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

**POST-EFFECTIVE AMENDMENT NO. 2
TO
FORM S-1
ON
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)

51-0407811
(I.R.S. Employer
Identification Number)

**11975 El Camino Real, Suite 101
San Diego, California 92130
(858) 792-6300**

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

Daniel P. Gold
President and Chief Executive Officer
**11975 El Camino Real, Suite 101
San Diego, California 92130
(858) 792-6300**

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

Copies to:

**Steven A. Navarro, Esq.
Finnbarr D. Murphy, Esq.
Morgan, Lewis & Bockius LLP
101 Park Avenue
New York, New York 10178**

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 or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input checked="" type="checkbox"/>

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

EXPLANATORY NOTE

This Post-Effective Amendment No. 2 to Form S-1 on Form S-3 (this “Post-Effective Amendment”) is being filed pursuant to Section 10(a)(3) of the Securities Act of 1933, as amended, to update the Registration Statement on Form S-1 (Registration No. 333-179590) (the “Original Registration Statement”), which was previously declared effective by the Securities and Exchange Commission (the “SEC”) on March 26, 2012, to include the audited financial statements and the notes thereto included in the Registrant’s Annual Report on Form 10-K for the fiscal year ended June 30, 2013, which was filed with the SEC on September 18, 2013 and to convert the Original Registration Statement to a Registration Statement on Form S-3. This Post-Effective Amendment also contains an updated prospectus relating to the offering and sale of certain of the securities that were included in the Original Registration Statement. The subscription rights offering (the “Rights Offering”) to which the Original Registration Statement related was completed on May 11, 2012. Accordingly, this Post-Effective Amendment relates only to the exercise of the warrants that were issued as a component of the units in the Right Offering.

All applicable registration fees were paid in connection with the filing of the Original Registration Statement on February 21, 2012.

THE INFORMATION IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. THESE SECURITIES MAY NOT BE SOLD UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL THESE SECURITIES, AND IS NOT SOLICITING OFFERS TO BUY THESE SECURITIES IN ANY STATE WHERE THE OFFER OR SALE IS NOT PERMITTED.

Subject to Completion, Dated November 12, 2013

PROSPECTUS

MEI PHARMA, INC.

319,191 Shares of Common Stock at \$7.14 Per Share Upon Exercise of Outstanding Warrants

In connection with our rights offering, the subscription period for which expired on May 11, 2012, we previously issued and sold 11,660,606 units, each unit consisting of 0.0833 shares of our common stock and a warrant to purchase 0.04167 shares of our common stock, par value \$0.00000002 per share (the "Common Stock"). The warrants may be exercised for a five-year term ending on May 10, 2017, and have an exercise price of \$7.14 per share. This prospectus relates to the potential issuance of up to 319,191 shares of Common Stock upon exercise of the warrants issued in connection with the rights offering, which we refer to herein as the warrants. This amount represents the 485,857 shares of Common Stock originally issuable upon exercise of the warrants less 166,666 shares of Common Stock that had been issuable upon exercise of the warrants, which were cancelled in connection with the previously disclosed agreement, dated December 5, 2012, between us, Novogen Limited, Novogen Research Pty Ltd, Andrew Heaton and Graham Kelly.

All costs associated with this registration statement will be borne by us. Shares of our Common Stock are traded on the Nasdaq Capital Market under the symbol "MEIP." On November 11, 2013, the closing price for a share of our Common Stock on the Nasdaq Capital Market was \$7.67 per share. The shares of Common Stock issued upon the exercise of the warrants will also be quoted on the Nasdaq Capital Market under the same ticker symbol. We do not intend to list the warrants for trading on any stock exchange or market or automated quotation system.

Investing in our securities involves risks. See "[Risk Factors](#)" beginning on page 7 of this prospectus.

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

The date of this prospectus is _____, 2013.

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We have not authorized anyone to provide any information other than that contained or incorporated by reference in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you.

This prospectus and any applicable prospectus supplement are not offers to sell nor are they seeking an offer to buy these securities in any jurisdiction where the offer or sale is not permitted. The information contained in this prospectus and any applicable prospectus supplement is complete and correct only as of the date on the front cover of such documents, regardless of the time of the delivery of such documents or any sale of these securities. In this prospectus, “MEI Pharma,” “the Company,” “we,” “us,” and “our” refer to the consolidated operations of MEI Pharma, Inc., and references to a company name refer solely to such company.

For investors outside the United States: We have not taken any action to permit a public offering of our securities or the possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (the “SEC”). When required, we will amend the registration statement or file prospectus supplements to update or change information contained in this prospectus. You should read this prospectus, as well as any amended prospectus and any prospectus supplement, together with additional information described under the headings “Additional Information” and “Incorporation By Reference.”

ADDITIONAL INFORMATION

As permitted by SEC rules, this prospectus omits certain information that is included in the registration statement and its exhibits. Since the prospectus may not contain all of the information that you may find important, you should review the full text of these documents. If we have filed a contract, agreement or other document as an exhibit to the registration statement, you should read the exhibit for a more complete understanding of the document or matter involved. Each statement in this prospectus, including statements incorporated by reference as discussed below, regarding a contract, agreement or other document is qualified in its entirety by reference to the actual document.

We file annual, quarterly and special reports and other information with the SEC. You may read and copy any document we file with the SEC at the SEC’s public reference room located at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the public reference room. Our filings are also available to the public from the SEC’s web site at <http://www.sec.gov>.

