

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

SCHEDULE 13D  
Under the Securities Exchange Act of 1934

(Amendment No. 1)

**MEI Pharma, Inc**

(Name of Issuer)

**Common Stock, par value \$0.00000002 per share**

(Title of Class of Securities)

**55279B202**

(CUSIP Number)

**Leo Kirby  
667 Madison Avenue, 21st Floor  
New York, NY 10065  
(212) 339-5633**

(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

**February 22, 2013**

(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(e), 13d-1(f) or 13d-1(g), check the following box.

**Note:** Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See Rule 13d-7 for other parties to whom copies are to be sent.

\*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 (the "Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes)

**SCHEDULE 13D**

CUSIP No. 55279B202

Page 2 of 10 Pages

<b>1</b>	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS  Baker Bros. Advisors, LLC  13-4093645	
<b>2</b>	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)	(a) <input type="checkbox"/>  (b) <input type="checkbox"/>
<b>3</b>	SEC USE ONLY	
<b>4</b>	SOURCE OF FUNDS (See Instructions)  OO	
<b>5</b>	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e) <input type="checkbox"/>	
<b>6</b>	CITIZENSHIP OR PLACE OF ORGANIZATION  Delaware	
<b>NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH</b>		
<b>7</b>	SOLE VOTING POWER  1,427,017 (1)	
<b>8</b>	SHARED VOTING POWER  0	
<b>9</b>	SOLE DISPOSITIVE POWER  1,427,017 (1)	
<b>10</b>	SHARED DISPOSITIVE POWER  0	
<b>11</b>	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  1,427,017 (1)	
<b>12</b>	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions) <input type="checkbox"/>	
<b>13</b>	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)  9.1% (1)(2)	
<b>14</b>	TYPE OF REPORTING PERSON (See Instructions)  IA	

(1) Includes shares of common stock issuable upon exercise of the Warrant (as defined in Item 5 below), subject to the limitations on exercise described in Item 5 below.  
 (2) Based on 15,015,454 shares of common stock outstanding as of February 12, 2013, as reported in the Issuer's Form 10-Q filed with the SEC on February 12, 2013.

CUSIP No. 55279B202

Page 3 of 10 Pages

<b>1</b>	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS  Julian C. Baker		
<b>2</b>	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)	(a) <input type="checkbox"/> (b) <input type="checkbox"/>	
<b>3</b>	SEC USE ONLY		
<b>4</b>	SOURCE OF FUNDS (See Instructions)  OO		
<b>5</b>	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e) <input type="checkbox"/>		
<b>6</b>	CITIZENSHIP OR PLACE OF ORGANIZATION  United States		
<b>NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH</b>		<b>7</b>	SOLE VOTING POWER  1,427,017 (1)
		<b>8</b>	SHARED VOTING POWER  0
		<b>9</b>	SOLE DISPOSITIVE POWER  1,427,017 (1)
		<b>10</b>	SHARED DISPOSITIVE POWER  0
<b>11</b>	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  1,427,017 (1)		
<b>12</b>	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions) <input type="checkbox"/>		
<b>13</b>	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)  9.1% (1)(2)		
<b>14</b>	TYPE OF REPORTING PERSON (See Instructions)  IN, HC		

(1) Includes shares of common stock issuable upon exercise of the Warrant (as defined in Item 5 below), subject to the limitations on exercise described in Item 5 below.  
 (2) Based on 15,015,454 shares of common stock outstanding as of February 12, 2013, as reported in the Issuer's Form 10-Q filed with the SEC on February 12, 2013.

**SCHEDULE 13D**

CUSIP No. 55279B202

Page 4 of 10 Pages

<b>1</b>	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS  Felix J. Baker	
<b>2</b>	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)	(a) <input type="checkbox"/> (b) <input type="checkbox"/>
<b>3</b>	SEC USE ONLY	
<b>4</b>	SOURCE OF FUNDS (See Instructions)  OO	
<b>5</b>	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) OR 2(e)	<input type="checkbox"/>
<b>6</b>	CITIZENSHIP OR PLACE OF ORGANIZATION  United States	
<b>NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH</b>		
<b>7</b>	SOLE VOTING POWER  1,427,017 (1)	
<b>8</b>	SHARED VOTING POWER  0	
<b>9</b>	SOLE DISPOSITIVE POWER  1,427,017 (1)	
<b>10</b>	SHARED DISPOSITIVE POWER  0	
<b>11</b>	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  1,427,017 (1)	
<b>12</b>	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions)	<input type="checkbox"/>
<b>13</b>	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)  9.1% (1)(2)	
<b>14</b>	TYPE OF REPORTING PERSON (See Instructions)  IN, HC	

(1) Includes shares of common stock issuable upon exercise of the Warrant (as defined in Item 5 below), subject to the limitations on exercise described in Item 5 below.

