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

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

MEI PHARMA, INC.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

51-04078
(I.R.S. Employer
Identification Number)

11455 El Camino Real Suite 250,
San Diego, California 92130
(858) 369-7100
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

David M. Urso
President & Chief Executive Officer
MEI Pharma, Inc.
11455 El Camino Real Suite 250,
San Diego, California 92130
(858) 369-7100
(Name, address, including zip code, and telephone number, including area code, of agent for service)

with copies to:

Steven A. Navarro, Esq.
Justin W. Chairman, Esq.
Morgan, Lewis & Bockius LLP
101 Park Avenue
New York, New York 10178
(212) 309-6000

Approximate date of commencement of proposed sale to the public: From time to time after this Registration Statement becomes effective.

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	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

EXPLANATORY NOTE

We intend to initiate a new offering through JonesTrading Institutional Services LLC, acting as sales agent or principal, pursuant to the terms of the Sales Agreement under this registration statement. Accordingly, this registration statement contains:

- a base prospectus which covers the offering, issuance and sale by us of up to \$100,000,000 in the aggregate of our common stock, preferred stock, warrants, rights and/or units from time to time in one or more offerings; and
- a prospectus supplement covering the offering, issuance and sale by us of up to a maximum aggregate offering price of \$10,300,000 of shares of our common stock that may be issued and sold from time to time under a sales agreement with JonesTrading Institutional Services LLC.

The base prospectus immediately follows this explanatory note. The specific terms of any securities to be offered pursuant to the base prospectus will be specified in a prospectus supplement to the base prospectus. The specific terms of the securities to be issued and sold under the sales agreement are specified in the prospectus supplement that immediately follows the base prospectus. The \$10,300,000 of common shares that may be offered, issued and sold under the prospectus supplement is included in the \$100,000,000 of securities that may be offered, issued and sold by us under the base prospectus. Upon termination of the sales agreement, any portion of the \$10,300,000 included in this prospectus supplement that is not sold pursuant to the sales agreement will be available for sale in other offerings pursuant to the base prospectus and a corresponding prospectus supplement, and if no shares are sold under the sales agreement, the full \$10,300,000 of securities may be sold in other offerings pursuant to the base prospectus and a corresponding prospectus supplement.

The information contained in this prospectus is not complete and may be changed. We 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 an offer to buy these securities in any state where the offer and sale is not permitted.

SUBJECT TO COMPLETION, DATED FEBRUARY 20, 2024

PROSPECTUS

\$100,000,000



MEI PHARMA, INC.

Common Stock
Preferred Stock
Warrants
Rights
Units

We may offer up to \$100,000,000 aggregate dollar amount of our common stock, preferred stock, warrants to purchase our common stock or preferred stock, rights to purchase common stock, preferred stock, or units and units that include any of these securities from time to time in one or more offerings. This prospectus provides you with a general description of the securities.

We may offer these securities at prices and on terms to be set forth in one or more supplements to this prospectus. These securities may be offered directly, through agents on our behalf or through underwriters or dealers.

This prospectus may not be used to consummate a sale of any securities unless accompanied by a prospectus supplement.

Our common stock is traded on The Nasdaq Capital Market under the symbol "MEIP." On February 14, 2024, the closing price of our common stock on The Nasdaq Capital Market was \$4.71 per share.

As of December 22, 2023, the aggregate market value of our outstanding common stock held by non-affiliates, or public float, was approximately \$30.9 million, based on 6,662,857 shares of outstanding common stock, of which approximately 1.7 million shares were held by affiliates, and a price of \$6.24 per share, which was the price at which our common stock was last sold on The Nasdaq Capital Market on such date. We have not offered any securities pursuant to General Instruction I.B.6 of Form S-3 during the prior 12-calendar-month period that ends on and includes the date of this prospectus. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell securities registered on this registration statement in a public primary offering with a value exceeding more than one-third of our public float in any 12-month period so long as our public float remains below \$75 million (the "Baby Shelf Limitation"). As of December 22, 2023, one-third of our Public Float was equal to approximately \$10.3 million.

An investment in our securities involves significant risks. See "[Risk Factors](#)" on page 3 of this prospectus and in any applicable prospectus supplement and in the documents incorporated by reference in this prospectus for a discussion of factors you should carefully consider before deciding to purchase 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 of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is _____, 2024.

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ABOUT THIS PROSPECTUS

Unless we have indicated otherwise, references in this prospectus to “MEI Pharma,” “we,” “us” and “our” or similar terms are to MEI Pharma, Inc., a Delaware corporation. References in this prospectus to “FDA” refer to the United States Food and Drug Administration.

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, utilizing a “shelf” registration statement. This prospectus provides you with a general description of the securities we may offer. We will describe the specific terms of those securities, as necessary, in supplements that we attach to this prospectus for each offering. Each supplement will also contain specific information about the terms of the offering it describes. The supplements may also add to, update or change information contained in this prospectus. In addition, as we describe in the sections entitled “Incorporation of Certain Information by Reference” and “Where You Can Find More Information,” we have filed and plan to continue to file other documents with the SEC that contain information about us. Before you decide whether to invest in our securities, you should read this prospectus, the supplement that further describes the offering of those securities and the information we otherwise file with the SEC.

The registration statement that contains this prospectus, including the exhibits to the registration statement, contains additional information about us and the securities being offered under this prospectus. You should read the registration statement and the accompanying exhibits for further information. The registration statement and exhibits can be read and are available to the public over the Internet at the SEC’s website at <http://www.sec.gov>.

You should rely only on the information contained or incorporated by reference in this prospectus and in any prospectus supplement. We have not authorized any person to provide any information or make any statement that differs from what is contained in this prospectus. If any person does make a statement that differs from what is in this prospectus, you should not rely on it. This prospectus is not an offer to sell, nor is it a solicitation of an offer to buy, these securities in any state in which the offer or sale is not permitted. The information in this prospectus is accurate as of its date, but the information may change after that date. You should not assume that the information in this prospectus is accurate as of any date after its date.

SUMMARY

The Company

We are a clinical-stage pharmaceutical company committed to developing novel and differentiated cancer therapies. We build our pipeline by acquiring promising cancer agents and creating value in programs through clinical development, strategic partnerships, and out-licensing or commercialization, as appropriate. Our approach to oncology drug development is to evaluate our drug candidates in combinations with standard-of-care therapies to overcome known resistance mechanisms and address clear medical needs to provide improved patient benefit. The drug candidate pipeline includes voruciclib, an oral cyclin-dependent kinase 9 ("CDK9") inhibitor, and ME-344, an intravenous small molecule mitochondrial inhibitor targeting the oxidative phosphorylation pathway. Our common stock is listed on the Nasdaq Capital Market under the symbol "MEIP."

We believe our cash is sufficient to fund operations for at least 12 months and through the reporting of clinical data readouts from the ongoing and planned voruciclib and ME-344 Phase 1 and Phase 1b clinical programs, respectively.

Corporate Information

Our principal executive offices are located at 11455 El Camino Real Suite 250, San Diego, CA 92130, and our phone number is (858) 369-7100.

RISK FACTORS

Any investment in our securities involves a high degree of risk. In addition to the other information included or incorporated by reference in this prospectus and any accompanying prospectus supplement, you should carefully consider the important factors set forth under the heading “Risk Factors” in our Annual Report on Form 10-K for the fiscal year ended June 30, 2023, as amended, our Quarterly Reports on Form 10-Q for the quarters ended September 30, 2023 and December 31, 2023, and in our subsequent annual reports on Form 10-K and in other reports we file with the SEC from time to time, which are incorporated herein by reference, before investing in our securities. Any of the risk factors referred to above could significantly and negatively affect our business, results of operations or financial condition, which may lower the trading price of our common stock. The risks referred to above are not the only ones that may exist. Additional risks not currently known by us or that we deem immaterial may also impair our business operations. You may lose all or a part of your investment. For further details, see the sections entitled “Where You Can Find More Information” and “Incorporation of Certain Information by Reference.”

CAUTIONARY STATEMENT ABOUT FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference herein include 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”). All statements other than statements of historical facts contained in this prospectus and in the documents incorporated by reference herein, including statements regarding the future financial position, business strategy and plans and objectives of management for future operations, are forward-looking statements. The words “believe,” “may,” “will,” “estimate,” “continue,” “anticipate,” “intend,” “should,” “plan,” “expect,” and similar expressions, as they relate to us, are intended to identify forward-looking statements. We have based these forward-looking statements largely on current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including, without limitation, those described in “Risk Factors” and elsewhere in this prospectus and the documents incorporated by reference herein, including, among other things:

- the potential, safety, efficacy, and regulatory and clinical progress of our product candidates, including the anticipated timing for initiation of clinical trials and release of clinical trial data and our expectations surrounding potential regulatory submissions, approvals and timing thereof, our business strategy and plans;
- the sufficiency of our cash, cash equivalents and short-term investments to fund our operations;
- our ability to fund future capital returns;
- our failure to successfully commercialize our product candidates;
- the availability or appropriateness of utilizing the FDA’s accelerated approval pathway for our product candidates;
- final data from our pre-clinical studies and completed clinical trials may differ materially from reported interim data from ongoing studies and trials;
- costs and delays in the development and/ or FDA approval, or the failure to obtain such approval, of our product candidates;
- uncertainties or differences in interpretation in clinical trial results;
- uncertainty regarding the impact of rising inflation and the increase in interest rates as a result;
- potential economic downturn;
- activist investors;
- our inability to maintain or enter into, and the risks resulting from, our dependence upon collaboration or contractual arrangements necessary for the development, manufacture, commercialization, marketing, sales and distribution of any products;

- our inability to protect our patents or proprietary rights and obtain necessary rights to third party patents and intellectual property to operate our business;
- our inability to operate our business without infringing the patents and proprietary rights of others;
- competition and competitive factors;
- our ability to attract and retain key employees ;
- our exposure to potential product liability claims and other claims may exceed our insurance limits;
- geopolitical conflicts;
- technological changes;
- cybersecurity;
- general economic conditions;
- government regulation generally;
- changes in industry practice; and
- one-time events.