INCORPORATION BY REFERENCE

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

We hereby incorporate by reference into this prospectus the following documents that we have filed with the SEC:

- Our Annual Report on Form 10-K for the fiscal year ended June 30, 2013 filed with the SEC on September 18, 2013, as amended by Amendment No. 1 thereto filed with the SEC on September 27, 2013;
- Our Current Reports on Form 8-K filed with the SEC on October 21, 2013 and October 29, 2013; and
- the description of our common stock contained in the Registration Statement on Form 8-A filed on November 26, 2003, and any further amendment or report 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 of which this prospectus forms a part and prior to effectiveness of the registration statement and (ii) the date of this prospectus and prior to the termination of this offering; provided, however, that we are not incorporating any information furnished under Item 2.02 or Item 7.01 of any current report on Form 8-K we may subsequently file.

Statements made in this prospectus or any applicable prospectus supplement or in any document incorporated by reference in this prospectus or any applicable prospectus supplement as to the contents of any

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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.
11975 El Camino Real, Suite 101
San Diego, California 92130
Tel: (858) 792-6300
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.

SUMMARY

This summary does not contain all of the information you should consider before investing in our Common Stock. This prospectus includes or incorporates by reference information about the shares we are offering as well as information regarding our business and detailed financial data. Before you decide to invest in our Common Stock, you should read the entire prospectus carefully, including the "Risk Factors" section and any information incorporated by reference herein.

The Company

We are a development-stage oncology company focused on the clinical development of novel therapies for cancer. Our common stock is listed on the Nasdaq Capital Market under the symbol "MEIP". We were incorporated in Delaware in 2000 as a wholly owned subsidiary of Novogen Limited ("Novogen"). In December 2012, Novogen distributed to its shareholders substantially all of its MEI Pharma common stock.

Our business purpose is the development of drugs for the treatment of cancer. We are principally focused on the clinical development of our lead drug candidate, Pracinostat, which we are currently investigating in Phase II clinical trials. Pracinostat is an orally available histone deacetylase (HDAC) inhibitor that is currently being developed for advanced hematologic diseases such as myelodysplastic syndrome (MDS) and acute myeloid leukemia (AML). In August 2012, we completed the acquisition of certain assets and intellectual property, including those related to Pracinostat, from S*Bio Pte Ltd ("S*Bio"). Our clinical development pipeline also includes two isoflavone-based drug candidates, ME-344 and ME-143. ME-344 and ME-143 are derived from an isoflavone technology platform that has shown promising anti-tumor activity in laboratory studies. These compounds have been shown to interact with specific targets resulting in the inhibition of tumor metabolism, a function critical for cancer cell survival. Results from a Phase I clinical trial of ME-344 in patients with refractory solid tumors were presented in October 2013 and we are now preparing for a Phase Ib trial in small cell lung cancer and ovarian cancer. In addition, in September 2013, we acquired PWT143, an oral inhibitor of phosphatidylinositide PI3-kinase delta, a molecular target that has been shown to play a critical role in the proliferation and survival of hematologic cancer cells. We have commenced pre-clinical work to support the filing of an Investigational New Drug application for PWT143 by the end of 2014.

We own exclusive worldwide rights to all of our drug candidates, including Pracinostat, ME-344, ME-143 and PWT143.

As of September 30, 2013, our existing cash balances were approximately \$31.5 million. We believe that our existing cash balances, including net proceeds of approximately \$32.7 million from the underwritten public offering that closed on October 30, 2013, will be sufficient to fund our operations through calendar year 2015. Changes to our research and development plans or other changes affecting our operating expenses may affect actual future use of existing cash resources. In any event, at some point in the future we may pursue one or more additional capital raising transactions, whether through the sale of equity securities or the entry into strategic partnerships.

Relationship with Novogen

Novogen was our majority shareholder from our inception through December 3, 2012. On such date, Novogen completed the distribution of substantially all of its MEI Pharma common stock to its shareholders. Historically, we licensed from Novogen the rights to Novogen patents and applications for our isoflavone-based drug candidates, as well as other compounds. Additionally, Novogen historically was a source of capital, and provided research and development services and administrative and finance services to us under service agreements. The license agreements were terminated in May 2011 in conjunction with our purchase of a portfolio of isoflavone-related assets from Novogen, which we refer to as the "Isoflavone Transaction". The service agreements were terminated in December 2010.

Rights Offering

In May 2012, we completed a rights offering pursuant to which we distributed, at no charge, to holders of our Common Stock as of 5:00 p.m., Eastern time, on March 30, 2012, subscription rights (the "Rights"), to purchase up to 17,129,361 units for an aggregate purchase price of up to \$7.6 million. The subscription period for the Rights Offering expired on May 11, 2012. Each unit consisted of 0.0833 shares of Common Stock and a warrant representing the right to purchase 0.04167 shares of Common Stock at an exercise price of \$7.14 per share. The exercise of one Right entitled holders to purchase one unit at a subscription price of \$0.445 per unit, which represented the subscription price of \$5.34 per whole share. Eligible participants in the Rights Offering exercised Rights to purchase an aggregate of 11,660,606 units; accordingly, the Company issued 971,700 shares of Common Stock and warrants to purchase an additional 319,191 shares of Common Stock, after giving effect to the cancellation of warrants to purchase 166,667 shares pursuant to the December 2012 waiver agreement between us, Novogen Limited, Novogen Research Pty Ltd, Andrew Heaton and Graham Kelly. We received net proceeds of \$4.8 million in connection with the Rights Offering.

Recent Events

On October 20, 2013, results from our first-in-human, single-agent Phase I clinical trial of ME-344 in patients with refractory solid tumors were presented at the AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics. The results indicated that five of 21 evaluable patients treated with ME-344 experienced progression free survival (34 to 61+ weeks) that was at least twice the duration of their last prior treatment before entry into the study. In addition, the presentation highlighted that one of these five patients, a heavily pre-treated patient with small cell lung cancer, achieved a confirmed partial response. This patient and two others remain on study and continue weekly dosing. ME-344 was generally well tolerated at doses equal to or less than 10 mg/kg delivered on a weekly schedule for extended durations. Dose limiting toxicities were observed at both the 15 mg/kg and 20 mg/kg dose levels, consisting primarily of Grade 3 peripheral neuropathy. Other medically significant adverse events observed in single patients included angina and QTc prolongation at the 10 mg/kg dose. See our Current Report on Form 8-K, filed with the SEC on October 21, 2013 for more information.

