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**SECURITIES AND EXCHANGE COMMISSION**  
Washington, DC 20549

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**SCHEDULE 13D**

**Under the Securities Exchange Act of 1934**  
**(Amendment No. 2)\***

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**MEI Pharma, Inc.**  
(Name of Issuer)

**Common Stock, par value \$0.00000002 per share**  
(Title of Class of Securities)

572322402  
(CUSIP Number)

**Craig L. Slutzkin**  
**New Leaf Venture Management II, L.L.C.**  
**Times Square Tower**  
**7 Times Square, Suite 3502**  
**New York, NY 10036**  
**(646) 871-6420**  
(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

**May 6, 2013**  
(Date of Event Which Requires Filing of This Statement)

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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 §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g) check the following box.

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**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.

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\* 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 ("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).

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1	Names of reporting persons. I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)	
	New Leaf Ventures II, L.P.	
2	Check the appropriate box if a member of a group (see instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC use only	
4	Source of funds (see instructions)	
	WC	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or place of organization	
	Delaware Limited Partnership	
Number of shares beneficially owned by each reporting person with	7	Sole voting power
		0 shares
	8	Shared voting power
		4,145,475 shares (1)
	9	Sole dispositive power
		0 shares
	10	Shared dispositive power
		4,145,475 shares (1)
11	Aggregate amount beneficially owned by each reporting person	
	4,145,475 shares (1)	
12	Check if the aggregate amount in Row (11) excludes certain shares (see instructions) <input type="checkbox"/>	
13	Percent of class represented by amount in Row (11)	
	21.6% (2)	
14	Type of reporting person (see instructions)	
	PN	

- (1) Includes 2,045,475 shares of common stock and 2,100,000 shares of common stock issuable upon exercise of the Warrants (as defined in Item 5 below).  
(2) The percentage ownership is based upon 17,116,571 shares of common stock outstanding as of May 6, 2013, as reported in the Issuer's 10Q filed with the SEC on May 9, 2013, plus 2,100,000 shares of common stock issuable upon exercise of the Warrants.

1	Names of reporting persons. I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)	
	New Leaf Venture Associates II, L.P.	
2	Check the appropriate box if a member of a group (see instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC use only	
4	Source of funds (see instructions)  AF	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or place of organization  Delaware Limited Partnership	
Number of shares beneficially owned by each reporting person with	7	Sole voting power  0 shares
	8	Shared voting power  4,145,475 shares (1)
	9	Sole dispositive power  0 shares
	10	Shared dispositive power  4,145,475 shares (1)
11	Aggregate amount beneficially owned by each reporting person  4,145,475 shares (1)	
12	Check if the aggregate amount in Row (11) excludes certain shares (see instructions) <input type="checkbox"/>	
13	Percent of class represented by amount in Row (11)  21.6% (2)	
14	Type of reporting person (see instructions)  PN	

- (1) Includes 2,045,475 shares of common stock and 2,100,000 shares of common stock issuable upon exercise of the Warrants (as defined in Item 5 below).
- (2) The percentage ownership is based upon 17,116,571 shares of common stock outstanding as of May 6, 2013, as reported in the Issuer's 10Q filed with the SEC on May 9, 2013, plus 2,100,000 shares of common stock issuable upon exercise of the Warrants.

1	Names of reporting persons. I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)	
	New Leaf Venture Management II, L.L.C.	
2	Check the appropriate box if a member of a group (see instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC use only	
4	Source of funds (see instructions)	
	AF	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or place of organization	
	Delaware Limited Liability Company	
Number of shares beneficially owned by each reporting person with	7	Sole voting power
		0 shares
	8	Shared voting power
		4,145,475 shares (1)
	9	Sole dispositive power
		0 shares
	10	Shared dispositive power
		4,145,475 shares (1)
11	Aggregate amount beneficially owned by each reporting person	
	4,145,475 shares (1)	
12	Check if the aggregate amount in Row (11) excludes certain shares (see instructions) <input type="checkbox"/>	
13	Percent of class represented by amount in Row (11)	
	21.6% (2)	
14	Type of reporting person (see instructions)	
	PN	

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- (2) The percentage ownership is based upon 17,116,571 shares of common stock outstanding as of May 6, 2013, as reported in the Issuer's 10Q filed with the SEC on May 9, 2013, plus 2,100,000 shares of common stock issuable upon exercise of the Warrants.

