statements.”

USE OF PROCEEDS

We are registering the Shares for resale by the Selling Stockholders. We will not receive any proceeds from the sale or other disposition of the Shares offered by this prospectus. However, upon any cash exercise of the Warrants by the Selling Stockholders, we will receive cash proceeds per share equal to the exercise price of the Warrants. The Commitment Warrants have a per share exercise price of \$1.36, the Additional Warrants have a per share exercise price of \$5.00 and the Exchange Warrants have an per share exercise price of \$5.50. We intend to use any net proceeds from the cash exercise of Warrants for general corporate purposes. The Warrants may be exercised on a cashless basis to the extent that a registration statement is not in effect with respect to the issuance of Shares upon exercise of the Warrants. If the Warrants are exercised in a cashless exercise, we will not receive any proceeds from the exercise of the Warrants.

SELLING STOCKHOLDERS

This prospectus covers the possible resale by the Selling Stockholders identified in the table below of up to 71,068,767 Shares, including up to (i) 26,207,050 shares of common stock issuable upon conversion of the 2028 Convertible Notes, (ii) 27,384,927 shares of common stock that may be issuable as Interest Payment and Make-Whole Shares, (iii) 7,352,941 shares of common stock issuable upon the exercise of the Commitment Warrants, (iv) 5,084,613 shares of common stock issuable upon the exercise of the Additional Warrants, and (v) 5,039,236 shares of common stock issuable upon the exercise of the Exchange Warrants. The Shares offered hereby include any shares of common stock that may be issuable upon exercise of any warrants issuable pursuant to the terms of any 2028 Convertible Notes in lieu of shares otherwise issuable pursuant to the terms of the 2028 Convertible Notes.

The Selling Stockholders may sell some, all or none of their Shares. We do not know how long the Selling Stockholders will hold the Warrants or the 2028 Convertible Notes, whether the Selling Stockholders will exercise the Warrants or convert the 2028 Convertible Notes, and upon such exercise or conversion, how long the Selling Stockholders will hold the Shares before selling them, and we currently have no agreements, arrangements or understandings with the Selling Stockholders regarding the sale of any of the Shares.

The following table presents information regarding the Selling Stockholders and the Shares that they may offer and sell from time to time under this prospectus. The table is prepared based on information supplied to us by the Selling Stockholders, and reflects their holdings as of December 22, 2023, unless otherwise noted in the footnotes to the table. Beneficial ownership is determined in accordance with the rules of the SEC, and thus represents voting or investment power with respect to our securities. Under such rules, beneficial ownership includes any shares over which the stockholder has sole or shared voting power or investment power as well as any shares that the stockholder has the right to acquire within 60 days after the date of this table, including the Warrants. To our knowledge and subject to applicable community property rules, the Selling Stockholders named in the table each have sole voting and sole investment power with respect to all equity interests beneficially owned. The percentage of shares beneficially owned before and after the offering is based on 27,209,277 shares of our common stock actually outstanding as of December 20, 2023. We cannot advise as to whether the Selling Stockholders will in fact sell any or all of such shares. In addition, the Selling Stockholders may have sold, transferred or otherwise disposed of, or may sell, transfer or otherwise dispose of, at any time and from time to time, the shares in transactions exempt from the registration requirements of the Securities Act after the date on which they provided the information set forth on the table below:

Selling Stockholders	Shares Beneficially Owned Before this Offering	Percentage of Outstanding Shares Beneficially Owned Before this Offering	Shares to be Sold in this Offering ⁽¹⁾	Shares Beneficially Owned After this Offering	Percentage of Outstanding Shares Beneficially Owned After this Offering ⁽²⁾
Funds associated with Athyrium Capital Management ⁽³⁾	16,214,525	49.9%	18,267,556	34,409,157	49.9%
Funds associated with Davidson Kempner Capital Management LP ⁽⁴⁾	2,989,698	9.9%	17,718,860	—	— %
Funds associated with Highbridge Capital Management LLC ⁽⁵⁾	2,951,015	9.9%	7,697,424	352,054	1.29%

- (1) Figures herein are also deemed to include an additional indeterminable number of Interest Payment and Make-Whole Shares that may be issued pursuant to the terms of the 2028 Convertible Notes.
- (2) Assumes all Shares offered by each of the Selling Stockholders hereby are sold and that each of the Selling Stockholders buy or sell no additional shares of common stock prior to the completion of this offering.
- (3) Consists of (i) 2,692,307 shares of common stock issuable upon the conversion of the 2028 Convertible Notes held by Athyrium Opportunities III Acquisition LP, (ii) 1,720,981 shares of common stock issuable