These risks are not exhaustive. Other sections of this report and our other filings with the SEC include additional factors which could adversely impact our business and financial performance. Moreover, we operate in a very competitive and rapidly changing environment. New risk factors emerge from time to time and it is not possible for us to predict all risk factors, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

You should not rely upon forward looking statements as predictions of future events. We cannot assure you that the events and circumstances reflected in the forward looking statements will be achieved or occur. Although we believe that the expectations reflected in the forward looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements.

SECURITIES OFFERED BY THIS PROSPECTUS

Using this prospectus, we may offer from time to time, subject to the Baby Shelf Limitation, in one or more series, together or separately, at prices and terms to be determined at the time of offering:

- shares of common stock, \$0.00000002 par value;
- shares of preferred stock, \$0.01 par value;
- warrants to purchase shares of common stock or preferred stock;
- rights to purchase shares of common stock, preferred stock, or units; and
- units

The shares of preferred stock may be convertible into or exchangeable for shares of our common stock or preferred stock issued by us.

See “Description of Securities” for a description of the terms of the common stock, preferred stock, warrants to purchase common stock or preferred stock, rights to purchase common stock, preferred stock, or units and units that include any of these securities.

USE OF PROCEEDS

Although we expect to use a substantial portion of the net proceeds from the sale of securities under this prospectus for general corporate purposes, including to progress the development programs of our drug candidates, we have not allocated these net proceeds for specific purposes. If, as of the date of any prospectus supplement, we have identified any additional use for the net proceeds, we will describe them in the prospectus supplement. The amount of securities offered from time to time pursuant to this prospectus and any prospectus supplement, and the precise amount of the net proceeds we will receive from the sale of such securities, as well as the timing of receipt of those proceeds, will depend upon our funding requirements. If we elect at the time of an issuance of securities to make different or more specific uses of the proceeds than as set forth herein, we will describe those uses in the applicable prospectus supplement.

PLAN OF DISTRIBUTION

We may sell the securities included in this prospectus (i) through agents, (ii) through underwriters, (iii) through dealers, (iv) directly to a limited number of purchasers or to a single purchaser, or (v) through a combination of any such methods of sale.

The distribution of the securities may be effected from time to time in one or more transactions, including block transactions and transactions on the Nasdaq Capital Market or any other organized market where the securities may be traded:

- at a fixed price or at final prices, which may be changed;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices; or
- at negotiated prices.

Offers to purchase securities may be solicited directly by us, or by agents designated by us, from time to time. Any such agent, which may be deemed to be an underwriter as that term is defined in the Securities Act, as amended, involved in the offer or sale of the securities in respect of which this prospectus is delivered will be named, and any commissions payable by us to such agent will be set forth, in the applicable prospectus supplement.

If an underwriter is, or underwriters are, utilized in the offer and sale of securities in respect of which this prospectus and the applicable prospectus supplement are delivered, we will execute an underwriting agreement with such underwriter(s) for the sale to it or them and the name(s) of the underwriter(s) and the terms of the transaction, including any underwriting discounts and other items constituting compensation of the underwriters and dealers, if any, will be set forth in such prospectus supplement, which will be used by the underwriter(s) to make resales of the securities in respect of which this prospectus and such prospectus supplement are delivered to the public. The securities will be acquired by the underwriters for their own accounts and may be resold from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. Any initial public offering price and any discounts or concessions allowed or reallocated or paid to dealers may be changed from time to time.

If a dealer is utilized in the sale of the securities in respect of which this prospectus is delivered, we will sell such securities to the dealer, as principal. The dealer may then resell such securities to the public at varying prices to be determined by such dealer at the time of resale. The name of the dealer and the terms of the transaction will be identified in the applicable prospectus supplement.

If an agent is used in an offering of securities being offered by this prospectus, the agent will be named, and the terms of the agency will be described, in the applicable prospectus supplement relating to the offering. Unless otherwise indicated in the prospectus supplement, an agent will act on a best efforts basis for the period of its appointment.

If indicated in the applicable prospectus supplement, we will authorize underwriters or their other agents to solicit offers by certain institutional investors to purchase securities from us pursuant to contracts providing for payment and delivery at a future date. Institutional investors with which these contracts may be made include commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and others. In all cases, these purchasers must be approved by us. The obligations of any purchaser under any of these contracts will not be subject to any conditions except that (a) the purchase of the securities must not at the time of delivery be prohibited under the laws of any jurisdiction to which that purchaser is subject, and (b) if the securities are also being sold to underwriters, we must have sold to these underwriters the securities not subject to delayed delivery. Underwriters and other agents will not have any responsibility in respect of the validity or performance of these contracts.

Certain of the underwriters, dealers or agents utilized by us in any offering hereby may be customers of, including borrowers from, engage in transactions with, and perform services for us or one or more of our affiliates in the ordinary course of business. Underwriters, dealers, agents and other persons may be entitled, under agreements which may be entered into with us, to indemnification against certain civil liabilities, including liabilities under the Securities Act.

Until the distribution of the securities is completed, rules of the SEC may limit the ability of the underwriters and certain selling group members, if any, to bid for and purchase the securities. As an exception to these rules, the representatives of the underwriters, if any, are permitted to engage in certain transactions that stabilize the price of the securities. Such transactions may consist of bids or purchases for the purpose of pegging, fixing or maintaining the price of the securities.

If underwriters create a short position in the securities in connection with the offering thereof (in other words, if they sell more securities than are set forth on the cover page of the applicable prospectus supplement), the representatives of such underwriters may reduce that short position by purchasing securities in the open market. Any such representatives also may elect to reduce any short position by exercising all or part of any over-allotment option described in the applicable prospectus supplement.

Any such representatives also may impose a penalty bid on certain underwriters and selling group members. This means that if the representatives purchase securities in the open market to reduce the underwriters' short position or to stabilize the price of the securities, they may reclaim the amount of the selling concession from the underwriters and selling group members who sold those shares as part of the offering thereof.

In general, purchases of a security for the purpose of stabilization or to reduce a syndicate short position could cause the price of the security to be higher than it might otherwise be in the absence of such purchases. The imposition of a penalty bid might have an effect on the price of a security to the extent that it was to discourage resales of the security by purchasers in the offering.

Neither we nor any of the underwriters, if any, makes any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of the securities. In addition, neither we nor any of the underwriters, if any, makes any representation that the representatives of the underwriters, if any, will engage in such transactions or that such transactions, once commenced, will not be discontinued without notice.

The anticipated date of delivery of the securities offered by this prospectus will be described in the applicable prospectus supplement relating to the offering. The securities offered by this prospectus may or may not be listed on a national securities exchange or a foreign securities exchange. We cannot give any assurances that there will be a market for any of the securities offered by this prospectus and any prospectus supplement.

We will bear costs relating to all of the securities being registered under this prospectus, other than underwriters' discounts and commissions.

DESCRIPTION OF SECURITIES

Securities We May Offer Under this Prospectus

Common Stock

For a description of our common stock, please see the Description of MEI Common Stock filed as Exhibit 4.4 to our Annual Report on Form 10-K for the fiscal year ended June 30, 2023, filed with the SEC on September 26, 2023, and any future description of capital stock filed thereafter for the purpose of updating such description.

Preferred Stock

The material terms of any series of preferred stock that we offer through a prospectus supplement will be described in that prospectus supplement. Our board of directors is authorized to provide for the issuance of blank check preferred stock in one or more series with designations as may be stated in the resolution or resolutions providing for the issue of such preferred shares. At the time that any series of our preferred stock is authorized, our board of directors will fix the dividend rights, any conversion rights, any voting rights, redemption provisions, liquidation preferences and any other rights, preferences, privileges and restrictions of that series, as well as the number of shares constituting that series and their designation. Our board of directors could, without stockholder approval, cause us to issue preferred stock which has voting, conversion and other rights that could adversely affect the holders of our common stock or make it more difficult to effect a change in control. Our preferred stock could be used to dilute the share ownership of persons seeking to obtain control of us and thereby hinder a possible takeover attempt which, if our stockholders were offered a premium over the market value of their shares, might be viewed as being beneficial to our stockholders. In addition, our preferred stock could be issued with voting, conversion and other rights and preferences which would adversely affect the voting power and other rights of holders of our common stock.

Warrants

We may issue warrants to purchase our common stock or preferred stock. Warrants may be issued independently or together with any other securities and may be attached to, or separate from, such securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a bank or trust company, as warrant agent. The warrant agent will act solely as our agent in connection with the warrants and will not have any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants. A copy of the forms of the warrant agreement and the warrant certificate relating to any particular issue of warrants will be filed with the SEC each time we issue warrants, and you should read those documents for provisions that may be important to you. For more information on how you can obtain copies of the forms of the warrant agreement and the related warrant certificate, if applicable, see “Where You Can Find More Information.” The terms of any warrants to be issued and a description of the material provisions of the applicable warrant agreement will be set forth in the applicable prospectus supplement.

The applicable prospectus supplement will describe the following terms of any warrants in respect of which this prospectus is being delivered:

- the title of such warrants;
- the aggregate number of such warrants;
- the price or prices at which such warrants will be issued;
- the currency or currencies, in which the price of such warrants will be payable;
- the securities purchasable upon exercise of such warrants;
- the price at which and the currency or currencies in which the securities or other rights purchasable upon exercise of such warrants may be purchased;
- the date on which the right to exercise such warrants shall commence and the date on which such right shall expire;

- if applicable, the minimum or maximum amount of such warrants which may be exercised at any one time;
- if applicable, the designation and terms of the securities with which such warrants are issued and the number of such warrants issued with each such security;
- if applicable, the date on and after which such warrants and the related securities will be separately transferable;
- information with respect to book-entry procedures, if any;
- if applicable, a discussion of any material United States federal income tax considerations; and
- any other terms of such warrants, including terms, procedures and limitations relating to the exchange and exercise of such warrants.

Rights to purchase Common Stock, Preferred Stock, or Units

We may issue rights to purchase our common stock, preferred stock, or units. Rights may be issued independently or together with any other securities and may be attached to, or separate from, such securities. In connection with any rights offering to our stockholders, we may enter into a standby underwriting, backstop or other arrangement with one or more underwriters or other persons pursuant to which such underwriters or other persons would purchase any offered securities remaining unsubscribed for after such rights offering. In connection with a rights offering to our stockholders, we would distribute certificates evidencing the rights and a prospectus supplement to our stockholders on or about the record date that we set for receiving rights in such rights offering. The terms of any rights to be issued and a description of the material provisions of the applicable underwriting, backstop or other arrangement will be set forth in the applicable prospectus supplement.