On September 10, 2013, we announced that we acquired exclusive worldwide rights to PWT143 from Pathway Therapeutics, Inc. for an undisclosed upfront cash payment with no future milestone or royalty obligations. In pre-clinical studies, PWT143 has been found to be a potent and highly selective oral inhibitor of PI3-kinase delta, a molecular target that has been shown to play a critical role in the proliferation and survival of hematologic cancer cells, with evidence of improved activity compared to other PI3-kinase delta inhibitors currently in development. We expect that it will take a minimal investment of resources to complete the required pre-clinical studies necessary for an Investigational New Drug filing, which is anticipated by the end of 2014.

Corporate Information

Our principal executive offices are located at 11975 El Camino Real, Suite 101, San Diego, California, 92130, and our phone number is (858) 792-6300. Our website address is www.meipharma.com.

The Offering

Securities Offered	319,191 shares of Common Stock issuable upon exercise of the warrants issued in connection with the Rights Offering that was completed on May 11, 2012.
Exercise Price and Term of Warrants	<p>The warrants have an exercise price of \$7.14 per share and are exercisable at any time prior to May 11, 2017. The warrants are exercisable for cash, or, solely during any period when a registration statement for the exercise of the warrants is not in effect, on a cashless basis.</p> <p>For a more complete description of the terms of the warrants, see “Description of Capital Stock—Warrants; Options—Warrants Issued in the Rights Offering.”</p>
Shares Outstanding	As of November 11, 2013, we had 21,493,405 shares of Common Stock outstanding.*
Use of Proceeds	We intend to use the net proceeds we receive from any exercise of the warrants to progress the development programs for Pracinostat, ME-344 and PWT143, and for other general corporate purposes. See “Use of Proceeds.”
Dividends	We have never paid or declared any cash dividends on our Common Stock, and we intend to retain any future earnings to finance the development and expansion of our business. We do not anticipate paying any cash dividends on our Common Stock in the foreseeable future. See “Market Price and Dividend Information.”
Market for Warrants and Common Stock	The warrants are transferable; however, there is no established trading market for the warrants, and we do not expect a market to develop. We do not intend to list the warrants for trading on any stock exchange or market or automated quotation system. Our Common Stock is currently traded on the Nasdaq Capital Market under the symbol “MEIP.” See “Market Price and Dividend Information.”

* In addition to the warrants issued in the Rights Offering to which this prospectus relates, this amount excludes (i) 960,449 shares of our common stock subject to outstanding options, with exercise prices ranging from \$2.76 to \$37.80 per share, (ii) 400,000 restricted stock units, each representing the contingent right to receive one share of our common stock, (iii) 4,742,082 shares of our common stock subject to outstanding warrants, with exercise prices ranging from \$3.12 to \$6.00 per share, (iv) based on an assumed price per share of \$7.67, which was the last reported sale price of our common stock on the Nasdaq Capital Market on November 11, 2013, up to 65,189 shares of common stock that may be issuable upon our achievement of certain clinical and regulatory milestones pursuant to the terms of the August 2012 Asset Purchase Agreement between the Company and S*Bio, and (v) 891,884 shares of our common stock available for awards under our Amended and Restated 2008 Stock Omnibus Equity Compensation Plan, in each case as of November 11, 2013.

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Risk Factors

Before you exercise the warrants to purchase shares of our Common Stock, you should carefully consider the risks described or referred to in the section entitled “Risk Factors,” beginning on page 6 of this prospectus.

Warrant Agent

Computershare Inc.

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" starting on page 15 of our Annual Report on Form 10-K for the fiscal year ended June 30, 2013, as well as in our subsequent annual reports on Form 10-K and in other reports we file with the SEC from time to time and incorporated herein by reference, before investing in our securities. For further details, see the sections entitled "Where You Can Find More Information" and "Incorporation of Certain Information by Reference."

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.

Risks Related to the Offering

The market price of our Common Stock may fall below the exercise price of the warrants.

The warrants became exercisable on May 11, 2012 and will expire five years thereafter. We cannot provide you any assurance that the market price of our Common Stock at any given time will exceed the exercise price of these warrants prior to their date of expiration. Any warrants not exercised by their date of expiration will expire, and we will be under no further obligation to the warrant holder.

The exercise of warrants may cause the price of our Common Stock to decrease.

The shares of Common Stock that will be issuable upon exercise of the warrants may cause the price of a share of our Common Stock to decrease. If shares of Common Stock issued upon exercise of the warrants are sold, such sales could further depress the market price of our Common Stock.

The future price of our Common Stock may be less than the \$7.14 exercise price per share of the warrants.

If you exercise your warrants to purchase Common Stock, you may not be able to sell the shares of Common Stock later at or above the \$7.14 per share subscription price. The last reported price of a share of our Common Stock on the Nasdaq Capital Market as of November 11, 2013 was \$7.67. This price could be subject to significant fluctuations in response to numerous factors, some of which are beyond our control. Any warrants not exercised by their date of expiration will expire, and we will be under no further obligation to the holders of warrants.

There is no public market for the warrants.

There is no established public trading market for the warrants, and we do not expect a market to develop. In addition, we do not intend to apply to list the warrants on any national securities exchange or other nationally recognized trading system, including the Nasdaq Capital Market. Without an active market, the liquidity of the warrants will be limited.