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upon the exercise of Warrants held by Athyrium Opportunities III Acquisition 2 LP, (iii) 8,450,641 shares of common stock issuable upon the conversion of the 2028 Convertible Notes and (iv) 5,403,627 shares of common stock issuable upon the exercise of Warrants held by Athyrium Opportunities III Co-Invest 1 LP, together with an additional indeterminable number of Interest Payment and Make-Whole Shares, all of which are being offered by this prospectus. Conversion of, and receipt of shares of common stock pursuant to the terms of, the 2028 Convertible Notes and the exercise of the Warrants by each Selling Stockholder is subject to a beneficial ownership limitation of 49.9%, which limitation restricts the Selling Stockholder from converting that portion of the 2028 Convertible Notes, receiving shares of common stock pursuant to the terms of the 2028 Convertible Notes, or exercising that portion of the Warrants that would result in the Selling Stockholder and its affiliates owning, after conversion, receipt or exercise, as applicable, a number of shares of common stock in excess of the applicable beneficial ownership limitation. Certain other securities that held by the Selling Stockholders and are exercisable for shares of Company common stock contain similar beneficial ownership limitations applicable to the Selling Stockholders. The amounts and percentages in the table give effect to these beneficial ownership limitations. Athyrium Opportunities Associates III GP LLC is the general partner of Athyrium Opportunities Associates III LP, which is the general partner of Athyrium Opportunities III Acquisition LP and Athyrium Opportunities III Acquisition 2 LP. Athyrium Opportunities Associates Co-Invest LLC is the general partner of Athyrium Opportunities III Co-Invest 1 LP. Jeffrey A. Ferrell, a member of the Company's board of directors, is President of Athyrium Opportunities Associates Co-Invest LLC and Athyrium Opportunities Associates III GP LLC and the Managing Member of Athyrium Funds GP Holdings LLC, which is the Managing Member of Athyrium Opportunities Associates Co-Invest LLC and Athyrium Opportunities Associates III GP LLC, and in his capacity as such may be deemed to exercise shared voting and investment power over the shares owned by Athyrium Opportunities III Acquisition LP, Athyrium Opportunities III Acquisition 2 LP and Athyrium Opportunities III Co-Invest 1 LP. Jeffrey A. Ferrell and each of the foregoing entities disclaims beneficial ownership of such shares except to the extent of his or its pecuniary interest therein. The business address for each of the foregoing is c/o Athyrium Capital Management, LP, 505 Fifth Avenue, Floor 18, New York, New York 10017.

- (4) Consists of 10,635,897 shares of common stock issuable upon the conversion of the 2028 Convertible Notes and 7,082,963 shares of common stock issuable upon the exercise of Warrants, together with an additional indeterminable number of Interest Payment and Make-Whole Shares, all of which are being offered by this prospectus. Conversion of, and receipt of shares of common stock pursuant to the terms of, the 2028 Convertible Notes and the exercise of the Warrants by each Selling Stockholder is subject to a beneficial ownership limitation of 9.9%, which limitation restricts the Selling Stockholder from converting that portion of the 2028 Convertible Notes, receiving shares of common stock pursuant to the terms of the 2028 Convertible Notes, or exercising that portion of the Warrants that would result in the Selling Stockholder and its affiliates owning, after conversion, receipt or exercise, as applicable, a number of shares of common stock in excess of the applicable beneficial ownership limitation. The amounts and percentages in the table give effect to these beneficial ownership limitations. The business address for Davidson Kempner Capital Management LP ("DKCM") is 520 Madison Avenue, 30th Floor, New York, NY 10022. DKCM is a Delaware limited partnership and a registered investment adviser with the U.S. Securities and Exchange Commission and is responsible for the voting and investment decisions of the funds covered hereby. DKCM GP LLC, a Delaware limited liability company, is the general partner of DKCM. The managing members of DKCM are Anthony A. Yoseloff, Eric P. Epstein, Conor Bastable, Shulamit Leviant, Morgan P. Blackwell, Patrick W. Dennis, Gabriel T. Schwartz, Zachary Z. Altschuler, Joshua D. Morris and Suzanne K. Gibbons. Anthony A. Yoseloff, through DKCM, is responsible for the voting and investment decisions relating to the securities reported herein, and each of the foregoing, other than funds covered hereby, disclaims any beneficial ownership of such securities except to the extent of any pecuniary interest therein.
- (5) Consists of 4,428,205 shares of common stock issuable upon the conversion of the 2028 Convertible Notes and 3,269,219 shares of common stock issuable upon the exercise of Warrants, together with an additional indeterminable number of Interest Payment and Make-Whole Shares, all of which are being offered by this prospectus, as well as 352,054 shares of common stock owned by the Selling Stockholder not being offered by this prospectus. Conversion of, and receipt of shares of common stock pursuant to the terms of, the 2028