The applicable prospectus supplement will describe the following terms of any rights in respect of which this prospectus is being delivered:

- the title of such rights;
- the aggregate number of such rights;
- the subscription price or a formula for the determination of the subscription price for the rights;
- the currency or currencies, in which the subscription price of such rights will be payable;
- if applicable, the designation and terms of the securities with which the rights are issued and the number of rights issued with each such security or each principal amount of such security;
- the number or a formula for the determination of the number of the rights issued to each stockholder;
- the extent to which the rights are transferable;
- in the case of rights to purchase common stock or preferred stock, the type of stock and number of shares of stock purchasable upon exercise of one right;
- the date on which the right to exercise the rights will commence, and the date on which the rights will expire (subject to any extension);
- if applicable, the minimum or maximum amount of the rights that may be exercised at any one time;
- the extent to which such rights include an over-subscription privilege with respect to unsubscribed securities;
- if applicable, the procedures for adjusting the subscription price and number of shares of common stock or preferred stock purchasable upon the exercise of each right upon the occurrence of certain events, including stock splits, reverse stock splits, combinations, subdivisions or reclassifications of common stock or preferred stock;
- the effect on the rights of any merger, consolidation, sale or other disposition of our business;

- the terms of any rights to redeem or call the rights;
- information with respect to book-entry procedures, if any;
- the terms of the securities issuable upon exercise of the rights;
- if applicable, the material terms of any standby underwriting, backstop or other purchase arrangement that we may enter into in connection with the rights offering;
- if applicable, a discussion of certain U.S. Federal income tax considerations; and
- any other terms of the rights, including terms, procedures and limitations relating to the exchange and exercise of the rights.

Units

We may issue units comprising one or more securities described in this prospectus in any combination. Each unit will be issued so that the holder of the unit also is the holder of each security included in the unit. Thus, the unit will have the rights and obligations of a holder of each included security. Units will be issued pursuant to the terms of a unit agreement. A copy of the forms of the unit agreement and the unit certificate relating to any particular issue of units will be filed with the SEC each time we issue units, and you should read those documents for provisions that may be important to you. For more information on how you can obtain copies of the forms of the unit agreement and the related unit certificate, see “Where You Can Find More Information.” The terms of the units and the extent, if any, to which the general terms and provisions may apply to the units so offered will be described in the applicable prospectus supplement.

The applicable prospectus supplement will describe the following terms of any units in respect of which this prospectus is being delivered:

- the designation and terms of the units and the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provision for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units; and
- whether the units will be issued in fully registered or global form.

Description of Share Capital

We are authorized to issue 226,000,000 shares of common stock, par value \$0.0000002 per share, and 100,000 shares of preferred stock, par value \$0.01 per share. As of February 14, 2024, we had 6,662,857 shares of common stock outstanding and no shares of preferred stock outstanding. Also as of February 14, 2024, we had outstanding (i) 1,355,103 shares of our common stock subject to outstanding options, with exercise prices ranging from \$6.19 to \$129.40 per share, (ii) 102,513 shares of our common stock subject to outstanding warrants, with an exercise price of \$6.80 per share, (iii) 477,543 shares of our common stock available for awards under our Amended and Restated 2008 Stock Omnibus Equity Compensation Plan, and (iv) 120,937 shares of our common stock available for awards under our 2021 Inducement Plan.

LEGAL MATTERS

The validity of the securities described herein will be passed upon for us by Morgan, Lewis & Bockius LLP, New York, New York. Certain partners of Morgan, Lewis & Bockius LLP own a number of shares of our common stock which represent less than 0.1% of the total outstanding common stock.

EXPERTS

The consolidated financial statements of MEI Pharma, Inc. as of June 30, 2023 and 2022, and for each of the two years in the period ended June 30, 2023, incorporated by reference in this Prospectus, have been so incorporated in reliance on the report of BDO USA, P.C., an independent registered public accounting firm, incorporated herein by reference, given on the authority of said firm as experts in auditing and accounting.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” into this prospectus and any accompanying prospectus supplement the information we have filed with the SEC. The information we incorporate by reference into this prospectus is an important part of this prospectus. Any statement in a document we incorporate by reference into this prospectus will be considered to be modified or superseded to the extent a statement contained in this prospectus, any accompanying prospectus supplement or any other subsequently filed document that is incorporated by reference into this prospectus or any accompanying prospectus supplement modifies or supersedes that statement. The modified or superseded statement will not be considered to be a part of this prospectus or any accompanying prospectus supplement, as applicable, except as modified or superseded.

We incorporate by reference into this prospectus the information contained in the documents listed below, which are considered to be a part of this prospectus:

- our Annual Report on [Form 10-K](#) for the fiscal year ended June 30, 2023 filed with the SEC on September 26, 2023, as amended by the [Form 10-K/A](#) filed with the SEC on October 27, 2023;
- our Quarterly Reports on Form 10-Q for the quarter ended [September 30, 2023](#) filed with the SEC on November 9, 2023, and the quarter ended [December 31, 2023](#) filed with the SEC on February 13, 2024;
- our Current Reports on Form 8-K filed with the SEC on [July 5, 2023](#), [July 7, 2023](#), [July 13, 2023](#), [July 17, 2023](#), [July 18, 2023](#), [July 19, 2023](#), [July 24, 2023](#), [July 27, 2023](#), the Current Report on Form 8-K filed with the SEC on [October 3, 2023](#) with respect to Items 1.01, 3.03, 5.03 and 9.01, the Current Report on Form 8-K filed with the SEC on [November 1, 2023](#) with respect to Items 1.01, 5.02, and 9.01, [December 11, 2023](#), [December 18, 2023](#), [December 22, 2023](#), [December 26, 2023](#) and [January 17, 2024](#); and
- the description of our common stock contained in the Description of MEI Common Stock filed as [Exhibit 4.4](#) to our Annual Report on Form 10-K for the fiscal year ended June 30, 2023 and any further Description of MEI Common Stock filed thereafter for the purpose of updating such description.

We also incorporate by reference all documents filed pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after (i) the date of the initial registration statement and prior to the effectiveness of the registration statement and (ii) the date of this prospectus and prior to the termination of the offering of the securities under this Registration Statement (except in each case for the information contained in such documents that is deemed to be “furnished” and not “filed”).

Statements made in this prospectus or any accompanying prospectus supplement or in any document incorporated by reference in this prospectus or any accompanying prospectus supplement as to the contents of any contract or other document referred to herein or therein are not necessarily complete, and in each instance reference is made to the copy of such contract or other document filed as an exhibit to the documents incorporated by reference, each such statement being qualified in all material respects by such reference.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address:

MEI Pharma, Inc.
11455 El Camino Real, Suite 250
San Diego, California 92130
Tel: (858) 369-7100
Attn: Investor Relations

Copies of these filings are also available, without charge, through the “Investors” section of our website (www.meipharma.com) as soon as reasonably practicable after they are filed electronically with the SEC. The information contained on our website is not a part of this prospectus.

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>. The SEC’s website contains reports, proxy and information statements and other information regarding issuers, such as us, that file electronically with the SEC.

The information in this prospectus is not complete and may be changed without notice. We may not sell these securities until the registration statement relating to these securities has been declared effective by the Securities and Exchange Commission. This prospectus is neither an offer to sell nor a solicitation of an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

**PROSPECTUS SUPPLEMENT
(To Prospectus dated February 20, 2024)**



Up to \$10,300,000 of Common Stock

We have entered into a Capital on DemandTM Sales Agreement, or Sales Agreement, with JonesTrading Institutional Services LLC, or JonesTrading, dated February 20, 2024, relating to shares of our common stock, par value \$0.00000002 per share, or common stock, offered by this prospectus supplement. In accordance with the terms of the Sales Agreement, we may offer and sell shares of our common stock having an aggregate offering price of up to \$25,000,000 from time to time through JonesTrading, acting as our sales agent. However, due to the offering limitations applicable to us under General Instruction I.B.6. of Form S-3 and our public float as of the date of this prospectus, and in accordance with the terms of the Sales Agreement, we are offering shares of our common stock having an aggregate gross sales price of up to \$10,300,000 pursuant to this prospectus. If our public float increases such that we may sell additional amounts under the Sales Agreement and the registration statement of which this prospectus is a part, we will file another prospectus prior to making additional sales.

Sales of our common stock, if any, under this prospectus supplement may be made by any method permitted that is deemed an “at the market offering” as defined in Rule 415 under the Securities Act of 1933, as amended, or the Securities Act. JonesTrading is not required to sell any specific amount but will act as our sales agent and use commercially reasonable efforts to sell on our behalf the shares of common stock requested to be sold by us, consistent with its normal trading and sales practices, on mutually agreed terms between JonesTrading and us. There is no arrangement for funds to be received in escrow, trust or similar arrangement.

JonesTrading will be entitled to compensation at a commission rate equal to 3% of the gross sales price per share of common stock sold through it as sales agent pursuant to the Sales Agreement. In connection with the sale of shares of our common stock on our behalf, JonesTrading will be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation of JonesTrading will be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to JonesTrading with respect to certain liabilities, including liabilities under the Securities Act. See “Plan of Distribution” beginning on page S-8 regarding the compensation to be paid to JonesTrading.

Our common stock is listed on The Nasdaq Capital Market under the symbol “MEIP.” On February 14, 2024, the last reported sales price of our common stock on The Nasdaq Capital Market was \$4.71 per share.

As of December 22, 2023, the aggregate market value of our outstanding common stock held by non-affiliates, or public float, was approximately \$30.9 million, based on 6,662,857 shares of outstanding common stock, of which approximately 1.7 million shares were held by affiliates, and a price of \$6.24 per share, which was the price at which our common stock was last sold on The Nasdaq Capital Market on such date. We have not offered any securities pursuant to General Instruction I.B.6 of Form S-3 during the prior 12-calendar-month period that ends on and includes the date of this prospectus. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell securities registered on this registration statement in a public primary offering with a value exceeding more than one-third of our public float in any 12-month period so long as our public float remains below \$75 million. As of December 22, 2023, one-third of our Public Float was equal to approximately \$10.3 million.