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:

- our inability to obtain required additional financing or financing available to us on acceptable terms, or at all, which may cause us to delay, scale-back or eliminate plans related to development of our drug candidates;
- we are in an early stage of clinical studies for our product candidates on which our development plans are based; clinical studies by their nature typically have a high level of risk and may not produce successful results;
- the results of pre-clinical studies and completed clinical trials are not necessarily predictive of future results, and our current drug candidates may not have favorable results in later studies or trials;
- our inability to maintain or enter into, and the risks resulting from our dependence upon, contractual arrangements necessary for the clinical development, manufacture, commercialization, marketing, sales and distribution of our product candidates;
- costs and delays in the clinical development programs and/or receipt of U.S. Food and Drug Administration (the “FDA”) or other required governmental approvals, or the failure to obtain such approvals, for our product candidates;
- the FDA’s interpretation and our interpretation of data from preclinical and clinical studies may differ significantly;
- our failure to successfully commercialize our product candidates;
- the failure of any products to gain market acceptance;
- our inability to control the costs of manufacturing our products;
- competition and competitive factors;
- 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;
- costs stemming from our defense against third party intellectual property infringement claims;
- general economic conditions;
- technological changes;
- government regulation generally and the receipt of regulatory approvals;
- changes in industry practice; and
- one-time events.

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These risks are not exhaustive. Other sections of this prospectus and the documents incorporated by reference herein 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.

PLAN OF DISTRIBUTION

Pursuant to the terms of the warrants, the shares of Common Stock issuable upon exercise of the warrants will be distributed to those warrant holders who surrender their warrant certificate, together with their subscription form and payment of the exercise price, to our warrant agent, Computershare Inc.

USE OF PROCEEDS

Assuming the exercise of warrants to purchase all 319,191 shares of Common Stock issuable upon exercise of the warrants, we estimate that the net proceeds from the exercise of the warrants will be approximately \$2.3 million. We intend to use the net proceeds we receive from this offering to progress the development programs for Pracinostat, ME-344 and PWT143, and for other general corporate purposes.

MARKET PRICE AND DIVIDEND INFORMATION

Our Common Stock is currently listed on the Nasdaq Capital Market under the symbol "MEIP." As of November 11, 2013, we had 21,493,405 shares of our Common Stock outstanding, held by approximately 3,080 holders of record. Prior to March 16, 2011, our Common Stock was listed on the Nasdaq Global Market.

The following table sets forth the quarterly high and low sales prices of our Common Stock on the Nasdaq Capital Market or the Nasdaq Global Market, as applicable, for the periods indicated, after adjustment of all amounts to retroactively reflect the 1-for-6 reverse stock split that occurred on December 18, 2012:

	Share Prices	
	High	Low
<i>Year Ending June 30, 2014</i>		
First Quarter	\$12.45	\$6.52
Second Quarter (through November 11, 2013)	\$11.31	\$7.49
<i>Year Ended June 30, 2013</i>		
First Quarter	\$ 4.80	\$1.98
Second Quarter	\$13.18	\$2.10
Third Quarter	\$ 9.65	\$4.37
Fourth Quarter	\$ 9.40	\$6.89
<i>Year Ended June 30, 2012</i>		
First Quarter	\$19.68	\$5.88
Second Quarter	\$10.50	\$5.70
Third Quarter	\$ 7.68	\$3.96
Fourth Quarter	\$ 6.66	\$2.46

We have never paid or declared any cash dividends on our Common Stock, and we intend to retain any future earnings to finance the development and expansion of our business. We do not anticipate paying any cash dividends on our Common Stock in the foreseeable future.

SELECTED FINANCIAL DATA

You should read the following selected financial data together with our financial statements and the related notes, as well as the “Management’s Discussion and Analysis of Financial Condition and Results of Operations” section and other financial data included in our Annual Report on Form 10-K for the year ended June 30, 2013 and Quarterly Report on Form 10-Q for the quarter ended September 30, 2013, each of which is incorporated by reference in this prospectus.

	Three Months ended September 30, 2013	Year ended June 30,				
		2013	2012	2011	2010	2009
Operating Data						
Total operating expenses	\$ (4,913)	\$ (11,222)	\$ (8,394)	\$ (6,451)	\$ (7,979)	\$ (11,407)
Net loss	\$ (4,896)	\$ (11,186)	\$ (7,523)	\$ (6,781)	\$ (7,896)	\$ (11,180)
Cash Flow Data						
Net cash used in operating activities	\$ (4,063)	\$ (10,044)	\$ (7,081)	\$ (6,501)	\$ (10,033)	\$ (10,554)
Net cash used in investing activities	\$ (6)	\$ (38)	—	\$ (48)	\$ (3)	—
Net cash provided by financing activities	—	\$ 39,453	\$ 9,425	\$ 1,376	—	\$ 9,878

	As of September 30, 2013	As of June 30,				
		2013	2012	2011	2010	2009
Balance Sheet Data						
Total assets	\$ 32,617	\$36,547	\$ 6,373	\$ 4,168	\$ 9,136	\$19,356
Total current liabilities	\$ (1,465)	\$ (1,675)	\$ (1,774)	\$ (2,374)	\$ (1,755)	\$ (4,143)

DILUTION

If you exercise the warrants to purchase shares of our Common Stock, your ownership interest will be diluted to the extent of the difference between the exercise price per share of our Common Stock and the pro forma adjusted net tangible book value per share of our Common Stock after the exercise of the warrants. Our historical net tangible book value of Common Stock as of September 30, 2013 was approximately \$30.7 million, or \$1.79 per share, based on 17,116,662 shares of Common Stock outstanding as of September 30, 2013. Historical net tangible book value per share represents the amount of our total tangible assets less total liabilities, divided by the total number of shares of Common Stock outstanding as of September 30, 2013.