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Convertible Notes and the exercise of the Warrants by each Selling Stockholder is subject to a beneficial ownership limitation of 9.9%, which limitation restricts the Selling Stockholder from converting that portion of the 2028 Convertible Notes, receiving shares of common stock pursuant to the terms of the 2028 Convertible Notes, or exercising that portion of the Warrants that would result in the Selling Stockholder and its affiliates owning, after conversion, receipt or exercise, as applicable, a number of shares of common stock in excess of the applicable beneficial ownership limitation. The amounts and percentages in the table give effect to these beneficial ownership limitations. Highbridge Capital Management, LLC is the trading manager of the funds covered hereby (the “Highbridge Selling Shareholders”). The Highbridge Selling Shareholders disclaim beneficial ownership over these shares. The business address of Highbridge Capital Management, LLC is 277 Park Avenue, 23rd floor, New York, NY 10172.

PLAN OF DISTRIBUTION

We are registering the resale by the Selling Stockholders or their permitted transferees of up to 71,068,767 Shares as described in this prospectus.

We will not receive any of the proceeds from the sale of the Shares offered by this prospectus. However, upon any cash exercise of the Warrants by the Selling Stockholders, we will receive cash proceeds per share equal to the exercise price of the Warrants.

We will not pay any brokers' or underwriters' discounts and commissions in connection with the registration and sale of the Shares covered by this prospectus. The Selling Stockholders reserve the right to accept and, together with their respective agents, to reject, any proposed purchases of Shares to be made directly or through agents.

Subject to the limitations set forth in any applicable registration rights agreement, the Shares offered by this prospectus may be sold from time to time to purchasers:

- directly by the Selling Stockholders;
- through underwriters, broker-dealers or agents, who may receive compensation in the form of discounts, commissions or agent's commissions from the Selling Stockholders or the purchasers of the Shares; or
- through a combination of any of these methods of sale.

Any underwriters, broker-dealers or agents who participate in the sale or distribution of the Shares may be deemed to be "underwriters" within the meaning of the Securities Act. As a result, any discounts, commissions or concessions received by any such broker-dealer or agents who are deemed to be underwriters will be deemed to be underwriting discounts and commissions under the Securities Act.

In compliance with the guidelines of the Financial Industry Regulatory Authority ("FINRA"), the aggregate maximum discount, commission, fees or other items constituting underwriting compensation to be paid by the Company and to be received by any FINRA member or independent broker-dealer will not exceed 8% of the gross proceeds of any offering by the Company pursuant to this prospectus and any applicable prospectus supplement. If at the time of any offering made under this prospectus a member of FINRA participating in the offering has a "conflict of interest" as defined in FINRA Rule 5121 ("Rule 5121"), that offering will be conducted in accordance with the relevant provisions of Rule 5121. Underwriters are subject to the prospectus delivery requirements of the Securities Act and may be subject to certain statutory liabilities under the Securities Act and the Exchange Act. We will make copies of this prospectus available to the Selling Stockholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act.

To our knowledge, there are currently no plans, arrangements or understandings between the Selling Stockholders and any underwriter, broker-dealer or agent regarding the sale of the Shares by the Selling Stockholders. Upon our notification by a Selling Stockholder that any material arrangement has been entered into with an underwriter or broker-dealer for the sale of Shares through a block trade, special offering, exchange distribution, secondary distribution or a purchase by an underwriter or broker-dealer, we will file, if required by applicable law or regulation, a supplement to this prospectus pursuant to Rule 424(b) under the Securities Act disclosing certain material information relating to such underwriter or broker-dealer and such offering.

The Shares may be sold in one or more transactions at:

- fixed prices;
- prevailing market prices at the time of sale;

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- prices related to such prevailing market prices;
- varying prices determined at the time of sale; or
- negotiated prices.