Investing in our securities involves a high degree of risk. See the section entitled “Risk Factors” commencing on page S-4 of this prospectus supplement and the accompanying base prospectus for a discussion of information that should be considered 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 adequacy or accuracy of this prospectus supplement. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is _____, 2024

JonesTrading



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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying base prospectus are part of a registration statement that we filed with the Securities and Exchange Commission (the “SEC”) utilizing a “shelf” registration process. Each time we conduct an offering to sell securities under the accompanying base prospectus we will provide a prospectus supplement that will contain specific information about the terms of that offering, including the price, the amount of securities being offered and the plan of distribution. This prospectus supplement describes the specific details regarding this offering and may add, update or change information contained in the accompanying base prospectus. The base prospectus, dated , 2024, including the documents incorporated by reference therein, provides general information about us and our securities, some of which, such as the section entitled “Plan of Distribution,” may not apply to this offering. This prospectus supplement and the accompanying base prospectus are an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. We are not, and JonesTrading is not, making offers to sell or solicitations to buy our common stock in any jurisdiction in which an offer or solicitation is not authorized or in which the person making that offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation.

If information in this prospectus supplement is inconsistent with the accompanying base prospectus or the information incorporated by reference with an earlier date, you should rely on this prospectus supplement. This prospectus supplement, together with the base prospectus, the documents incorporated by reference into this prospectus supplement and the accompanying base prospectus and any free writing prospectus we have provided for use in connection with this offering, include all material information relating to this offering. We have not, and JonesTrading has not, authorized anyone to provide you with different or additional information and you must not rely on any unauthorized information or representations. You should assume that the information appearing in this prospectus supplement, the accompanying base prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying base prospectus and any free writing prospectus we have provided for use in connection with this offering is accurate only as of the respective dates of those documents. Our business, financial condition, results of operations and prospects may have changed since those dates. **You should carefully read this prospectus supplement, the accompanying base prospectus and the information and documents incorporated herein by reference herein and therein, as well as any free writing prospectus we have provided for use in connection with this offering, before making an investment decision. See “Incorporation of Certain Documents by Reference” and “Where You Can Find More Information” in this prospectus supplement and in the accompanying base prospectus.**

This prospectus supplement and the accompanying base prospectus contain summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the full text of the actual documents, some of which have been filed or will be filed and incorporated by reference herein. See “Where You Can Find More Information” in this prospectus supplement. We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference into this prospectus supplement or the accompanying base prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

This prospectus supplement and the accompanying base prospectus contain and incorporate by reference certain market data and industry statistics and forecasts that are based on Company-sponsored studies, independent industry publications and other publicly available information. Although we believe these sources are reliable, estimates as they relate to projections involve numerous assumptions, are subject to risks and uncertainties, and are subject to change based on various factors, including those discussed under “Risk Factors” in this prospectus supplement and the accompanying base prospectus and under similar headings in the documents incorporated by reference herein and therein. Accordingly, investors should not place undue reliance on this information.

Unless the context otherwise indicates, references in this prospectus to “we,” “our” and “us” refer to MEI Pharma, Inc., a Delaware corporation.

PROSPECTUS SUPPLEMENT SUMMARY

This prospectus summary highlights information contained elsewhere in this prospectus supplement, the accompanying base prospectus and the documents incorporated by reference herein and therein. This summary does not contain all of the information that you should consider before deciding to invest in our securities. You should read this entire prospectus supplement and the accompanying base prospectus carefully, including the section entitled “Risk Factors” beginning on page S-4 and our consolidated financial statements and the related notes and the other information incorporated by reference into this prospectus supplement and the accompanying base prospectus, before making an investment decision.

Our Company

MEI Pharma, Inc. (NASDAQ: MEIP) is a clinical-stage pharmaceutical company committed to developing novel and differentiated cancer therapies. We build our pipeline by acquiring promising cancer agents and creating value in programs through clinical development, strategic partnerships, and out-licensing or commercialization, as appropriate. Our approach to oncology drug development is to evaluate our drug candidates in combinations with standard-of-care therapies to overcome known resistance mechanisms and address clear medical needs to provide improved patient benefit. The drug candidate pipeline includes voruciclib, an oral cyclin-dependent kinase 9 (“CDK9”) inhibitor, and ME-344, an intravenous small molecule mitochondrial inhibitor targeting the oxidative phosphorylation pathway. Our common stock is listed on the Nasdaq Capital Market under the symbol “MEIP.”

We believe our cash is sufficient to fund operations for at least 12 months and through the reporting of clinical data readouts from the ongoing and planned voruciclib and ME-344 Phase 1 and Phase 1b clinical programs, respectively.

Our principal executive offices are located at 11455 El Camino Real Suite 250, San Diego, CA 92130, and our phone number is (858) 369-7100.

Our website is www.meipharma.com. Information contained in, or accessible through, our website does not constitute part of this prospectus supplement and inclusions of our website address in this prospectus supplement are inactive textual references only.

The Offering

The following is a brief summary of some of the terms of the offering and is qualified in its entirety by reference to the more detailed information appearing elsewhere in this prospectus supplement and the accompanying base prospectus. For a more complete description of the terms of our common stock, see description of our common stock in the accompanying base prospectus in the section, “The Securities We May Offer.”

Common stock offered by us	Shares of our common stock, par value \$0.00000002 per share, having an aggregate offering price of up to \$10,300,000.
Common stock outstanding	6,662,857 shares of common stock outstanding as of February 14, 2024. The actual number of shares issued by us in this offering will vary depending on the sales price under this offering.
Manner of offering	We have entered into a Capital on Demand TM Sales Agreement, or Sales Agreement, with JonesTrading Institutional Services LLC, or JonesTrading, relating to the sale of up to \$25,000,000 of shares of our common stock. In accordance with the terms of the Sales Agreement, under this prospectus supplement we may offer and sell common stock having an aggregate offering price of up to \$10,300,000 from time to time through JonesTrading, acting as our sales agent. Sales of common stock, if any, under this prospectus supplement may be made by any method permitted that is deemed an “at the market offering” as defined in Rule 415 under the Securities Act of 1933, as amended. See the section entitled “Plan of Distribution” on page S-8 of this prospectus supplement.
Use of proceeds	We expect to use the net proceeds from this offering for working capital and general corporate purposes, including to progress the development programs of our drug candidates. See “Use of Proceeds” on page S-7.
Risk factors	Investing in our common stock involves a high degree of risk. These risks include all of the risks typically relating to an early stage company, including (i) we may not be able to successfully commercialize the perceived advantages of our product candidates, (ii) we may not be able to successfully conclude clinical testing or obtain pre-market approval of our product candidates, (iii) no drug product incorporating our product candidates has received FDA pre-market approval or otherwise been incorporated into a commercial drug product, (iv) we have no current agreements or understandings with any large pharmaceutical companies for the development of a drug product incorporating our product candidates, (v) the risk that we will not be able to conclude a long-term commercial agreement with any third-party, and (vi) raise additional funds, as and when needed. See “Risk Factors” beginning on page S-4 and the other information included or incorporated by reference in this prospectus supplement and the accompanying base prospectus for a discussion of factors you should carefully consider before deciding to invest in our common stock.
The Nasdaq Capital Market symbol	“MEIP”

The 6,662,857 shares of our common stock outstanding as of February 14, 2024 excludes the following:

- 102,513 shares of common stock issuable upon exercise of warrants outstanding as of February 14, 2024, which are exercisable at a price of \$6.80 per share;
- 1,355,103 shares of common stock issuable upon exercise of options outstanding as of February 14, 2024, which have a weighted average exercise price of \$32.79 per share;

- 477,543 shares of common stock reserved for issuance and available for future grant under the MEI Pharma, Inc. 2008 Stock Omnibus Equity Compensation Plan (Omnibus Plan), as amended and restated from time to time, as of February 14, 2024; and
- 120,937 shares of common stock reserved for issuance and available for future grant under the 2021 Inducement Plan (Inducement Plan) as of February 14, 2024.

RISK FACTORS

Investing in our common stock involves a high degree of risk. Before purchasing our common stock, you should read and consider carefully the following risk factors and the risk factors included in our most recent Annual Report on Form 10-K filed with the SEC, any subsequent Quarterly Reports on Form 10-Q as well as all other information contained and incorporated by reference in this prospectus supplement and the accompanying base prospectus, including our consolidated financial statements and the related notes. Each of these risk factors, either alone or taken together, could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our common stock. There may be additional risks that we do not presently know of or that we currently believe are immaterial, which could also impair our business and financial position. If any of the events described below were to occur, our financial condition, our ability to access capital resources, our results of operations and/or our future growth prospects could be materially and adversely affected and the market price of our common stock could decline. As a result, you could lose some or all of any investment you may make in our common stock.

Risks Related to This Offering

The market price of our shares may be subject to fluctuation and volatility. You could lose all or part of your investment. The market price of our common stock is subject to wide fluctuations in response to various factors, some of which are beyond our control. Since January 1, 2022, the reported high and low sales prices of our common stock have ranged from \$4.20 to \$54.80 through February 14, 2024. The market price of our shares on the Nasdaq Capital Market may fluctuate as a result of a number of factors, some of which are beyond our control, including, but not limited to:

- actual or anticipated variations in our and our competitors' results of operations and financial condition;
- market acceptance of our product candidates;
- changes in earnings estimates or recommendations by securities analysts, if our shares are covered by analysts;
- development of technological innovations or new competitive products by others;
- announcements of technological innovations or new products by us;
- publication of the results of preclinical or clinical trials for our product candidates;
- failure by us to achieve a publicly announced milestone;
- delays between our expenditures to develop and market new or enhanced products and the generation of sales from those products;
- developments concerning intellectual property rights, including our involvement in litigation brought by or against us;
- regulatory developments and the decisions of regulatory authorities as to the approval or rejection of new or modified products;
- changes in the amounts that we spend to develop, acquire or license new products, technologies or businesses;
- changes in our expenditures to promote our product candidates;

- our sale or proposed sale, or the sale by our significant stockholders, of our shares or other securities in the future;
- changes in key personnel;
- success or failure of our research and development projects or those of our competitors;
- the trading volume of our shares; and
- general economic and market conditions and other factors, including factors unrelated to our operating performance.