(2) Based on 15,015,454 shares of common stock outstanding as of February 12, 2013, as reported in the Issuer's Form 10-Q filed with the SEC on February 12, 2013.

## **Amendment No. 1 to Schedule 13D**

This Amendment No. 1 to Schedule 13D amends and supplements the previously filed Schedule 13D filed by Baker Bros. Advisors, LLC (the “Adviser”), Julian C. Baker and Felix J. Baker (together with the Adviser and Julian C. Baker, the “Reporting Persons”). Except as supplemented herein, such statements, as heretofore amended and supplemented, remain in full force and effect.

### **Item 4. Purpose of Transaction**

Baker Brothers Life Sciences, L.P. (“Life Sciences”), 667, L.P. (“667”), and 14159, L.P. (“14159” and together with Life Sciences and 667, the “Funds”) hold the securities for investment purposes. Whether the Reporting Persons or their affiliates purchase any additional securities or dispose of any securities, and the amount and timing of any such transactions, will depend upon the Reporting Persons’ continuing assessments of pertinent factors, including the availability of shares of Common Stock or other securities for purchase at particular price levels, the business and prospects of MEI Pharma, Inc. (the “Issuer”), other business investment opportunities, economic conditions, stock market conditions, money market conditions, the attitudes and actions of the board of directors and management of the Issuer, the availability and nature of opportunities to dispose of shares in the Issuer and other plans and requirements of the particular entities. The Reporting Persons may discuss items of mutual interest with the Issuer, which could include items in subparagraphs (a) through (j).

Depending upon their assessments of the above factors from time to time, the Reporting Persons or their affiliates may change their present intentions as stated above, including assessing whether to make suggestions to the management of the Issuer regarding financing, and whether to acquire additional securities of the Issuer, including shares of Common Stock (by means of open market purchases, privately negotiated purchases, exercise of some or all of the Warrants (as defined below), or otherwise) or to dispose of some or all of the securities of the Issuer, including shares of Common Stock, under their control.

Except as otherwise disclosed herein, at the present time, the Reporting Persons do not have any plans or proposals with respect to any extraordinary corporate transaction involving the Issuer including, without limitation, those matters described in subparagraphs (a) through (j) of Item 4 of Schedule 13D.

### **Item 5. Interest in Securities of the Issuer.**

(a) and (b) Items 7 through 11 and 13 of each of the cover pages of this Schedule 13D are incorporated herein by reference. The numbers set forth in Items 7 through 11 and 13 of each of the cover pages of this Schedule 13D reflect the reverse stock split effected by the Issuer on December 18, 2012, as disclosed in the Issuer’s Form 8-K filed with the SEC on December 19, 2012. Set forth below is the aggregate number of shares of Common Stock of the Issuer directly held by each of the Funds, which may be deemed to be indirectly beneficially owned by the Reporting Persons, as well as shares of Common Stock that may be acquired upon exercise of the Warrant (as defined below) at an exercise price of \$3.12 per share as of the date hereof by the Funds, subject to the limitation on exercise described below.

Name	Number of Shares of Common Stock	Number of Shares Underlying Warrant
667, L.P.	54,454	52,430
Baker Brothers Life Sciences, L.P.	656,860	632,450
14159, L.P.	15,703	15,120

Pursuant to the Warrants to Purchase Common Stock by each Fund dated November 4, 2012 (the "Warrant"), if at any time the beneficial ownership of the Funds and their affiliates exceeds 9.99% of the shares of Common Stock outstanding immediately after giving effect to the exercise of the Warrant, then the number of shares of common stock that may be acquired by the Funds and their affiliates upon any exercise of the Warrant will be limited to the extent necessary to ensure that, following such exercise, the total number of shares of common stock then beneficially owned by the Funds and their affiliates does not exceed 9.99% of the total number of then issued and outstanding shares of Common Stock (including for such purpose the shares of Common Stock issuable upon exercise of the Warrant) (the "Maximum Percentage"). At any time that the Funds and their affiliates do not beneficially own in excess of the Maximum Percentage, the Funds may, by written notice to the Issuer, from time to time increase or decrease the Maximum Percentage to any other percentage not in excess of 9.99% specified in such notice. Pursuant to the Warrant, any such increase will not be effective until the 61st day after such notice is delivered to the Issuer.