Our pro forma historical net tangible book value per share of our Common Stock, after giving effect to (i) the issuance of 4,375,000 shares of Common Stock at a public offering price of \$8.00 per share in an underwritten public offering on October 30, 2013, and (ii) the issuance of 1,743 shares of Common Stock upon the exercise of warrants to which this prospectus relates during October 2013, was \$63.4 million, or \$2.95 per share. On a pro forma as adjusted basis, after giving effect to the foregoing and to the issuance of the remaining 317,296 shares of Common Stock underlying the warrants at a price of \$7.14 per share, for an aggregate amount of approximately \$2.3 million, our pro forma as adjusted net tangible book value as of September 30, 2013 would have been approximately \$65.7 million, or \$3.01 per share. This represents an immediate increase in adjusted net tangible book value of \$0.06 per share to our existing stockholders and an immediate dilution in adjusted net tangible book value of \$4.13 per share in connection with shares issued upon exercise of the warrants. The following table illustrates this per share dilution:

Exercise price per share		\$7.14
Pro forma net tangible book value per share as of September 30, 2013	\$2.95	
Increase in net adjusted tangible book value per share attributable to exercise of the warrants	<u>\$0.06</u>	
Pro forma as adjusted net tangible book value per share after exercise of the warrants		\$3.01
Dilution per share for shares issued upon exercise of the warrants		\$4.13

The number of shares to be outstanding upon exercise of the warrants is based on 17,116,662 shares outstanding as of September 30, 2013, and excludes, in each case as of September 30, 2013:

- the remaining warrants issued in the December 2012 private placement exercisable to purchase 4,526,361 shares of our Common Stock at an exercise price of \$3.12 per share;
- the remaining Series A warrants issued in the May 2011 private placement exercisable to purchase 215,721 shares of our Common Stock at an exercise price of \$6.00 per share;
- options to purchase 960,449 shares of Common Stock at exercise prices from \$2.76 to \$37.80 per share, which expire at various dates in calendar years 2014, 2015, 2016, 2017 and 2018; and
- based on an assumed price per share of \$7.67, which was the closing the last reported sale price of our common stock on the Nasdaq Capital Market on November 11, 2013, up to 65,189 shares of common stock that may be issuable upon our achievement of certain clinical and regulatory milestones pursuant to the terms of the August 2012 Asset Purchase Agreement between the Company and S*Bio.

To the extent outstanding warrants or options are exercised, there will be further dilution to new investors. In addition, to the extent we issue additional equity securities in connection with future capital raising or other strategic activities, our then-existing stockholders may experience dilution.

DESCRIPTION OF CAPITAL STOCK

Our authorized capital stock consists of 113,000,000 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 November 11, 2013, there were 21,493,405 shares of Common Stock outstanding and no shares of preferred stock outstanding. The description set forth below is only a summary and is not complete. For more information regarding our capital stock, please refer to our restated certificate of incorporation, as amended, which is incorporated by reference as an exhibit to the registration statement of which this prospectus forms a part.

Common Stock

The holders of shares of Common Stock are entitled to one vote per share. In the event of a liquidation, dissolution or winding up of our affairs, holders of the Common Stock will be entitled to share ratably in all of our assets that are remaining after payment of our liabilities and the liquidation preference, if any, of any outstanding shares of preferred stock. All outstanding shares of Common Stock are fully paid and non-assessable. The rights, preferences and privileges of holders of Common Stock are subject to any series of preferred stock that we have issued or may issue in the future. The holders of Common Stock have no preemptive rights and are not subject to future calls or assessments by us. Our Common Stock is currently listed on the Nasdaq Capital Market under the trading symbol "MEIP."

Preferred Stock

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 shares 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.

On May 9, 2011, we issued to Novogen, in a transaction exempt from the registration requirements of the Securities Act, pursuant to Section 4(2) thereof, 1,000 shares of our newly-designated Series A Convertible Preferred Stock (the "Series A Preferred Stock"). Each share of Series A Preferred Stock was initially convertible at any time and from time to time and without the payment of additional consideration by the holder thereof into 804.5 shares of Common Stock. In addition, if a Phase II clinical trial involving our isoflavone technology were to achieve a statistically significant result ($p=0.05$ or less) or a first patient were enrolled in a Phase III clinical trial our isoflavone technology, then any share of the Series A Preferred Stock not already converted may thereafter have been converted into 1,609 shares of Common Stock. On November 19, 2012, Novogen provided the Company written notice of conversion with respect to all of the 1,000 shares of Series A Preferred Stock held by Novogen. In accordance with the terms of the Preferred Shares, on November 20, 2012, the Company issued to Novogen 804,5000 shares of Common Stock.

In December 2012, Novogen completed a capital reduction and in specie distribution to the Novogen shareholders of substantially all of the shares of the Company that it owned.

Warrants; Options; Restricted Stock Units

We may issue warrants, options, restricted stock units or other securities exchangeable for or convertible into shares of our Common Stock or preferred stock. Warrants or options 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 warrant agent. All options will be issued under separate option agreements to be entered into between us and each holder of such options. Restricted stock units may be issued to our non-employee directors, officers, employees and advisors pursuant to the 2008 Stock Omnibus Equity Compensation Plan.

Warrants Issued in the Rights Offering

The warrants have an exercise price of \$7.14 per share and the exercise price may be adjusted in certain instances. The exercise price of the warrants was determined in conjunction with the determination of the subscription price for the units offered in connection with the Rights Offering, and represented a 20 percent premium to the volume-weighted average price of our common stock for the 30 consecutive trading days ending on, and inclusive of, March 13, 2012. The exercise price will be payable by certified or bank check to an account designated by us of an amount equal to the then applicable warrant price multiplied by the number of warrant shares being issued. The warrants will expire on May 11, 2017.