These factors and any corresponding price fluctuations may materially and adversely affect the market price of our shares and result in substantial losses being incurred by our investors. In the past, following periods of market volatility, public company stockholders have often instituted securities class action litigation. If we were involved in securities litigation, it could impose a substantial cost upon us and divert the resources and attention of our management from our business.

Future sales of substantial amounts of our common stock, or the possibility that such sales could occur, could adversely affect the market price of our common stock. We cannot predict the effect, if any, that future issuances or sales of our securities including sales of shares of our common stock pursuant to the Sales Agreement or the availability of our securities for future issuance or sale, will have on the market price of our common stock. Issuances or sales of substantial amounts of our securities, including sales of our common stock pursuant to the Sales Agreement, or the perception that such issuances or sales might occur, could negatively impact the market price of our common stock and the terms upon which we may obtain additional equity financing in the future.

It is not possible to predict the actual number of shares of our common stock we will sell under the Sales Agreement, or the gross proceeds resulting from those sales. Subject to certain limitations in the Sales Agreement and compliance with applicable law, we have the discretion to deliver a placement notice to the sales agent at any time throughout the term of the Sales Agreement. The number of shares of our common stock that are sold through the sales agent after delivering a placement notice will fluctuate based on a number of factors, including the market price of our common stock during the sales period, the limits we set with the sales agent in any applicable placement notice, and the demand for our common stock during the sales period. Because the price per share of each share sold will fluctuate during the sales period, it is not currently possible to predict the number of shares that will be sold or the gross proceeds to be raised in connection with those sales.

The common stock offered hereby will be sold in “at the market offerings,” and investors who buy shares at different times will likely pay different prices. Investors who purchase common stock in this offering at different times will likely pay different prices, and so may experience different levels of dilution and different outcomes in their investment results. We will have discretion, subject to market demand, to vary the timing, prices, and numbers of shares sold in this offering. In addition, there is no minimum or maximum sales price for shares to be sold in this offering. Investors may experience a decline in the value of the shares they purchase in this offering as a result of sales made at prices lower than the prices they paid.

You may experience immediate and substantial dilution in the net tangible book value per common share you purchase. The price per common share being offered may be higher than the net tangible book value per common share outstanding prior to this offering. Assuming that an aggregate of shares are sold at a price of \$ per share, the last reported sale price of our common stock on The Nasdaq Capital Market on , for aggregate proceeds of \$ in this offering, and after deducting commissions and estimated aggregate offering expenses payable by us, the purchasers of those shares you will suffer immediate dilution of \$ per share, representing the difference between the as adjusted net tangible book value per common share as of after giving effect to the sale of the assumed shares of our common stock at the assumed offering price. See the section entitled “Dilution” below for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering.

Our management will have broad discretion over the use of the net proceeds from this offering, and you may not agree with how we use the proceeds and the proceeds may not be invested successfully. Our management will have broad discretion as to the use of the net proceeds from this offering and could use them for purposes other than those contemplated at the time of this offering. We will retain broad discretion over the use of the net proceeds from the sale of the securities offered hereby. We currently expect to use the net proceeds from this offering for working capital and general corporate purposes, including to progress the development programs of our drug candidates. See the section entitled “Use of Proceeds” below for a more detailed discussion. Accordingly, you will be relying on the judgment of our management with regard to the use of these net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds will be used appropriately. It is possible that the proceeds will be invested in a way that does not yield a favorable, or any, return for the Company and cause the price of our common stock to decline.

FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying base prospectus and the documents we have filed with the SEC that are incorporated by reference herein and therein contain forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). In addition, from time to time we or our representatives have made or will make forward-looking statements in various other filings that we make with the SEC or in other documents, including press releases or other similar announcements. Forward-looking statements concern our current plans, intentions, beliefs, expectations and statements of future economic performance. Statements containing terms such as “will,” “may,” “believe,” “do not believe,” “plan,” “expect,” “intend,” “estimate,” “anticipate” and other phrases of similar meaning are considered to be forward-looking statements.

Forward-looking statements are based on our assumptions and are subject to known and unknown risks and uncertainties that could cause actual results to differ materially from those reflected in or implied by these forward-looking statements. Factors that might cause actual results to differ include, among others, those set forth under “Risk Factors” in this prospectus supplement and those discussed in “Management’s Discussion and Analysis of Financial Condition and Results of Operation” in our most recent Annual Report on Form 10-K and subsequent Quarterly Reports on Form 10-Q and in our future periodic reports filed with the SEC, all of which are incorporated by reference herein. Readers are cautioned not to place undue reliance on any forward-looking statements contained in this prospectus supplement, the accompanying base prospectus or the documents we have filed with the SEC that are incorporated by reference herein and therein, which reflect management’s views and opinions only as of their respective dates. We assume no obligation to update forward-looking statements to reflect actual results, changes in assumptions or changes in other factors affecting such forward-looking statements, except to the extent required by applicable securities laws. You are advised, however, to consult any additional disclosures we have made or will make in the filings we make with the SEC, including reports on Forms 10-K, 10-Q and 8-K. All subsequent forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by the cautionary statements contained in this prospectus supplement, the accompanying base prospectus or any related issuer free writing prospectus.

USE OF PROCEEDS

We expect to use the net proceeds from the sale of our common stock offered under this prospectus supplement for working capital and general corporate purposes, including to progress the development programs of our drug candidates. We have not determined the amount of net proceeds to be used specifically for such purposes. As a result, management will retain broad discretion over the allocation of net proceeds. Pending the uses described above, we intend to invest the net proceeds from this offering in short-term, investment-grade interest-bearing securities such as money market accounts, certificates of deposit, commercial paper, and guaranteed obligations of the U.S. government.

DILUTION

If you invest in our common stock, you will experience immediate dilution to the extent of the difference between the price per share you pay in this offering and the net tangible book value per share of our common stock after this offering.

Our net tangible book value as of _____ was approximately \$ _____ million, or approximately \$ _____ per share. Net tangible book value is determined by subtracting our total liabilities from our total tangible assets, and net tangible book value per share is determined by dividing our net tangible book value by the number of outstanding shares of our common stock. Assuming the sale of _____ shares of our common stock during the term of the Sales Agreement at an assumed offering price of \$ _____ per share, the last reported sale price per common share on The Nasdaq Capital Market on _____, and after deducting commissions of 3% of the offering proceeds and estimated aggregate offering expenses payable by us, our adjusted net tangible book value as of _____ would have been approximately \$ _____, or approximately \$ _____ per share. This represents an immediate increase in net tangible book value of approximately \$ _____ per share to our existing stockholders and an immediate dilution in net tangible book value of approximately \$ _____ per share to investors who purchased the _____ shares of common stock. The following table illustrates this calculation on a per share basis:

Assumed public offering price per share of common stock		\$
Net tangible book value per share as of December 31, 2023		\$
Increase per share attributable to investors participating in the sale of _____ million shares		\$
Adjusted net tangible book value per share after giving effect to the sale of _____ million shares		\$
Dilution per share to investors purchasing the _____ million shares		\$

The table above assumes for illustrative purposes that an aggregate of _____ shares of our common stock are sold during the term of the Sales Agreement at a price of \$ _____ per share, the last reported sale price per common share on The Nasdaq Capital Market on _____, for aggregate gross proceeds of \$ _____. The shares subject to the Sales Agreement are being sold from time to time at various prices. An increase in the price at which the shares are sold from the assumed offering price per share shown in the table above would increase our adjusted net tangible book value per share after the offering and would increase the dilution in net tangible book value per share to new investors in this offering. This information is supplied for illustrative purposes only.

The number of shares of our common stock expected to be outstanding after the sale of the assumed _____ shares of common stock is based on _____ shares of common stock outstanding as of _____ and excludes the following:

- _____ shares of common stock issuable upon exercise of warrants outstanding as of _____, which are exercisable at a price of \$ _____ per share;
- _____ shares of common stock issuable upon exercise of options outstanding as of _____, which have a weighted average exercise price of \$ _____ per share;

- shares of common stock reserved for issuance and available for future grant under the MEI Pharma, Inc. 2008 Stock Omnibus Equity Compensation Plan (Omnibus Plan), as amended and restated from time to time; and
- shares of common stock reserved for issuance and available for future grant under the 2021 Inducement Plan (Inducement Plan).

The above illustration of dilution per share to investors participating in this offering assumes no exercise of outstanding options or warrants to purchase our common stock. To the extent that the options or warrants are exercised, investors participating in this offering will experience further dilution. In addition, we may choose to raise additional capital depending on market conditions, our capital requirements and strategic considerations, even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through our sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

PLAN OF DISTRIBUTION

We have entered into a Capital on DemandTM Sales Agreement with JonesTrading Institutional Services LLC, or JonesTrading, under which we may offer and sell up to \$25,000,000 of our shares of common stock from time to time through JonesTrading acting as agent. However, due to the offering limitations applicable to us under General Instruction I.B.6. of Form S-3 and our public float as of the date of this prospectus, and in accordance with the terms of the Sales Agreement, we are offering shares of our common stock having an aggregate gross sales price of up to \$10,300,000 pursuant to this prospectus. If our public float increases such that we may sell additional amounts under the Sales Agreement and the registration statement of which this prospectus is a part, we will file another prospectus prior to making additional sales.

Sales of our shares of common stock, if any, under this prospectus supplement and the accompanying prospectus will be made by any method that is deemed to be an “at the market offering” as defined in Rule 415(a)(4) under the Securities Act.

Each time we wish to issue and sell shares of common stock under the sales agreement, we will notify JonesTrading of the number of shares to be issued, the dates on which such sales are anticipated to be made, any limitation on the number of shares to be sold in any one day and any minimum price below which sales may not be made. Once we have so instructed JonesTrading, unless JonesTrading declines to accept the terms of such notice, JonesTrading has agreed to use its commercially reasonable efforts consistent with its normal trading and sales practices to sell such shares up to the amount specified on such terms. The obligations of JonesTrading under the sales agreement to sell our shares of common stock are subject to a number of conditions that we must meet.