On April 12, 2012, the Adviser, the Funds, and the general partners of the Funds entered into an amended and restated management agreement (the "Management Agreement") which gave the Adviser complete and unlimited discretion and authority with respect to the Funds' investments and voting power over investments. The general partners of the Funds relinquished all discretion and authority with respect to the Funds' investments and voting power over investments. In connection with the services provided by the Adviser to the Funds, the Adviser receives a management based fee that does not confer any pecuniary interest.

By virtue of the Management Agreement, the Adviser, and Felix J. Baker and Julian C. Baker, as principals of the Adviser, may be deemed to be indirect beneficial owners of securities of the Issuer owned directly by the Funds, and may be deemed to have the power to vote or direct the vote of and the power to dispose or direct the disposition of such securities. The Reporting Persons disclaim beneficial ownership of the securities held by each of the Funds, and this Schedule 13D shall not be deemed an admission that the Reporting Persons are the beneficial owners of such securities for purposes of Section 13(d) or for any other purpose.

(c) The following transactions in the Issuer's Common Stock were effected by the Funds noted below during the sixty days preceding the filing of this statement. All transactions were effected in the over-the-counter market directly with a broker-dealer. Except as disclosed herein or in any previous amendments to this Schedule 13D, none of the Reporting Persons or their affiliates has effected any other transactions in securities of the Issuer during the past 60 days.

Name	Date	Number of Shares	Transaction	Price/Share	Footnotes
667, L.P.	2/22/2013	10,977	Sale	7.0001	1

Baker Brothers Life Sciences, L.P.	2/22/2013	132,411	Sale	7.0001	1
14159, L.P.	2/22/2013	3,165	Sale	7.0001	1
667, L.P.	2/25/2013	2,327	Sale	7.0904	2
Baker Brothers Life Sciences, L.P.	2/25/2013	28,070	Sale	7.0904	2
14159, L.P.	2/25/2013	671	Sale	7.0904	2
667, L.P.	2/26/2013	3,755	Sale	7.1070	3
Baker Brothers Life Sciences, L.P.	2/26/2013	45,294	Sale	7.1070	3
14159, L.P.	2/26/2013	1,083	Sale	7.1070	3
667, L.P.	2/27/2013	3,387	Sale	7.0065	4
Baker Brothers Life Sciences, L.P.	2/27/2013	40,865	Sale	7.0065	4
14159, L.P.	2/27/2013	978	Sale	7.0065	4

- (1) The reported price is a weighted average price. These shares were traded in multiple transactions at prices ranging from \$6.94 to \$7.10. The Reporting Persons undertake to provide the staff of the Securities and Exchange Commission (the "Staff"), upon request, full information regarding the number of shares traded at each separate price within the ranges set forth in this footnote.
- (2) The reported price is a weighted average price. These shares were traded in multiple transactions at prices ranging from \$7.00 to \$7.45. The Reporting Persons undertake to provide the Staff, upon request, full information regarding the number of shares traded at each separate price within the ranges set forth in this footnote.
- (3) The reported price is a weighted average price. These shares were traded in multiple transactions at prices ranging from \$7.10 to \$7.55. The Reporting Persons undertake to provide the Staff, upon request, full information regarding the number of shares traded at each separate price within the ranges set forth in this footnote.
- (4) The reported price is a weighted average price. These shares were traded in multiple transactions at prices ranging from \$6.90 to \$7.32. The Reporting Persons undertake to provide the Staff, upon request, full information regarding the number of shares traded at each separate price within the ranges set forth in this footnote.

(d) Not applicable

(e) Not applicable.

**Item 7. Material to Be Filed as Exhibits.**

**Exhibit Description**

99.1: Agreement Regarding the Joint Filing of Schedule 13D by and among the Reporting Persons



**SIGNATURE**

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

February 27, 2013

**BAKER BROS. ADVISORS, LLC**

By: /s/ Scott L. Lessing

Name: Scott L. Lessing

Title: President

/s/ Julian C. Baker

Julian C. Baker

/s/ Felix J. Baker

Felix J. Baker

AGREEMENT

In accordance with Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, as amended, the undersigned hereby agree that this Statement on Schedule 13D relating to the Common Stock, \$0.00000002 par value, of MEI Pharma, Inc. is being filed with the Securities and Exchange Commission on behalf of each of them.

February 27, 2013

**BAKER BROS. ADVISORS, LLC**

By: /s/ Scott L. Lessing  
Name: Scott L. Lessing  
Title: President

/s/ Julian C. Baker  
Julian C. Baker

/s/ Felix J. Baker  
Felix J. Baker