No fractional shares will be delivered upon the exercise of a warrant. If the exercise of a warrant would result in the delivery of a fractional share, we will not be obligated to deliver such fractional share, and the number of shares to be delivered upon the exercise of a warrant will be rounded down to the nearest full share.

The warrants are transferable; however, there is no established public trading market for the warrants, and we do not expect a market to develop. In addition, we do not intend to apply to list the warrants on any national securities exchange or other nationally recognized trading system, including the Nasdaq Capital Market. Without an active market, the liquidity of the warrants will be limited.

The holders of unexercised warrants are not entitled, as such, to (i) receive dividends or distributions made to holders of Common Stock; (ii) acquire options, convertible securities, rights to purchase stock, warrants, securities or other property issued to holders of Common Stock; (iii) receive notice of, or to vote at, any meeting; (iv) receive notice of any other proceedings of MEI Pharma; or (v) to exercise any other rights whatsoever as our shareholders.

The number of shares for which the warrants may be exercised and the exercise price applicable to the warrants will be proportionately adjusted in the event that we make distributions of our Common Stock, or subdivide, combine or reclassify outstanding shares of our Common Stock, or if we pay a dividend in securities or property other than Common Stock. In the case of a merger or consolidation of us into another company where we are not the surviving company, the warrant holder will have the right to receive a new warrant in the surviving corporation; provided that the company will have the right to instead require the warrant holder to exercise all of its remaining warrants prior to any such merger or consolidation.

The warrants are exercisable for cash, or, solely during any period when a registration statement for the exercise of the warrants is not in effect, on a cashless basis.

Other Warrants; Options; Restricted Stock Units

In addition to the warrants issued in the Rights Offering to which this prospectus relates, as of November 11, 2013, there were outstanding the following additional (i) warrants issued in our December 2012 private placement exercisable to purchase 4,526,361 shares of Common Stock at an exercise price of \$3.12, which expire on December 17, 2017; and (ii) Series A warrants issued in our May 2011 private placement

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exercisable to purchase 215,721 shares of Common Stock at an exercise price of \$6.00, which expire on November 18, 2016. As of November 11, 2013, there were also outstanding options to purchase 960,449 shares of Common Stock at exercise prices from \$2.76 to \$37.80 per share, which expire at various dates in calendar years 2014, 2015, 2016, 2017 and 2018. As of November 11, 2013, there were also outstanding 400,000 restricted stock units (RSUs) granted to the Company's chief executive officer, Dr. Daniel P. Gold, in March 2013; each RSU which represents the contingent right to receive one share of the Company's common stock. One third of the RSUs will vest on each of August 30, 2014, August 30, 2015 and August 30, 2016. The shares underlying the vested RSUs will be delivered to Dr. Gold on the earliest to occur of (i) March 29, 2018, (ii) Dr. Gold's death, disability or separation from service from the Company for any reason, or (iii) a change in control involving the Company.

U.S. FEDERAL INCOME TAX CONSEQUENCES

The following is a general discussion of certain United States federal income tax consequences to U.S. holders, as defined below, of exercising the warrants issued in the Rights Offering to which this prospectus relates and owning the shares of Common Stock that would be issued upon an exercise of the warrants. This discussion is based on the Internal Revenue Code of 1986, as amended (the “Code”), Treasury regulations promulgated thereunder, and administrative and judicial interpretations thereof, all as in effect as of the date hereof and all of which are subject to change, possibly with retroactive effect. This discussion is not binding on the Internal Revenue Service (the “IRS”), or the courts. Accordingly, no assurance can be given that the tax consequences described herein will not be challenged by the IRS or that such a challenge would not be sustained by a court. No ruling has been sought from the IRS, and no opinion of counsel has been rendered, as to the federal income tax consequences set forth in this discussion.

This discussion does not address all aspects of U.S. federal income taxation that may be applicable to holders in light of their particular circumstances or to holders subject to special treatment under the U.S. federal income tax laws, including, but not limited to, financial institutions, brokers and dealers in securities or currencies, insurance companies, tax-exempt organizations, persons who hold their shares as part of a straddle, hedge, conversion or other risk-reduction transaction, persons liable for the alternative minimum tax, U.S. expatriates, persons whose functional currency is not the U.S. dollar, persons who hold their shares through “foreign financial institutions” within the meaning of Section 1471 of the Code, persons that could be subject to the 3.8% Medicare tax on certain investment income beginning in 2013, persons that distribute the Rights to their stockholders, members or general or limited partners and foreign taxpayers. This discussion also does not address any aspect of state, local or foreign income or other tax laws. This discussion is limited to U.S. holders which hold the warrants, and would hold the shares issued on an exercise of the warrants, as capital assets. For purposes of this discussion, a “U.S. holder” is a holder that is, for U.S. federal income tax purposes:

- a citizen or resident of the United States;
- a corporation or partnership created or organized in or under the laws of the United States or any political subdivision thereof;
- an estate the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust if a U.S. court is able to exercise primary supervision over the administration of the trust and one or more U.S. persons have the authority to control all substantial decisions of the trust.

YOU SHOULD CONSULT YOUR TAX ADVISOR AS TO THE PARTICULAR TAX CONSEQUENCES TO YOU OF YOUR EXERCISE OF THE WARRANTS AND OWNERSHIP OF THE SHARES, INCLUDING THE APPLICABILITY OF ANY FEDERAL ESTATE OR GIFT TAX LAWS OR ANY STATE, LOCAL OR FOREIGN TAX LAWS.