These sales may be effected in one or more transactions:

- through one or more underwritten offerings on a firm commitment or best efforts basis;
- settlement of short sales entered into after the date of this prospectus;
- agreements with broker-dealers to sell a specified number of the Shares at a stipulated price per share;
- in “at the market” offerings, as defined in Rule 415 under the Securities Act, at negotiated prices, at prices prevailing at the time of sale or at prices related to such prevailing market prices, including sales made directly on a national securities exchange or sales made through a market maker other than on an exchange or other similar offerings through sales agents;
- in privately negotiated transactions;
- through trading plans entered into by the Selling Stockholders pursuant to Rule 10b5-1 under the Exchange Act that are in place at the time of an offering pursuant to this prospectus and any applicable prospectus supplement hereto that provide for periodic sales of their securities on the basis of parameters described in such trading plans;
- in ordinary brokerage transactions in which the broker solicits purchasers;
- in block trades in which the broker-dealer so engaged will attempt to sell the Shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- directly to purchasers, including through a specific bidding, auction or other process;
- through the writing of options (including the issuance by the Selling Stockholders of derivative securities) or other hedging transactions, whether through an options exchange or otherwise;
- in distributions to members, limited partners or stockholders of the Selling Stockholders;
- on any national securities exchange or quotation service on which the Shares may be listed or quoted at the time of sale, including Nasdaq;
- in the over-the-counter market;
- in transactions otherwise than on such exchanges or services or in the over-the-counter market;
- any other method permitted by applicable law; or
- through any combination of the foregoing.

These transactions may include block transactions or crosses. Crosses are transactions in which the same broker acts as an agent on both sides of the trade.

In connection with distributions of the Shares or otherwise, the Selling Stockholders may enter into hedging transactions with broker-dealers or other financial institutions. In connection with such transactions, broker-dealers or other financial institutions may engage in short sales of the securities in the course of hedging transactions, broker-dealers or other financial institutions may engage in short sales of the Shares in the course of hedging the positions they assume with the Selling Stockholders. The Selling Stockholders may also sell the Shares short and redeliver the Shares to close out such short positions. The Selling Stockholders may also enter into option or other transactions with broker-dealers or other financial institutions which require the delivery to such broker-dealer or other financial institution of the Shares offered by this prospectus, which Shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to

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reflect such transaction). The Selling Stockholders may also pledge the Shares to a broker-dealer or other financial institution, and, upon a default, such broker-dealer or other financial institution, may effect sales of the pledged Shares pursuant to this prospectus (as supplemented or amended to reflect such transaction).

It is possible that one or more underwriters may make a market in our Shares, but such underwriters will not be obligated to do so and may discontinue any market making at any time without notice. We cannot give any assurance as to the liquidity of the trading market for our Shares.

Our shares are currently listed on the Nasdaq Global Market under the symbol "BIOR."

In effecting sales, broker-dealers or agents engaged by the Selling Stockholders may arrange for other broker-dealers to participate. Broker-dealers or agents may receive commissions, discounts or concessions from the Selling Stockholders in amounts to be negotiated immediately prior to the sale.

The underwriters, broker-dealers and agents that may engage in transactions with us or the Selling Stockholders, may have banking, lending or other relationships with us or perform services for us or the Selling Stockholders, in the ordinary course of business.

In order to comply with the securities laws of certain states, if applicable, the Shares must be sold in such jurisdictions only through registered or licensed brokers or dealers. In addition, in certain states the Shares may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

The Selling Stockholders and any other persons participating in the sale or distribution of the Shares will be subject to applicable provisions of the Securities Act and the Exchange Act, and the rules and regulations thereunder, including, without limitation, Regulation M. These provisions may restrict certain activities of, and limit the timing of purchases and sales of any of the Shares by, the Selling Stockholders or any other person, which limitations may affect the marketability of the Shares.

The Selling Stockholders may enter into derivative transactions with third parties, or sell shares not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement indicates, in connection with those derivatives, the third parties may sell the Shares covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use Shares pledged by any of the Selling Stockholders or borrowed from any of the Selling Stockholders or others to settle those sales or to close out any related open borrowings of stock, and may use Shares received from any of the Selling Stockholders in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and will be identified in the applicable prospectus supplement (or a post-effective amendment). In addition, any of the Selling Stockholders may otherwise loan or pledge the Shares to a financial institution or other third party that in turn may sell the Shares short using this prospectus. Such financial institution or other third party may transfer its economic short position to investors in our Shares or in connection with a concurrent offering of other securities.

At the time a particular offering of the Shares is made, to the extent required, an accompanying prospectus supplement, or, if appropriate, a post-effective amendment to the registration statement of which this prospectus forms a part, will be prepared and distributed, which will set forth the names of the Selling Stockholders, the aggregate amount of Shares being offered and the terms of the offering, including, to the extent required, (1) the name or names of any underwriters, broker-dealers or agents, (2) any discounts, commissions and other terms constituting compensation from the Selling Stockholders and (3) any discounts, commissions or concessions allowed or reallocated to be paid to broker-dealers. We may suspend the sale of Shares by the Selling Stockholders pursuant to this prospectus for certain periods of time for certain reasons, including if the prospectus is required to be supplemented or amended to include additional material information.