The settlement of sales of shares between us and JonesTrading is generally anticipated to occur on the second trading day following the date on which the sale was made. Sales of our shares of common stock as contemplated in this prospectus supplement will be settled through the facilities of The Depository Trust Company or by such other means as we and JonesTrading may agree upon. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

We will pay JonesTrading a commission equal to 3% of the aggregate gross proceeds we receive from each sale of our shares of common stock. Because there is no minimum offering amount required as a condition to close this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. In addition, we have agreed to reimburse JonesTrading for the fees and disbursements of its counsel, payable upon execution of the sales agreement, in an amount not to exceed \$75,000, in addition to certain ongoing disbursements of its legal counsel. We estimate that the total expenses for the offering, excluding any commissions or expense reimbursement payable to JonesTrading under the terms of the sales agreement, will be approximately \$. The remaining sale proceeds, after deducting any other transaction fees, will equal our net proceeds from the sale of such shares.

JonesTrading will provide written confirmation to us before the open on the Nasdaq Capital Market on the day following each day on which our shares of common stock are sold under the sales agreement. Each confirmation will include the number of shares sold on that day, the aggregate gross proceeds of such sales and the proceeds to us.

In connection with the sale of our shares of common stock on our behalf, JonesTrading will be deemed to be an “underwriter” within the meaning of the Securities Act, and the compensation of JonesTrading will be deemed to be underwriting commissions or discounts. We have agreed to indemnify JonesTrading against certain civil liabilities, including liabilities under the Securities Act. We have also agreed to contribute to payments JonesTrading may be required to make in respect of such liabilities.

The offering of our shares of common stock pursuant to the sales agreement will terminate upon the earlier of (i) the sale of all shares of common stock subject to the sales agreement and (ii) the termination of the sales agreement as permitted therein. We and JonesTrading may each terminate the sales agreement at any time upon ten days’ prior notice.

This summary of the material provisions of the sales agreement does not purport to be a complete statement of its terms and conditions.

JonesTrading and its affiliates may in the future provide various investment banking, commercial banking, financial advisory and other financial services for us and our affiliates, for which services they may in the future receive customary fees. In the course of its business, JonesTrading may actively trade our securities for its own account or for the accounts of customers, and, accordingly, JonesTrading may at any time hold long or short positions in such securities.

This prospectus supplement and the accompanying prospectus in electronic format may be made available on a website maintained by JonesTrading, and JonesTrading may distribute the prospectus supplement and the accompanying prospectus electronically.

LEGAL MATTERS

The validity of the securities offered by this prospectus supplement will be passed upon for us by Morgan, Lewis & Bockius LLP, New York, New York. Certain partners of Morgan, Lewis & Bockius LLP own a number of shares of our common stock which represent less than 0.1% of the total outstanding common stock. Certain legal matters in connection with this offering will be passed upon for the sales agent by Goodwin Procter LLP, New York, New York.

EXPERTS

The consolidated financial statements of MEI Pharma, Inc., as of June 30, 2023 and 2022 and for each of the two years in the period ended June 30, 2023, incorporated by reference into this prospectus supplement and the accompanying base prospectus, from the Company's Annual Report on Form 10-K for the year ended June 30, 2023, have been audited by BDO USA, P.C., an independent registered public accounting firm, as stated in their report which is incorporated by reference herein, and has been so incorporated in reliance upon such report and upon the authority of such firm as experts in accounting and auditing.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC permits us to "incorporate by reference" the information and reports we file with it. This means that we can disclose important information to you by referring to another document. The information that we incorporate by reference is considered to be part of this prospectus supplement, and later information that we file with the SEC automatically updates and supersedes this information. We incorporate by reference the documents listed below, except to the extent information in those documents is different from the information contained in this prospectus supplement, and all future documents filed with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act (other than filings or portions thereof, including exhibits, deemed to be furnished to the SEC pursuant to Item 9 or Item 12 of Form S-3) until we terminate the offering of these securities:

- our Annual Report on [Form 10-K](#) for the fiscal year ended June 30, 2023 filed with the SEC on September 26, 2023, as amended by the [Form 10-K/A](#) filed with the SEC on October 27, 2023;
- our Quarterly Reports on Form 10-Q for the quarter ended [September 30, 2023](#) filed with the SEC on November 9, 2023, and the quarter ended [December 31, 2023](#) filed with the SEC on February 13, 2024;
- our Current Reports on Form 8-K filed with the SEC on [July 5, 2023](#), [July 7, 2023](#), [July 13, 2023](#), [July 17, 2023](#), [July 18, 2023](#), [July 19, 2023](#), [July 24, 2023](#), [July 27, 2023](#), the Current Report on Form 8-K filed with the SEC on [October 3, 2023](#) with respect to Items 1.01, 3.03, 5.03 and 9.01, the Current Report on Form 8-K filed with the SEC on [November 1, 2023](#) with respect to Items 1.01, 5.02, and 9.01, [December 11, 2023](#), [December 18, 2023](#), [December 22, 2023](#), [December 26, 2023](#) and [January 17, 2024](#); and
- the description of our common stock contained in the Description of MEI Common Stock filed as [Exhibit 4.4](#) to our Annual Report on Form 10-K for the fiscal year ended June 30, 2023 and any further Description of MEI Common Stock filed thereafter for the purpose of updating such description.

To the extent that any statement in this prospectus supplement is inconsistent with any statement that is incorporated by reference and that was made on or before the date of this prospectus supplement, the statement in this prospectus supplement shall supersede such incorporated statement. The incorporated statement shall not be deemed, except as modified or superseded, to constitute a part of this prospectus supplement or the registration statement. Statements contained in this prospectus supplement as to the contents of any contract or other document are not necessarily complete and, in each instance, we refer you to the copy of each contract or document filed as an exhibit to our various filings made with the SEC.

We will provide to each person, including any beneficial owner, to whom a prospectus supplement is delivered, without charge upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus supplement but not delivered with the prospectus supplement, including exhibits which are specifically incorporated by reference into such documents. You may request a copy of these filings, at no cost, by writing or telephoning us at the following address or telephone number:

MEI Pharma, Inc.
11455 El Camino Real, Suite 250
San Diego, California 92130
Tel: (858) 369-7100
Attn: Investor Relations

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement under the Securities Act that registers the securities offered hereby. The registration statement, including the exhibits and schedules attached thereto and the information incorporated by reference therein, contains additional relevant information about the securities and our Company, which we are allowed to omit from this prospectus supplement pursuant to the rules and regulations of the SEC. In addition, we file annual, quarterly and current reports and proxy statements and other information with the SEC. Our SEC filings are available on the SEC's website at www.sec.gov. Copies of certain information filed by us with the SEC are also available on our website at www.meipharma.com. We have not incorporated by reference into this prospectus supplement the information on our website and it is not a part of this document.

Up to \$10,300,000 of Common Stock



PROSPECTUS

, 2024

PART II**INFORMATION NOT REQUIRED IN PROSPECTUS****Item 14. Other Expenses of Issuance and Distribution**

The following are the estimated expenses, other than underwriting discounts and commissions, relating to the registration of the offer and sale of the securities registered hereunder on Form S-3:

SEC registration fee	\$	14,760 ⁽¹⁾
FINRA filing fee		*
Accounting fees and expenses		*
Legal fees and expenses		*
Transfer agent fees and expenses		*
Trustee fees and expenses		*
Printing and miscellaneous expenses		*
Total	\$	*

(1) See Exhibit 107 to this Form S-3. Of this amount, \$13,949.21 was previously paid and is being applied to the registration fees due with respect to this Registration Statement pursuant to Rule 457(p) under the Securities Act of 1933, as amended.

* Estimated expenses are not presently known. The foregoing sets forth the general categories of expenses (other than underwriting discounts and commissions) that we anticipate we will incur in connection with the offering of securities under this Registration Statement. An estimate of the aggregate expenses in connection with the issuance and distribution of the securities being offered will be included in the applicable prospectus supplement.

Item 15. Indemnification of Directors and Officers

Our Amended and Restated Certificate of Incorporation, as amended, provides that we will indemnify our directors and officers to the full extent permitted by the Delaware General Corporation Law, or DGCL. Section 145 of the DGCL provides that the extent to which a corporation may indemnify its directors and officers depends on the nature of the action giving rise to the indemnification right. In actions not on behalf of the corporation, directors and officers may be indemnified for acts taken in good faith and in a manner reasonably believed to be in or not opposed to the best interests of the corporation. In actions on behalf of the corporation, directors and officers may be indemnified for acts taken in good faith and in a manner reasonably believed to be in or not opposed to the best interests of the corporation, except for acts as to which the director or officer is adjudged liable to the corporation, unless the relevant court determines that indemnification is appropriate despite such liability. Section 145 of the DGCL also permits a corporation to (i) reimburse present or former directors or officers for their defense expenses to the extent they are successful on the merits or otherwise and (ii) advance defense expenses upon receipt of an undertaking to repay the corporation if it is determined that payment of such expenses is unwarranted.

To supplement the general indemnification right contained in our Amended and Restated Certificate of Incorporation, our Sixth Amended and Restated By-Laws provide for the specific indemnification rights permitted by Section 145 (as described above). Our Sixth Amended and Restated By-Laws also permit us to purchase Directors & Officers insurance, but no director or officer has a right to require this.

In addition to the indemnification rights described above, our Amended and Restated Certificate of Incorporation, as amended, eliminates any monetary liability of directors to us or our stockholders for breaches of fiduciary duty except for (i) breaches of the duty of loyalty, (ii) acts or omissions in bad faith, (iii) improper dividends or share redemptions and (iv) transactions from which the director derives an improper personal benefit.

Finally, we have entered into an indemnification agreement with each of our directors and executive officers. Subject to certain exceptions, the indemnification agreements provide that an indemnitee will be indemnified for all expenses incurred or paid by the indemnitee in connection with a proceeding to which the indemnitee was or is a

party, or is threatened to be made a party, by reason of the indemnitee's status with or service to us or to another entity at our request. In connection with proceedings other than those by or in the right of our company and to which the indemnitee was or is a party, or is threatened to be made a party, by reason of the indemnitee's status with or service to us or to another entity at our request, the indemnification agreements provide that an indemnitee will also be indemnified for all liabilities incurred or paid by the indemnitee. The indemnification agreements also provide for advancement of expenses incurred by an indemnitee in connection with an indemnifiable claim, subject to reimbursement in certain circumstances.