1	Names of reporting persons. I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)	
	Philippe O. Chambon	
2	Check the appropriate box if a member of a group (see instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC use only	
4	Source of funds (see instructions)	
	AF	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or place of organization	
	French citizen	
Number of shares beneficially owned by each reporting person with	7	Sole voting power
		0 shares
	8	Shared voting power
		4,145,475 shares (1)
	9	Sole dispositive power
		0 shares
	10	Shared dispositive power
		4,145,475 shares (1)
11	Aggregate amount beneficially owned by each reporting person	
	4,145,475 shares (1)	
12	Check if the aggregate amount in Row (11) excludes certain shares (see instructions) <input type="checkbox"/>	
13	Percent of class represented by amount in Row (11)	
	21.6% (2)	
14	Type of reporting person (see instructions)	
	IN	

- (1) Includes 2,045,475 shares of common stock and 2,100,000 shares of common stock issuable upon exercise of the Warrants (as defined in Item 5 below).
- (2) The percentage ownership is based upon 17,116,571 shares of common stock outstanding as of May 6, 2013, as reported in the Issuer's 10Q filed with the SEC on May 9, 2013, plus 2,100,000 shares of common stock issuable upon exercise of the Warrants.

1	Names of reporting persons. I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)	
	James Niedel	
2	Check the appropriate box if a member of a group (see instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC use only	
4	Source of funds (see instructions)	
	AF	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or place of organization	
	United States citizen	
Number of shares beneficially owned by each reporting person with	7	Sole voting power
		0 shares
	8	Shared voting power
		4,145,475 shares (1)
	9	Sole dispositive power
		0 shares
	10	Shared dispositive power
		4,145,475 shares (1)
11	Aggregate amount beneficially owned by each reporting person	
	4,145,475 shares (1)	
12	Check if the aggregate amount in Row (11) excludes certain shares (see instructions) <input type="checkbox"/>	
13	Percent of class represented by amount in Row (11)	
	21.6% (2)	
14	Type of reporting person (see instructions)	
	IN	

- (1) Includes 2,045,475 shares of common stock and 2,100,000 shares of common stock issuable upon exercise of the Warrants (as defined in Item 5 below).
- (2) The percentage ownership is based upon 17,116,571 shares of common stock outstanding as of May 6, 2013, as reported in the Issuer's 10Q filed with the SEC on May 9, 2013, plus 2,100,000 shares of common stock issuable upon exercise of the Warrants.

1	Names of reporting persons. I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)	
	Vijay Lathi	
2	Check the appropriate box if a member of a group (see instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC use only	
4	Source of funds (see instructions)	
	AF	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or place of organization	
	United States citizen	
Number of shares beneficially owned by each reporting person with	7	Sole voting power
		0 shares
	8	Shared voting power
		4,145,475 shares (1)
	9	Sole dispositive power
		0 shares
	10	Shared dispositive power
		4,145,475 shares (1)
11	Aggregate amount beneficially owned by each reporting person	
	4,145,475 shares (1)	
12	Check if the aggregate amount in Row (11) excludes certain shares (see instructions) <input type="checkbox"/>	
13	Percent of class represented by amount in Row (11)	
	21.6% (2)	
14	Type of reporting person (see instructions)	
	IN	

- (1) Includes 2,045,475 shares of common stock and 2,100,000 shares of common stock issuable upon exercise of the Warrants (as defined in Item 5 below).
- (2) The percentage ownership is based upon 17,116,571 shares of common stock outstanding as of May 6, 2013, as reported in the Issuer's 10Q filed with the SEC on May 9, 2013, plus 2,100,000 shares of common stock issuable upon exercise of the Warrants.

1	Names of reporting persons. I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)	
	Ronald Hunt	
2	Check the appropriate box if a member of a group (see instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC use only	
4	Source of funds (see instructions)	
	AF	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or place of organization	
	United States citizen	
Number of shares beneficially owned by each reporting person with	7	Sole voting power
		0 shares
	8	Shared voting power
		4,145,475 shares (1)
	9	Sole dispositive power
		0 shares
	10	Shared dispositive power
		4,145,475 shares (1)
11	Aggregate amount beneficially owned by each reporting person	
	4,145,475 shares (1)	
12	Check if the aggregate amount in Row (11) excludes certain shares (see instructions) <input type="checkbox"/>	
13	Percent of class represented by amount in Row (11)	
	21.6% (2)	
14	Type of reporting person (see instructions)	
	IN	

- (1) Includes 2,045,475 shares of common stock and 2,100,000 shares of common stock issuable upon exercise of the Warrants (as defined in Item 5 below).
- (2) The percentage ownership is based upon 17,116,571 shares of common stock outstanding as of May 6, 2013, as reported in the Issuer's 10Q filed with the SEC on May 9, 2013, plus 2,100,000 shares of common stock issuable upon exercise of the Warrants.