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The Selling Stockholders also may transfer the Shares in other circumstances, in which case the transferees, pledgees or other successors-in-interest will be the selling beneficial owners for purposes of this prospectus. Upon being notified by either of the Selling Stockholders that a donee, pledgee, transferee, other successor- in-interest intends to sell our Shares, we will, to the extent required, promptly file a supplement to this prospectus to name specifically such person as a selling stockholder.

The Selling Stockholders will act independently of us in making decisions with respect to the timing, manner, and size of each resale or other transfer. There can be no assurance that the Selling Stockholders will sell any or all of the Shares under this prospectus. Further, we cannot assure you that the Selling Stockholders will not transfer, distribute, devise or gift the Shares by other means not described in this prospectus. In addition, any Shares covered by this prospectus that qualify for sale under Rule 144 of the Securities Act may be sold under Rule 144 rather than under this prospectus. The Shares may be sold in some states only through registered or licensed brokers or dealers. In addition, in some states the Shares may not be sold unless they have been registered or qualified for sale or an exemption from registration or qualification is available and complied with.

The Selling Stockholders may, from time to time, pledge or grant a security interest in some of the Shares owned by them and, if any of the Selling Stockholders default in their performance of its secured obligations, the pledgees or secured parties may offer and sell such Shares, from time to time, under this prospectus, or under an amendment or supplement to this prospectus amending the list of the Selling Stockholders to include the pledgee, transferee or other successors in interest as the Selling Stockholders under this prospectus. The Selling Stockholders also may transfer the Shares in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

The Selling Stockholders are each an entity that may elect to make an in-kind distribution of the Shares to its members, partners or shareholders pursuant to this prospectus by delivering a prospectus. To the extent that such members, partners or shareholders are not affiliates of ours, such members, partners or stockholders would thereby receive freely tradable Shares pursuant to the distribution through this prospectus.

For additional information regarding expenses of registration, see the section titled "Use of Proceeds" appearing elsewhere in this prospectus.

We have agreed with the Selling Stockholders to keep the registration statement of which this prospectus constitutes a part effective until such time as all of the Shares covered by this prospectus have been disposed of pursuant to and in accordance with the registration statement or such Shares have been withdrawn.

LEGAL MATTERS

Certain legal matters relating to the validity of the Shares offered by this prospectus will be passed upon for us by Gibson, Dunn & Crutcher LLP, San Francisco, California.

EXPERTS

The consolidated financial statements of Biora Therapeutics, Inc. as of December 31, 2022 and 2021, and for each of the years in the two-year period ended December 31, 2022, have been incorporated by reference herein in reliance upon the report of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing. The audit report covering the December 31, 2022 consolidated financial statements contains an explanatory paragraph that states that the Company has suffered recurring losses from operations and has an accumulated deficit that raise substantial doubt about its ability to continue as a going concern. The consolidated financial statements do not include any adjustments that might result from the outcome of that uncertainty.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>. Copies of certain information filed by us with the SEC are also available on our website at www.bioratherapeutics.com. Our website is not a part of this prospectus and is not incorporated by reference in this prospectus.

This prospectus is part of a registration statement that we filed with the SEC. This prospectus omits some information contained in the registration statement in accordance with SEC rules and regulations. You should review the information and exhibits in the registration statement for further information about us and our subsidiaries and the securities we are offering. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings. You should review the complete document to evaluate these statements.

INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to “incorporate by reference” information from other documents that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus.

We incorporate by reference into this prospectus and the registration statement of which this prospectus is a part the information or documents listed below that we have filed with the SEC:

1. Our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2022, filed with the SEC on March 30, 2023, including the information specifically incorporated by reference therein from our Definitive Proxy Statement on [Schedule 14A](#), filed with the SEC on April 27, 2023;
2. Our Quarterly Report on Form 10-Q for the quarters ended [March 31, 2023](#), [June 30, 2023](#) and [September 30, 2023](#), filed with the SEC on May 15, 2023, August 14, 2023 and November 13, 2023, respectively;
3. Our Current Reports on Form 8-K filed on [January 9, 2023](#), [January 12, 2023](#), [January 20, 2023](#), [April 7, 2023](#), [June 8, 2023](#), [June 14, 2023](#), [June 15, 2023](#), [September 19, 2023](#), [October 6, 2023](#), [October 11, 2023](#), [October 13, 2023](#), [December 1, 2023](#), [December 15, 2023](#) and [December 18, 2023](#);
4. The description of our common stock contained in our Registration Statement on [Form 8-A](#) filed with the SEC on June 16, 2020, as well as any subsequent amendments or reports filed for the purpose of updating such description.