Item 16. Exhibits and Financial Statement Schedules

A list of the exhibits required by Item 601 of Regulation S-K are listed below in the "Exhibit Index" are part of this Registration Statement and are incorporated herein by reference.

Item 17. Undertakings

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;

(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 a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement; and

(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 (1)(i), (1)(ii) and (1)(iii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the 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, 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 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 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 that 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 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.

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

Insofar as indemnification for liabilities arising under the Securities Act 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 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 and will be governed by the final adjudication of such issue.

EXHIBIT INDEX

Exhibit No.	Description
1.1	Form of Underwriting Agreement*
3.1	Amended and Restated Certificate of Incorporation of MEI Pharma, Inc. (incorporated by reference to Exhibit 3.2 to the Registrant's Quarterly Report on Form 10-Q filed on February 13, 2024)
3.2	Sixth Amended and Restated Bylaws of MEI Pharma, Inc. (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on December 22, 2023)
3.3	Certificate of Designation of Preferred Stock*
4.1	Specimen Common Stock Certificate*
4.2	Specimen Preferred Stock Certificate*
4.3	Form of Warrant Certificate*
4.4	Form of Warrant Agreement*
4.5	Form of Rights Certificate*
4.6	Form of Rights Agreement*
4.7	Form of Unit Certificate*
4.8	Form of Unit Agreement*
5.1	Opinion of Morgan, Lewis & Bockius LLP**
23.1	Consent of Morgan, Lewis & Bockius LLP (included as Exhibit 5.1)**
23.2	Consent of BDO USA, P.C.**
24.1	Power of Attorney (included on signature page)**
107	Filing Fee**

* To be filed by amendment or Form 8-K.

** Filed herewith.

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-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, California, on this 20th day of February, 2024.

MEI PHARMA, INC.

By: /s/ David M. Urso
Name: David M. Urso
Title: Chief Executive Officer

POWER OF ATTORNEY

Each person whose individual signature appears below hereby authorizes and appoints David M. Urso and Justin J. File, and each of them, with full power of substitution and resubstitution and full power to act without the other, as his or her true and lawful attorney-in-fact and agent to act in his or her name, place and stead and to execute in the name and on behalf of each person, individually and in each capacity stated below, and to file, any and all amendments to this Registration Statement, including any and all post-effective amendments and amendments thereto and any other registration statement relating to the same offering as this Registration Statement that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act, as amended, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, 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, ratifying and confirming all that said attorneys-in-fact and agents or either of them or their or his or her substitute or substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities indicated below on February 20, 2024.

Signature	Title
<u>/s/ David M. Urso</u> David M. Urso	Chief Executive Officer, President and Director (Principal Executive Officer)
<u>/s/ Justin J. File</u> Justin J. File	Chief Financial Officer (Principal Financial and Accounting Officer)
<u>/s/ Charles V. Baltic III</u> Charles V. Baltic III	Chairperson
<u>/s/ Taheer Dato</u> Taheer Dato	Director
<u>/s/ James P. Flynn</u> James P. Flynn	Director
<u>/s/ Steven D. Wood</u> Steven D. Wood	Director
<u>/s/ Frederick W. Driscoll</u> Frederick W. Driscoll	Director
<u>/s/ Nicholas R. Glover</u> Nicholas R. Glover	Director
<u>/s/ Thomas C. Reynolds</u> Thomas C. Reynolds	Director

Morgan Lewis

February 20, 2024

MEI Pharma, Inc.
11455 El Camino Real Suite 250
San Diego, California 92130

Re: MEI Pharma, Inc. – Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel to MEI Pharma, Inc., a Delaware corporation (the “Company”), in connection with the Registration Statement on Form S-3 (the “Registration Statement”) under the Securities Act of 1933, as amended (the “Securities Act”), relating to the proposed offer and sale by the Company, from time to time, as set forth in the prospectus (the “Prospectus”) contained in the Registration Statement and as shall be set forth in one or more supplements to the Prospectus (each, a “Prospectus Supplement”) of up to \$100,000,000 of the following securities (the “Securities”): (i) shares of the Company’s common stock, par value \$0.00000002 per share (the “Common Stock”), (ii) shares of the Company’s preferred stock, in one or more classes or series (the “Preferred Stock”), (iii) warrants to purchase shares of Common Stock or shares of Preferred Stock (the “Warrants”), (v) rights (the “Rights”) to purchase shares of Common Stock, shares of Preferred Stock, or Units, and (vi) units (the “Units”) consisting of Common Stock, Preferred Stock, Warrants or any combination of the foregoing.

In connection with this opinion letter, we have examined originals, or copies certified or otherwise identified to our satisfaction, of the Registration Statement, the Amended and Restated Certificate of Incorporation, as amended (the “Certificate of Incorporation”), and the Amended and Restated By-Laws (the “By-Laws”) of the Company, certain resolutions of the Company’s Board of Directors relating to the Registration Statement, and such other documents, records and other instruments as we have deemed appropriate for purposes of the opinions set forth herein.

We have assumed the genuineness of all signatures, the legal capacity of all natural persons, the authenticity of the documents submitted to us as originals, the conformity with the originals of all documents submitted to us as certified, facsimile or photostatic copies and the authenticity of the originals of all documents submitted to us as copies. With respect to matters of fact relevant to our opinions as set forth below, we have relied upon certificates of officers of the Company, representations made by the Company in documents examined by us and representations of officers of the Company. We have also obtained and relied upon such certificates and assurances from public officials as we have deemed necessary for the purposes of our opinions set forth below.

For the purpose of the opinions set forth below, we have also assumed, without independent investigation or verification, that:

A. The issuance, sale, number or amount, as the case may be, and terms of Securities to be offered from time to time will be duly authorized and established, in accordance with the Certificate of Incorporation, the By-Laws and applicable Delaware law (each, a “Corporate Action”), and will not conflict with or constitute a breach of the terms of any agreement or instrument to which the Company is subject;

Morgan, Lewis & Bockius LLP

2222 Market Street

☎ +1.215.963.5000

Philadelphia, PA 19103-3007
United States

☎ +1.215.963.5001

B. At the time of issuance and sale of shares of Common Stock, a sufficient number of shares of Common Stock will be authorized and available for issuance and that the consideration for the issuance and sale of the Common Stock (or Preferred Stock convertible into Common Stock, Warrants exercisable for Common Stock or Rights to purchase Common Stock) will be in an amount that is not less than the par value of the Common Stock;

C. Prior to the issuance of shares of one or more series of Preferred Stock, an appropriate certificate of designation relating to each such series of Preferred Stock will have been duly authorized by Corporate Action and filed with the Secretary of State of the State of Delaware and at the time of issuance and sale, a sufficient number of shares of Preferred Stock will be authorized, designated and available for issuance and that the consideration for the issuance and sale of the Preferred Stock (or Warrants exercisable for Preferred Stock or Rights to purchase Preferred Stock) will be in an amount that is not less than the par value of the Preferred Stock;

D. Any Warrants will be issued under one or more warrant agreements (each, a "Warrant Agreement") between the Company and the financial institution identified in the Warrant Agreement as a warrant agent (each, a "Warrant Agent") and the execution, delivery and performance of the applicable Warrant Agreement will be duly authorized by Corporate Action, and will not conflict with or constitute a breach of the terms of any agreement or instrument to which the Company is subject;

E. Any Warrants offered under the Registration Statement and the related Warrant Agreement, as applicable, will be executed in the forms filed as exhibits to the Registration Statement or incorporated by reference therein;

F. To the extent that the obligations of the Company under any Warrant Agreement may depend upon such matters, each of the parties thereto, other than the Company, will be duly organized, validly existing and in good standing under the laws of its jurisdiction of organization and will be duly qualified to engage in the activities contemplated by such Warrant Agreement; that such Warrant Agreement will have been duly authorized, executed and delivered by such party and will constitute the legal, valid and binding obligation of such party, enforceable against such party in accordance with its terms; that such party will be in compliance, generally and with respect to acting as a party with respect to its obligations under such Warrant Agreement, with all applicable laws and regulations, and that such party will have the requisite organizational and legal power and authority to perform its obligations under such Warrant Agreement;

G. Any Units will be issued pursuant to purchase or similar agreements to be entered into by the Company and the parties thereto (each, a "Unit Agreement") and the execution, delivery and performance of the applicable Unit Agreement will be duly authorized by Corporate Action, and will not conflict with or constitute a breach of the terms of any agreement or instrument to which the Company is subject;

H. To the extent that the obligations of the Company under any Unit Agreement may depend upon such matters, each of the parties thereto, other than the Company, will be duly organized, validly existing and in good standing under the laws of its jurisdiction of organization and will be duly qualified to engage in the activities contemplated by such Unit Agreement; that such Unit Agreement will have been duly authorized, executed and delivered by such party and will constitute the legal, valid and binding obligation of such party, enforceable against such party in accordance with its terms; that such party will be in compliance, generally and with respect to acting as a party with respect to its obligations under such Unit Agreement, with all applicable laws and regulations, and that such party will have the requisite organizational and legal power and authority to perform its obligations under such Unit Agreement;

I. Any Units offered under the Registration Statement and the related purchase or similar agreement, as applicable, will be executed in the forms filed as exhibits to the Registration Statement or incorporated by reference therein;

J. Any Rights will be issued pursuant to rights agreements (each such rights agreement, a “Rights Agreement”) to be entered into by the Company and a rights agent (each, a “Rights Agent”) and the execution, delivery and performance of the applicable Warrant Agreement will be duly authorized by Corporate Action, and will not conflict with or constitute a breach of the terms of any agreement or instrument to which the Company is subject;

K. To the extent that the obligations of the Company under any Rights Agreement may depend upon such matters, each of the parties thereto, other than the Company, will be duly organized, validly existing and in good standing under the laws of its jurisdiction of organization and will be duly qualified to engage in the activities contemplated by such Rights Agreement; that such Rights Agreement will have been duly authorized, executed and delivered by such party and will constitute the legal, valid and binding obligation of such party, enforceable against such party in accordance with its terms; that such party will be in compliance, generally and with respect to acting as a party with respect to its obligations under such Rights Agreement, with all applicable laws and regulations, and that such party will have the requisite organizational and legal power and authority to perform its obligations under such Rights Agreement;

L. Any Rights offered under the Registration Statement and the related Rights Agreement, as applicable, will be executed in the forms filed as exhibits to the Registration Statement or incorporated by reference therein;

M. The Registration Statement and any amendments thereto (including post-effective amendments) will have become effective and such effectiveness shall not have been terminated or rescinded and will comply with all applicable federal and state laws at the time the Securities are offered and issued as contemplated by the Registration Statement;

N. A Prospectus Supplement will have been prepared, delivered (including through compliance with Rule 172 of the General Rules and Regulations promulgated under the Securities Act) and filed with the U.S. Securities and Exchange Commission (the “Commission”) describing the Securities offered thereby and will comply with all applicable laws at the time the Securities are offered and issued as contemplated by the Registration Statement;

O. All Securities will be issued and sold in compliance with applicable federal and state securities laws; and

P. A definitive purchase, underwriting or similar agreement (each, a “Definitive Agreement”) with respect to any Securities offered or issued will have been duly authorized and validly executed and delivered by the Company and the other parties thereto.