Exercise of the warrants

If you exercise the warrants for cash, you will not recognize any gain or loss on exercise, your tax basis in the shares you receive will reflect your tax basis in the warrants and the exercise price paid, and your holding period in the shares will begin on the date of exercise.

The tax treatment of a cashless exercise of the warrants is unclear. In one alternative treatment, a cashless exercise may be treated as a tax-free recapitalization of the warrants into shares, and as a result an exercising holder would not recognize gain or loss on the exercise, and would have a tax basis and holding period in the shares issued upon exercise reflecting the tax basis and holding period of the exercised warrant. In another alternative treatment, a cashless exercise may be treated in the same manner as an exercise of the warrants for cash, generally resulting in neither gain nor loss for the exercising holder, but the holder would then be treated as having sold a portion of the shares received on exercise to us, reflecting shares with a fair market value equal to

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the exercise price for the warrants, and as a result may recognize gain (or loss) reflecting the amount by which the fair market value of such shares exceeds (or is less than) the holder's tax basis in such shares (reflecting, in turn, the holder's tax basis in the warrants exercised in exchange for such shares). You are urged to consult with your tax adviser regarding the tax treatment of a cashless exercise of the warrants.

Tax treatment of shares received on exercise of warrants

Distributions, if any, made on shares of our Common Stock, including shares received on exercise of warrants, generally will be included in your income as ordinary dividend income to the extent of our current and accumulated earnings and profits. However, if you are a noncorporate holder of our shares, such dividends are generally taxed at a maximum U.S. federal income tax rate of 20%, provided certain holding period requirements are satisfied. Distributions in excess of our current and accumulated earnings and profits will be treated as a return of capital to the extent of your adjusted tax basis in the common stock and thereafter as capital gain from the sale or exchange of such common stock. If you are a corporation, you may be eligible for a dividends received deduction on dividends you receive on our shares, subject to applicable limitations.

Upon the sale, exchange, certain redemptions or other taxable dispositions of shares of our Common Stock, you generally will recognize capital gain or loss equal to the difference between (i) the amount of cash and the fair market value of any property received upon such taxable disposition and (ii) your adjusted tax basis in the shares. Such capital gain or loss will be long-term capital gain or loss if your holding period in the shares is more than one year at the time of the taxable disposition. Otherwise, such gain or loss will be short-term capital gain or loss. If you are a noncorporate holder of our shares, any long-term capital gains you recognize will generally be subject to a maximum U.S. federal income tax rate of 20%. The deductibility of capital losses is subject to limitations.

Backup withholding and information reporting

In general, if you are not a corporation, we and other payors are required to report to the Internal Revenue Service dividends paid on the shares to you and proceeds you receive from a disposition of shares. Backup withholding may also apply to any payments if you fail to provide an accurate taxpayer identification number or you are notified by the Internal Revenue Service that you have failed to report all dividends or certain other income required to be shown on your federal income tax returns. Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules will be allowed as a refund or credit against your United States federal income tax liability, provided the required information is furnished to the Internal Revenue Service.

LEGAL MATTERS

The validity of the securities being offered by this prospectus has been passed upon for us by Morgan, Lewis & Bockius LLP.

EXPERTS

The financial statements as of June 30, 2013 and 2012, and for each of the two years in the period ended June 30, 2013, incorporated by reference into this prospectus have been so incorporated in reliance on the report of BDO USA, LLP, an independent registered public accounting firm, incorporated herein by reference, given on the authority of said firm as experts in auditing and accounting.

MEI PHARMA, INC.

**319,191 Shares of Common Stock at \$7.14 Per Share
Upon Exercise of Outstanding Warrants**

PROSPECTUS

The date of this prospectus is _____, 2013

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

We estimate that expenses in connection with the distribution of securities described in this registration statement (including the May 2012 Rights Offering) will be as set forth below. We will pay all of the expenses with respect to the distribution and such amounts, with the exception of the Securities and Exchange Commission registration fee, are estimates.

	Amount paid or to be paid
SEC registration fee	\$ 1,458
Printing expenses	\$ 30,000
Legal fees and expenses	\$ 175,000
Accounting fees and expenses	\$ 25,000
Nasdaq Stock Market listing fees	\$ 85,600
Subscription agent and information agent fees and expenses	\$ 40,000
Total Expenses	<u>\$ 357,058</u>

Item 15. Indemnification of Directors and Officers

Our 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 Restated Certificate of Incorporation, our Amended and Restated By-Laws provide for the specific indemnification rights permitted by Section 145 (as described above). Our 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 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.

The exhibits to the registration statement are listed in the Exhibit Index attached hereto and incorporated by reference herein.

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 of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission 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) 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 Securities and Exchange Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

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

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

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

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

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

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registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

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

- (i) Any preliminary prospectus or prospectus of the undersigned Registrant relating to the offering required to be filed pursuant to Rule 424;
- (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned Registrant or used or referred to by the undersigned Registrant;
- (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned Registrant or its securities provided by or on behalf of the undersigned Registrant; and
- (iv) Any other communication that is an offer in the offering made by the undersigned Registrant to the purchaser.

(6) For purposes of determining liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bond fide offering thereof.

(7) To deliver or cause to be delivered with the prospectus, to each person to whom the prospectus is sent or given, the latest annual report, to security holders that is incorporated by reference in the prospectus and furnished pursuant to and meeting the requirements of Rule 14a-3 or Rule 14c-3 under the Securities Exchange Act of 1934; and, where interim financial information required to be presented by Article 3 of Regulation S-X is not set forth in the prospectus, to deliver, or cause to be delivered to each person to whom the prospectus is sent or given, the latest quarterly report that is specifically incorporated by reference in the prospectus to provide such interim financial information.

(8) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the 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 Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Diego, California, on November 12, 2013.