In addition, all documents (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the initial registration statement of which this prospectus is a part and prior to the effectiveness of such registration statement and all documents subsequently filed by us pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the termination of the offering (excluding any information furnished rather than filed) shall be deemed to be incorporated by reference into this prospectus.

Notwithstanding the statements in the preceding paragraphs, no document, report or exhibit (or portion of any of the foregoing) or any other information that we have “furnished” to the SEC pursuant to the Exchange Act shall be incorporated by reference into this prospectus.

We will furnish without charge to you, on written or oral request, a copy of any or all of the documents incorporated by reference in this prospectus, including exhibits to these documents. You should direct any requests for documents to Biora Therapeutics, Inc., 4330 La Jolla Village Drive, Suite 300, San Diego, CA 92122, telephone: (833) 727-2841. You also may access these filings on our website at www.bioratherapeutics.com. We do not incorporate the information on our website into this prospectus and you should not consider any information on, or that can be accessed through, our website as part of this prospectus (other than those filings with the SEC that we specifically incorporate by reference into this prospectus).

Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus will be deemed modified, superseded or replaced for purposes of this prospectus to the extent that a statement contained in this prospectus modifies, supersedes or replaces such statement.

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

The following table sets forth an estimate of the fees and expenses, other than the underwriting discounts and commissions, payable by the registrant in connection with the issuance and distribution of the securities being registered. All the amounts shown are estimates, except for the SEC registration fee.

<u>Item</u>	<u>Amount</u>
SEC registration fee	\$ 12,641
Legal fees and expenses	50,000
Accounting fees and expenses	35,000
Printing and miscellaneous expenses	12,359
Total	<u>\$ 110,000</u>

Item 15. Indemnification of Officers and Directors

The Company is a Delaware corporation. Section 145(a) of the Delaware General Corporation Law, or the DGCL, provides that a Delaware corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, other than an action by or in the right of the corporation, by reason of the fact that such person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful.

Section 145(b) of the DGCL provides that a Delaware corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that such person acted in any of the capacities set forth above, against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if the person acted in good faith and in a manner the person reasonably believed to be in, or not opposed to, the best interests of the corporation, except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation, unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine, upon application, that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the court shall deem proper.

Further subsections of DGCL Section 145 provide that:

- (1) to the extent a present or former director or officer of a corporation has been successful on the merits or otherwise in the defense of any action, suit or proceeding referred to in subsections (i) and (ii) of Section 145 or in the defense of any claim, issue or matter therein, such person shall be indemnified against expenses, including attorneys' fees, actually and reasonably incurred by such person in connection therewith;
- (2) the indemnification and advancement of expenses provided for pursuant to Section 145 shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise; and

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(3) the corporation shall have the power to purchase and maintain insurance of behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the corporation would have the power to indemnify such person against such liability under Section 145.

As used in this Item 14, the term "proceeding" means any threatened, pending or completed action, suit or proceeding, whether or not by or in the right of the Company, and whether civil, criminal, administrative, investigative or otherwise.

Section 145 of the DGCL makes provision for the indemnification of officers and directors in terms sufficiently broad to indemnify officers and directors of the Company under certain circumstances from liabilities (including reimbursement for expenses incurred) arising under the Securities Act. The Company's organizational documents provide, in effect, that, to the fullest extent and under the circumstances permitted by Section 145 of the DGCL, the Company will indemnify any and all of its officers and directors. The Company has entered into indemnification agreements with its officers and directors. The Company may, in its discretion, similarly indemnify its employees and agents. The Company's certificate of incorporation also relieves its directors from monetary damages to the Company or its stockholders for breach of such director's fiduciary duty as a director to the fullest extent permitted by the DGCL. Under Section 102(b)(7) of the DGCL, a corporation may relieve its directors from personal liability to such corporation or its stockholders for monetary damages for any breach of their fiduciary duty as directors except (i) for a breach of the duty of loyalty, (ii) for failure to act in good faith, (iii) for intentional misconduct or knowing violation of law, (iv) for willful or negligent violations of certain provisions in the DGCL imposing certain requirements with respect to stock repurchases, redemptions and dividends or (v) for any transactions from which the director derived an improper personal benefit.