Subject to the foregoing and the other matters set forth herein, it is our opinion that, as of the date hereof:

1. Upon due authorization by Corporate Action of the issuance and sale of shares of Common Stock and upon issuance and delivery of such shares of Common Stock against payment for such shares (in an amount at least equal to the aggregate par value of such shares of Common Stock) in accordance with the terms and provisions of the applicable Definitive Agreements, the terms of the Corporate Action and as contemplated by the Registration Statement and the applicable Prospectus Supplement, and, if applicable, upon the conversion, exchange or exercise of any other Securities in accordance with their respective terms, the terms of the Corporate Action and as contemplated by the Registration Statement and the applicable Prospectus Supplement (which shall, in each case, provide for payment of consideration that shall be at least equal to the aggregate par value of such shares of Common Stock), such shares of Common Stock will be validly issued, fully paid and nonassessable.
 2. Upon due authorization by Corporate Action of the issuance and sale of shares of a series of Preferred Stock and upon issuance and delivery of such shares of Preferred Stock against payment for such shares (in an amount at least equal to the aggregate par value of such shares of Preferred Stock) in accordance with the terms and provisions of applicable Definitive Agreements, the terms of
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the Corporate Action and as contemplated by the Registration Statement and the applicable Prospectus Supplement, and, if applicable, upon the conversion, exchange or exercise of any other Securities in accordance with their respective terms, the terms of the Corporate Action and as contemplated by the Registration Statement and the applicable Prospectus Supplement (which shall, in either case, provide for payment of consideration at least equal to the aggregate par value of such shares of Preferred Stock), such shares of such series of Preferred Stock will be validly issued, fully paid and nonassessable.

3. When a Warrant Agreement providing for the specific terms of a particular issuance of Warrants has been duly authorized by Corporate Action and has been duly executed and delivered by the Company and the Warrant Agent named in such Warrant Agreement and such Warrants, conforming to the requirements of such Warrant Agreement, have been duly countersigned or authenticated, as required, by such Warrant Agent and duly executed and delivered by the Company against payment for such Warrants in accordance with the terms and provisions of such Warrant Agreement and applicable Definitive Agreements, the terms of the Corporate Action and as contemplated by the Registration Statement and the applicable Prospectus Supplement, such Warrants will be valid and binding obligations of the Company, except as enforcement may be limited by applicable bankruptcy, insolvency, reorganization, arrangement, moratorium or other similar laws affecting creditors' rights, and subject to general equity principles and to limitations on the availability of equitable relief, including specific performance.

4. When a Unit Agreement providing for the specific terms of a particular issuance of Unit has been duly authorized by Corporate Action and has been duly executed and delivered by the Company and the other parties named in such Unit Agreement and such Units, conforming to the requirements of such Unit Agreement, have been duly executed and delivered by the Company against payment for such Units in accordance with the terms and provisions of such Unit Agreement and applicable Definitive Agreements, the terms of the Corporate Action and as contemplated by the Registration Statement and the applicable Prospectus Supplement, such Units will be valid and binding obligations of the Company, except as enforcement may be limited by applicable bankruptcy, insolvency, reorganization, arrangement, moratorium or other similar laws affecting creditors' rights, and subject to general equity principles and to limitations on the availability of equitable relief, including specific performance.

5. When a Rights Agreement providing for the specific terms of a particular issuance of Rights has been duly authorized by Corporate Action and has been duly executed and delivered by the Company and the Rights Agent named in such Rights Agreement and such Rights, conforming to the requirements of such Rights Agreement, have been duly countersigned or authenticated, as required, by such Rights Agent and duly executed and delivered by the Company against payment for such Rights in accordance with the terms and provisions of such Rights Agreement and applicable Definitive Agreements, the terms of the Corporate Action and as contemplated by the Registration Statement and the applicable Prospectus Supplement, such Rights will be valid and binding obligations of the Company, except as enforcement may be limited by applicable bankruptcy, insolvency, reorganization, arrangement, moratorium or other similar laws affecting creditors' rights, and subject to general equity principles and to limitations on the availability of equitable relief, including specific performance.

The opinions expressed herein are limited to the Delaware General Corporation Law and we express no opinion with respect to the laws of any other state or jurisdiction. Although the Securities may be issued from time to time on a delayed or continuous basis, the opinions expressed herein are limited to the laws, including rules and regulations, as in effect on the date hereof.

The opinion letter is limited to the matters stated herein and no opinions may be implied or inferred beyond the matters expressly stated herein. The opinions expressed herein are as of the date hereof and we assume no obligation to update or supplement such opinions to reflect any facts or circumstances that may hereafter come to our attention or any changes in the law that may hereafter occur.

We consent to your use of this opinion as an exhibit to the Registration Statement and to the reference to our firm under the caption "Legal Matters" in the Prospectus. In giving such consent, we do not hereby admit that we are acting within the category of persons whose consent is required under Section 7 of the Securities Act or the rules or regulations of the Commission thereunder.

Very truly yours,

Morgan, Lewis & Bockius LLP

Consent of Independent Registered Public Accounting Firm

MEI Pharma, Inc.
San Diego, California

We hereby consent to the incorporation by reference in the Prospectus constituting a part of this Registration Statement of our report dated September 26, 2023, relating to the consolidated financial statements of MEI Pharma, Inc. (the Company), appearing in the Company's Annual Report on Form 10-K for the year ended June 30, 2023.

We also consent to the reference to us under the caption "Experts" in the Prospectus.

/s/ BDO USA, P.C.
San Diego, California

February 20, 2024

Calculation of Filing Fee Tables

FORM S-3

(Form Type)

MEI Pharma, Inc.

(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities 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 \$0.00000002 per share	457(o)	(1)	(2)	(2)	N/A	N/A				
	Equity	Preferred Stock, par value \$0.01 per share	457(o)	(1)	(2)	(2)	N/A	N/A				
	Other	Warrants	457(o)	(1)	(2)	(2)	N/A	N/A				
	Other	Rights	457(o)	(1)	(2)	(2)	N/A	N/A				
	Other	Units	457(o)	(1)	(2)	(2)	N/A	N/A				
	Unallocated (Universal) Shelf	(1)	457(o)	(1)	(2)	\$100,000,000	0.0001476	\$14,760				
Fees Previously Paid	N/A	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	N/A	N/A	N/A
	Total Offering Amount					\$100,000,000		\$14,760				
	Total Fees Previously Paid							-				
	Total Fee Offsets							\$13,949.21 (3)				
	Net Fee Due							\$810.79				

(1) The securities registered hereunder may be sold separately, together or as units with the other securities registered hereunder. The securities registered hereunder also include such indeterminate number of shares of common stock and preferred stock as may be issued upon conversion of or exchange for preferred stock that provide for conversion or exchange, upon exercise of warrants or pursuant to the anti-dilution provisions of any of such securities. In addition, pursuant to Rule 416 under the Securities Act of 1933, as amended (the “Securities Act”), the securities being registered hereunder include such indeterminate number of shares of common stock and preferred stock as may be issuable with respect to the securities being registered hereunder as a result of stock splits, stock dividends or in connection with a stock combination, recapitalization, merger, consolidation or otherwise.

(2) The proposed maximum per unit and aggregate offering prices per class of securities will be determined from time to time by the registrant in connection with the issuance by the registrant of the securities registered under this registration statement and is not specified as to each class of security pursuant to Instruction 2.A.iii.b. to the Calculation of Filing Fee Tables and Related Disclosure on Form S-3 under the Securities Act.

(3) Please see Table 2 below.

Table 2: Fee Offset Claims and Sources

	Registrant or Filer Name	Form or Filing Type	File Number	Initial Filing Date	Filing Date	Fee Offset Claimed	Security Type Associated with Fee Offset Claimed	Security Title Associated with Fee Offset Claimed	Unsold Securities Associated with Fee Offset Claimed	Unsold Aggregate Offering Amount Associated with Fee Offset Claimed	Fee Paid with Fee Offset Source
Rule 457(p)											
Fee Offset Claims	MEI Pharma, Inc.	S-3 (4)	333-238056	May 5, 2020		\$13,949.21	(5)	(5)	(5)	\$107,466,957 (6)	
Fees Offset Sources	MEI Pharma, Inc.	S-3 (4)	333-238056		May 5, 2020						\$13,949.21

(4) The registrant has either withdrawn each prior registration statement or has terminated or completed any offering that included the unsold securities under the prior registration statement.

(5) The securities offered thereunder included up to \$200,000,000 aggregate initial offering price of such indeterminate number of shares of common stock and preferred stock and such indeterminate number of warrants to purchase common stock or preferred stock.

(6) Pursuant to Rule 415(a)(6) under the Securities Act, the registrant included \$107,466,957 of newly registered securities thereunder for which the filing fee of \$13,949.21 was paid.

