MEI PHARMA, INC.

2,915,152 Shares of Common Stock at \$1.19 Per Share Upon Exercise of Outstanding Warrants

This prospectus amends and supplements the prospectus dated March 26, 2012 (the "Prospectus"), which forms a part of our Registration Statement on Form S-1 (Registration Statement No. 333-179590). This prospectus supplement is being filed to update and supplement the information included or incorporated by reference in the prospectus with the information contained in our Current Report on Form 8-K, filed with the Securities and Exchange Commission on August 8, 2012 (the "Form 8-K"). Accordingly, we have attached the Form 8-K to this prospectus supplement.

The prospectus and this prospectus supplement relate to (i) our distribution, at no charge, to holders of our common stock, \$0.00000002 par value per share (our "Common Stock"), as of 5:00 p.m., Eastern time, March 30, 2012 (the "Record Date"), of subscription rights (the "Rights"), to purchase up to 17,129,361 Units for an aggregate purchase price of up to \$7.6 million (the "Rights Offering") and (ii) the issuance of shares of Common Stock upon exercise of the Warrants (as defined below). The subscription period for the Rights Offering expired on May 11, 2012. Each Unit consisted of 0.50 shares of Common Stock and a warrant ("Warrant") representing the right to purchase 0.25 shares of Common Stock at an exercise price of \$1.19 per share. The exercise of one Right entitled holders to purchase one Unit at a subscription price of \$0.445 per Unit, which represents the subscription price of \$0.89 per whole share of Common Stock for two Units. In the Rights Offering, eligible participants exercised Rights to purchase 11,660,606 Units; accordingly, the Company issued 5,830,202 shares of Common Stock and Warrants to purchase an additional 2,915,152 shares of Common Stock. Gross proceeds of \$5.2 million were received in connection with the Rights Offering.

Our common stock is traded on the Nasdaq Capital Market under the symbol "MEIP". The Warrants will not trade on the Nasdaq Capital Market or any other securities exchange or trading market. On August 22, 2012, the closing price for a share of our Common Stock on the Nasdaq Capital Market was \$0.41 per share.

Investing in our Common Stock involves risks. See "Risk Factors" beginning on page 16 of the Prospectus to read about factors you should consider before you make your investment decision.

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

The date of this Prospectus Supplement No. 7 is August 23, 2012

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): August 22, 2012

MEI Pharma, Inc.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization) 000-50484 (Commission File Number) 51-0407811 (I.R.S. Employer Identification No.)

11975 El Camino Real, Suite 101, San Diego, California (Address of principal executive offices)

92130 (Zip Code)

Registrant's telephone number, including area code: (858) 792-6300

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (*see* General Instruction A.2. below):

□ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 2.01 Completion of Acquisition or Disposition of Assets

As previously disclosed, on August 7, 2012, MEI Pharma, Inc., a Delaware corporation (the "<u>Company</u>"), entered into an Asset Purchase Agreement (the "<u>Asset Purchase Agreement</u>") with S*Bio Pte Ltd., a Singapore private limited company ("<u>S* Bio</u>", and, collectively with the Company, the "<u>Parties</u>"), pursuant to which the Company agreed to acquire from S*Bio all of its right, title and interest in, and assume certain liabilities relating to, certain intellectual property and other assets related to compounds SB939, SB1304, SB1354 and SB1502 (the "<u>Acquired Compounds</u>"), which are intended to inhibit histone deacetylase ("<u>HDAC</u>").

On August 22, 2012, the Company consummated its acquisition of the Acquired Compounds. Pursuant to the Asset Purchase Agreement, at the closing, the Company issued to S*Bio, in a transaction exempt from the registration requirements of the Securities Act of 1933, as amended (the "<u>Securities Act</u>"), pursuant to Section 4(2) thereof, 1,174,536 shares of the Company's common stock, par value \$0.00000002 per share (the "<u>Common Stock</u>"). The Company has also agreed to make certain milestone payments to S*Bio based on the achievement of certain clinical, regulatory and net sales-based milestones, as well as to make certain contingent earnout payments to S*Bio. Milestone payments will be made to S*Bio up to an aggregate amount of \$75.2 million if certain U.S., E.U. and Japanese regulatory approvals are obtained or if certain net sales thresholds are met in North America, the E.U. and Japan. The Company may pay up to \$500,000 of the first milestone payment in shares of Common Stock. S*Bio will be entitled to receive certain contingent earnout payments at a low, single digit percentage rate based on certain worldwide net sales thresholds on a product-by-product and country-by-country basis.

The Parties each made customary representations, warranties and covenants in the Asset Purchase Agreement and the agreement includes customary indemnification provisions. S*Bio has also agreed, for a period commencing on the closing date and ending on the fourth anniversary of the closing date, not to manufacture, commercialize or otherwise exploit any small molecule compound the primary mechanism of action of which is selective and specific inhibition of HDAC.

In connection with the closing, the Company also entered into a registration rights agreement (the "<u>Registration Rights Agreement</u>") with S*Bio pursuant to which the Company has agreed to file, within thirty (30) days after the closing, a registration statement with the Securities and Exchange Commission for the purpose of registering the resale by S*Bio of the shares of Common Stock issued and which may be issuable pursuant to the Asset Purchase Agreement.

Item 3.02 Unregistered Sales of Equity Securities.

The disclosures set forth under Item 2.01 of this Current Report on Form 8-K are incorporated herein by reference.

Signature

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

MEI PHARMA, INC.

By: /s/ Daniel P. Gold

Daniel P. Gold Chief Executive Officer

Dated: August 22, 2012