The Company has purchased insurance policies that, within the limits and subject to the terms and conditions thereof, cover certain expenses and liabilities that may be incurred by directors and officers in connection with proceedings that may be brought against them as a result of an act or omission committed or suffered while acting as a director or officer of the Company.

Item 16. Exhibits

<u>Exhibit Number</u>	<u>Description</u>
3.1	<u>Certificate of Incorporation, dated as of June 23, 2020 (incorporated by reference to the Company's Form 8-K filed on June 26, 2020).</u>
3.2	<u>Certificate of Amendment of the Eighth Amended and Restated Certificate of Incorporation of Biora Therapeutics, Inc., effective April 26, 2022 (incorporated by reference to the Company's Form 8-K filed on April 27, 2022).</u>
3.3	<u>Second Certificate of Amendment of the Eighth Amended and Restated Certificate of Incorporation of Biora Therapeutics, Inc., effective January 3, 2023 (incorporated by reference to the Company's Form 8-K filed on December 30, 2022).</u>
3.4	<u>Third Amended and Restated Bylaws of Biora Therapeutics, Inc. (incorporated by reference to the Company's Form 8-K filed on November 28, 2022).</u>
4.1	<u>Form of common stock certificate of the registrant (incorporated by reference to the Company's Form S-1/A filed on June 4, 2020).</u>
4.2	<u>Indenture, dated as of December 19, 2023, between the Company and GLAS Trust Company LLC, as trustee (incorporated by reference to the Company's Form 8-K filed on December 18, 2023).</u>

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<u>Exhibit Number</u>	<u>Description</u>
4.3	Form of certificate representing the 11.00 / 13.00% Convertible Senior Secured Notes due 2028 (included as Exhibit A to Exhibit 4.2).
4.4	Form of Commitment Warrant (incorporated by reference to the Company's Form 8-K filed on December 18, 2023).
4.5	Form of Additional Warrant (incorporated by reference to the Company's Form 8-K filed on December 18, 2023).
4.6	Form of Exchange Warrant (incorporated by reference to the Company's Form 8-K filed on December 18, 2023).
5.1*	Opinion of Gibson, Dunn & Crutcher LLP.
10.1	Form of Note Purchase Agreement between the Company and the Purchasers named therein (incorporated by reference to the Company's Form 8-K filed on December 18, 2023).
10.2	Form of Note Exchange Agreement between the Company and the Holders named therein (incorporated by reference to the Company's Form 8-K filed on December 18, 2023).
10.3	Form of Registration Rights Agreement between the Company and the Investors named therein (incorporated by reference to the Company's Form 8-K filed on December 18, 2023).
23.1*	Consent of Independent Registered Public Accounting Firm.
23.2*	Consent of Gibson, Dunn & Crutcher LLP (included in Exhibit 5.1).
24.1*	Power of Attorney (included on signature page).
107*	Filing Fee Table.

* Filed herewith.

Item 17. Undertakings

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement; provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the

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registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which the prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual

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report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Diego, State of California, on December 22, 2023.

Biora Therapeutics, Inc.

By: /s/ Aditya P. Mohanty

Aditya P. Mohanty
Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Eric d'Esparbes and Clarke W. Neumann, and each of them, as true and lawful attorneys-in-fact and agents, with full powers of substitution and resubstitution, for them and in their name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement (or any registration statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933), and to file the same, with all exhibits thereto, and other documents in connection therewith, with the SEC, and generally to do all such things in their names and behalf in their capacities as officers and directors to enable Biora Therapeutics, Inc. to comply with the provisions of the Securities Act of 1933 and all requirements of the SEC, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed below by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Aditya P. Mohanty</u> Aditya P. Mohanty	Chief Executive Officer and Director (<i>principal executive officer</i>)	December 22, 2023
<u>/s/ Eric d'Esparbes</u> Eric d'Esparbes	Chief Financial Officer (<i>principal financial and accounting officer</i>)	December 22, 2023
<u>/s/ Jeffrey Alter</u> Jeffrey Alter	Director and Chairman of the Board	December 22, 2023
<u>/s/ Jeffrey Ferrell</u> Jeffrey Ferrell	Director	December 22, 2023
<u>/s/ Jill Howe</u> Jill Howe	Director	December 22, 2023
<u>/s/ Brian Kotzin, M.D.</u> Brian Kotzin, M.D.	Director	December 22, 2023
<u>/s/ Lynne Powell</u> Lynne Powell	Director	December 22, 2023