1	Names of reporting persons. I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)	
	Srinivas Akkaraju	
2	Check the appropriate box if a member of a group (see instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC use only	
4	Source of funds (see instructions)	
	AF	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or place of organization	
	United States citizen	
Number of shares beneficially owned by each reporting person with	7	Sole voting power
		0 shares
	8	Shared voting power
		0 shares
	9	Sole dispositive power
		0 shares
	10	Shared dispositive power
		0 shares
11	Aggregate amount beneficially owned by each reporting person	
	0 shares	
12	Check if the aggregate amount in Row (11) excludes certain shares (see instructions) <input type="checkbox"/>	
13	Percent of class represented by amount in Row (11)	
	0%	
14	Type of reporting person (see instructions)	
	IN	

1	Names of reporting persons. I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)	
	Jeani Delagardelle	
2	Check the appropriate box if a member of a group (see instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC use only	
4	Source of funds (see instructions)	
	AF	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or place of organization	
	United States citizen	
Number of shares beneficially owned by each reporting person with	7	Sole voting power
		0 shares
	8	Shared voting power
		4,145,475 shares (1)
	9	Sole dispositive power
		0 shares
	10	Shared dispositive power
		4,145,475 shares (1)
11	Aggregate amount beneficially owned by each reporting person	
	4,145,475 shares (1)	
12	Check if the aggregate amount in Row (11) excludes certain shares (see instructions) <input type="checkbox"/>	
13	Percent of class represented by amount in Row (11)	
	21.6% (2)	
14	Type of reporting person (see instructions)	
	IN	

- (1) Includes 2,045,475 shares of common stock and 2,100,000 shares of common stock issuable upon exercise of the Warrants (as defined in Item 5 below).
- (2) The percentage ownership is based upon 17,116,571 shares of common stock outstanding as of May 6, 2013, as reported in the Issuer's 10Q filed with the SEC on May 9, 2013, plus 2,100,000 shares of common stock issuable upon exercise of the Warrants.

**Item 1. Security and Issuer.**

This Amendment No. 1 to the statement on Schedule 13D (this "Amendment No. 1") amends and supplements the statement on Schedule 13D filed on December 10, 2012 (the "Original 13D") as amended by Amendment No. 1 to the statement on Schedule 13D filed on March 1, 2013 ("Amendment No. 1" and together with the Original 13D and this Amendment No. 2, the "Schedule 13D") filed by the Reporting Persons, and relates to shares of Common Stock, \$0.00000002 par value (the "Common Stock") of MEI Pharma, Inc., a Delaware corporation (the "Issuer") having its principal executive offices at 11975 El Camino Real, Suite 101, San Diego, California 92130.

Except as specifically provided herein, this Amendment No. 2 does not modify any of the information previously reported on the Original 13D. All capitalized terms contained herein but not otherwise defined shall have the meanings ascribed to such terms in the Original 13D.

**Item 2. Identity and Background.**

Item No. 2 is amended by adding the following:

Srinivas Akkaraju resigned as a manager of NLV Associates and NLV Management on March 31, 2013.

**Item 4. Purpose of the Transaction.**

Item No. 4 is amended by adding the following:

As described in more detail in Item 5 below, NLV II sold a total of 457,300 shares of Common Stock from April 18, 2013 through May 8, 2013. Depending on market conditions, its continuing evaluation of the business and prospects of the Issuer and other factors, NLV II and other Reporting Persons may dispose of or acquire additional shares of the Issuer. Except as set forth above, none of the Reporting Persons has any present plans which relate to or would result in:

- (a) The acquisition by any person of additional securities of the Issuer, or the disposition of securities of the Issuer;
- (b) An extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Issuer or any of its subsidiaries;
- (c) A sale or transfer of a material amount of assets of the Issuer or any of its subsidiaries;
- (d) Any change in the present board of directors or management of the Issuer, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board;
- (e) Any material change in the present capitalization or dividend policy of the Issuer;
- (f) Any other material change in the Issuer's business or corporate structure;
- (g) Changes in the Issuer's charter, bylaws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Issuer by any person;
- (h) Causing a class of securities of the Issuer to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association;

- (i) A class of equity securities of the Issuer becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Securities Exchange Act of 1934; or
- (j) Any action similar to any of those enumerated above.

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

This Amendment No. 2 amends and restates Item 5 of the Original Schedule 13D in its entirety as set forth below:

- (a) NLV II is the record owner of 2,045,475 shares of Common Stock and warrants (the "Warrants") to purchase an additional 2,100,000 shares of Common Stock (collectively, the "NLV II Securities"). As the sole general partner of NLV II, NLV Associates may be deemed to own beneficially the NLV II Securities. As the sole general partner of NLV Associates, NLV Management may be deemed to own beneficially the NLV II Securities. As the individual managers of NLV Management, each of the Managing Directors also may be deemed to own beneficially the NLV II Securities.  
Each of the Reporting Persons may be deemed to own beneficially 21.6% of the Issuer's Common Stock, which percentage is calculated based upon 17,116,571 shares of Common Stock outstanding as of May 6, 2013, as reported in the Issuer's 10Q filed with the SEC on May 9, 2013, plus 2,100,000 shares of Common Stock issuable upon exercise of the Warrants. Each of the Reporting Persons, except NLV II, disclaims beneficial ownership of the NLV II Securities except to the extent of their pecuniary interest therein, if any.
- (b) Regarding the number of shares as to which such person has:
  - (i) sole power to vote or to direct the vote: See line 7 of cover sheets.
  - (ii) shared power to vote or to direct the vote: See line 8 of cover sheets.
  - (iii) sole power to dispose or to direct the disposition: See line 9 of cover sheets.
  - (iv) shared power to dispose or to direct the disposition: See line 10 of cover sheets.
- (c) NLV II sold 100,000 shares of Common Stock on April 18, 2013, 157,300 shares of Common Stock on April 19, 2013, 100,000 shares of Common Stock on May 6, 2013 and 100,000 shares of Common Stock on May 8, 2013. Except as set forth above, none of the Reporting Persons has effected any transaction in the Common Stock during the last 60 days.
- (d) No other person is known to have the right to receive or the power to direct the receipt of dividends from, or any proceeds from the sale of, shares beneficially owned by any of the Reporting Persons.
- (e) Upon his resignation as a manager from each of NLV Associates and NLV Management on March 31, 2013, Akkaraju ceased to be the beneficial owner of more than five percent of the Issuer's Common Stock. Accordingly, this is an exit filing for Akkaraju.

**Item 7. Materials to be Filed as Exhibits.**

Exhibit 99.1 – Agreement regarding filing of joint Schedule 13D.

Exhibit 99.2 – Powers of Attorney regarding Schedule 13D filings.

**SIGNATURE**

After reasonable inquiry and to the best of its knowledge and belief, each of the undersigned certifies that the information set forth in this statement is true, complete and correct.

Date: May 15, 2013

NEW LEAF VENTURES II, L.P.

By: NEW LEAF VENTURE ASSOCIATES II, L.P.  
General Partner

By: NEW LEAF VENTURE MANAGEMENT II, L.L.C.  
General Partner

By: /s/ Craig L. Slutzkin  
Craig L. Slutzkin  
Chief Financial Officer

NEW LEAF VENTURE ASSOCIATES II, L.P.

By: NEW LEAF VENTURE MANAGEMENT II, L.L.C.  
General Partner

By: /s/ Craig L. Slutzkin  
Craig L. Slutzkin  
Chief Financial Officer

NEW LEAF VENTURE MANAGEMENT II, L.L.C.

By: /s/ Craig L. Slutzkin  
Craig L. Slutzkin  
Chief Financial Officer

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Philippe O. Chambon

\*

James Niedel

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Vijay Lathi

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Ronald Hunt

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Jeani Delagardelle

/s/ Craig L. Slutzkin

Craig L. Slutzkin

As attorney-in-fact

\* This Schedule 13D was executed by Craig L. Slutzkin on behalf of the individuals listed above pursuant to Powers of Attorney, copies of which are attached as Exhibit 99.2.

AGREEMENT

Pursuant to Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, the undersigned hereby agree that only one statement containing the information required by Schedule 13D need be filed with respect to the ownership by each of the undersigned of shares of stock and/or warrants to purchase shares of stock of MEI Pharma, Inc.

EXECUTED this 15th day of May, 2013.

NEW LEAF VENTURES II, L.P.

By: NEW LEAF VENTURE ASSOCIATES II, L.P.  
General Partner

By: NEW LEAF VENTURE MANAGEMENT II, L.L.C.  
General Partner

By: /s/ Craig L. Slutzkin  
Craig L. Slutzkin  
Chief Financial Officer

NEW LEAF VENTURE ASSOCIATES II, L.P.

By: NEW LEAF VENTURE MANAGEMENT II, L.L.C.  
General Partner

By: /s/ Craig L. Slutzkin  
Craig L. Slutzkin  
Chief Financial Officer

NEW LEAF VENTURE MANAGEMENT II, L.L.C.

By: /s/ Craig L. Slutzkin  
Craig L. Slutzkin  
Chief Financial Officer

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Philippe O. Chambon

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James Niedel

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Vijay Lathi



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Ronald Hunt

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Jeani Delagardelle

/s/ Craig L. Slutzkin

Craig L. Slutzkin

As attorney-in-fact

\* This Agreement was executed by Craig L. Slutzkin on behalf of the individuals listed above pursuant to Powers of Attorney, copies of which are attached as Exhibit 99.2.

Powers of Attorney dated October 5, 2005, September 29, 2006 and February 2, 2009 (incorporated by reference from Exhibit 99.2 to the statement on Schedule 13D relating to the Common Stock of MEI Pharma, Inc. filed by the undersigned with the Securities and Exchange Commission on December 10, 2012).