MEI Pharma, Inc.

By: /s/ Daniel P. Gold
Name: Daniel P. Gold
Title: President and Chief Executive Officer

Each person whose individual signature appears below hereby authorizes and appoints Daniel P. Gold and Thomas M. Zech, 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 of 1933, 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 of 1933, this registration statement has been signed by the following persons in the capacities indicated below on November 12, 2013:

<u>Signature</u>	<u>Title</u>
<u>/s/ Daniel P. Gold</u> Daniel P. Gold	President and Chief Executive Officer (Principal Executive Officer)
<u>/s/ Thomas M. Zech</u> Thomas M. Zech	Chief Financial Officer (Principal Financial and Accounting Officer)
<u>/s/ Christine A. White</u> Christine A. White	Lead Director
<u>/s/ Leah Rush Cann</u> Leah Rush Cann	Director
<u>/s/ William D. Rueckert</u> William D. Rueckert	Director
<u>/s/ Charles V. Baltic III</u> Charles V. Baltic III	Director
<u>/s/ Thomas C. Reynolds</u> Thomas C. Reynolds	Director
<u>/s/ Nicholas R. Glover</u> Nicholas R. Glover	Director

Exhibit Index

4.1	Specimen Stock Certificate (incorporated by reference to Exhibit 4.1 to Amendment No. 1 to Registrant's Registration Statement on Form S-1 filed on October 31, 2003 (Reg. No. 333-109129)).
4.2	Specimen Warrant Certificate (incorporated by reference to Exhibit 4.2 to Registrant's Registration Statement on Form S-3 filed on August 9, 2006 (Reg. No. 333-136440)).
4.3	Specimen Warrant Certificate (incorporated by reference to Exhibit 4.4 to Registrant's Annual Report on Form 10-K filed on September 27, 2007 (File No. 000-50484)).
4.4	Form of Warrant Agreement (incorporated by reference to Exhibit 10.3 to Registrant's Current Report on Form 8-K filed on July 12, 2006 (File No. 000-50484)).
4.5	Warrant Agreement (incorporated by reference to Exhibit 10.3 to Registrant's Current Report on Form 8-K filed on August 6, 2007 (File No. 000-50484)).
4.6	Amended and Restated Warrant Agreement (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K/A filed on September 27, 2007 (File No. 000-50484)).
4.7	Form of Warrant (incorporated by reference to Exhibit 10.4 to Registrant's Current Report on Form 8-K filed on July 12, 2006 (File No. 000-50484)).
4.8	Form of Warrant (incorporated by reference to Exhibit 10.4 to the Registrant's Current Report on Form 8-K filed on August 6, 2007 (File No. 000-50484)).
4.9	Form of Warrant (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K/A filed on September 27, 2007 (File No. 000-50484)).
4.10	Warrant dated July 30, 2008 issued to Mr. John O'Connor (incorporated by reference to Exhibit 4.1 to Registrant's Current Report on Form 8-K filed on July 30, 2008 (File No. 000-50484)).
4.11	Form of Amended and Restated Series A and Series B Warrants (incorporated by reference to Exhibits 4.1 and 4.2 to Registrant's Current Report on Form 8-K filed on September 29, 2011 (File No. 000-50484)).
4.12	Form of Warrant (incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on November 5, 2012 (File No. 000-50484)).
4.13	Form of Subscription Agent Agreement between Marshall Edwards, Inc. and Computershare, Inc. (incorporated by reference to Exhibit 4.12 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 filed on March 20, 2012 (File No. 333-179590)).
4.14	Form of Information Agent Agreement between the Company and Georgeson, Inc. (incorporated by reference to Exhibit 4.13 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 filed on March 20, 2012 (File No. 333-179590)).
4.15	Form of Subscription Rights Certificate (incorporated by reference to Exhibit 4.14 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 filed on March 20, 2012 (File No. 333-179590)).
4.16	Form of Warrant Agreement between the Company and Computershare, Inc. (incorporated by reference to Exhibit 4.15 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 filed on March 20, 2012 (File No. 333-179590)).
4.17	Form of Warrant (incorporated by reference to Exhibit 4.16 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 filed on March 20, 2012 (File No. 333-179590)).
5.1	Opinion of Morgan, Lewis & Bockius LLP.**
23.1	Consent of BDO USA LLP*

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23.2	Consent of Morgan, Lewis & Bockius LLP (included in Exhibit 5.1 above).**
24.1	Powers of Attorney (included on the signature page hereto).
99.1	Form of Instructions for Use of Marshall Edwards, Inc. Subscription Rights Certificate.**
99.2	Form of Letter to Registered Holders of Common Stock.**
99.3	Form of Letter to Brokers and Other Nominee Holders.**
99.4	Form of Letter to Clients.**
99.5	Form of Beneficial Owner Election Form.**
99.6	Form of Nominee Holder Certification.**
99.7	Form of Notice of Guaranteed Delivery.**
99.8	Information for Substitute Form W-9.**

(*) Filed herewith.

(**) Previously filed.

Consent of Independent Registered Public Accounting Firm

MEI Pharma, Inc.
San Diego, California 92130

We hereby consent to the incorporation by reference in the Prospectus constituting a part of this Registration Statement of our report dated September 17, 2013, relating to the financial statements of MEI Pharma, Inc., which comprise the balance sheets as of June 30, 2013 and 2012 and the related statements of operations, stockholders' equity, and cash flows for each of the years ended June 30, 2013 and 2012 and for the period from inception (December 1, 2000) to June 30, 2013, and the related notes to the financial statements, appearing in the Company's Annual Report on Form 10-K for the year ended June 30, 2013.

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

/s/ BDO USA LLP

La Jolla, California
November 12, 2013