GIBSON DUNN

Gibson, Dunn & Crutcher LLP

One Embarcadero Center
San Francisco, CA 94111-3715
Tel 415.393.8200
gibsondunn.com

Client: 05557-00041

December 22, 2023

Biora Therapeutics, Inc.
4330 La Jolla Village Drive, Suite 300
San Diego, CA 92122*Re: Biora Therapeutics, Inc.
Registration Statement on Form S-3*

Ladies and Gentlemen:

We have examined the Registration Statement on Form S-3 (the "Registration Statement"), of Biora Therapeutics, Inc., a Delaware corporation (the "Company"), filed with the Securities and Exchange Commission (the "Commission") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), in connection with the registration for offer and resale from time to time by the selling stockholders named in the Registration Statement of up to 71,068,767 shares of the Company's common stock (the "Common Stock"), par value \$0.001 per share (the "Shares").

In arriving at the opinion expressed below, we have examined originals, or copies certified or otherwise identified to our satisfaction as being true and complete copies of the originals, of specimen Common Stock certificates and such other documents, corporate records, certificates of officers of the Company and of public officials and other instruments as we have deemed necessary or advisable to enable us to render the opinions set forth below. In our examination, we have assumed without independent investigation the genuineness of all signatures, the legal capacity and competency of all natural persons, the authenticity of all documents submitted to us as originals and the conformity to original documents of all documents submitted to us as copies.

Based upon the foregoing, and subject to the assumptions, exceptions, qualifications and limitations set forth herein, we are of the opinion that the Shares, when issued against payment therefor as set forth in the Registration Statement, will be validly issued, fully paid and non-assessable.

We consent to the filing of this opinion as an exhibit to the Registration Statement, and we further consent to the use of our name under the caption "Legal Matters" in the Registration Statement and the prospectus that forms a part thereof. In giving these consents, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the Rules and Regulations of the Commission.

Very truly yours,

/s/ Gibson, Dunn & Crutcher LLP

Abu Dhabi • Beijing • Brussels • Century City • Dallas • Denver • Dubai • Frankfurt • Hong Kong • Houston • London • Los Angeles
Munich • New York • Orange County • Palo Alto • Paris • Riyadh • San Francisco • Singapore • Washington, D.C.

Consent of Independent Registered Public Accounting Firm

We consent to the use of our report dated March 30, 2023, with respect to the consolidated financial statements of Biora Therapeutics, Inc., incorporated herein by reference and to the reference to our firm under the heading “Experts” in the prospectus. Our report also contains an explanatory paragraph that states that the Company has suffered recurring losses from operations and has an accumulated deficit that raise substantial doubt about its ability to continue as a going concern. The consolidated financial statements do not include any adjustments that might result from the outcome of that uncertainty.

/s/ KPMG LLP

San Diego, California
December 22, 2023

Calculation of Filing Fee Tables

FORM S-3

(Form Type)

Biora Therapeutics, Inc.

(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee	Carry Forward Form Type	Carry Forward File Number	Carry Forward Initial effective date	Filing Fee Previously Paid In Connection with Unsold Securities to be Carried Forward
Newly Registered Securities												
Fees to Be Paid	Equity	Common stock, par value \$0.001 per share ⁽¹⁾	457(c)	71,068,767	\$1.205	\$85,637,865	0.00014760	\$12,641				
Fees Previously Paid	N/A	N/A	N/A	N/A	N/A	N/A		N/A				
Carry Forward Securities												
Carry Forward Securities	N/A	N/A	N/A	N/A		N/A			N/A	N/A	N/A	N/A
	Total Offering Amounts					\$85,637,865		\$12,641				
	Total Fees Previously Paid							—				
	Total Fee Offsets							—				
	Net Fee Due							\$12,641				

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended, this registration statement also covers such an indeterminate amount of shares of common stock as may become issuable to prevent dilution resulting from stock splits, stock dividends and similar events.
- (2) The amount registered consists of up to (i) 26,207,050 shares of common stock issuable upon conversion of \$40,883,000 principal amount of the Company's 11.00%/13.00% Convertible Senior Secured Notes due 2028 (the "2028 Convertible Notes"), (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, (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, (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.
- (3) Estimated solely for the purpose of calculating the registration fee, based on the average of the high and low prices of the shares of common stock on The Nasdaq Global Market on December 20, 2023 (such date being within five business days of the date that this registration statement was first filed with the Securities and Exchange Commission, in accordance with Rule 457(c) under the Securities Act).