

AVEO PHARMACEUTICALS INC
Form SC 13G/A
February 12, 2014

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

SCHEDULE 13G
UNDER THE SECURITIES EXCHANGE ACT OF 1934
(Amendment No. 2)*

AVEO PHARMACEUTICALS, INC.

(Name of Issuer)

Common Stock

(Title of Class of Securities)

053588109

(CUSIP Number)

December 31, 2013

(Date of Event Which Requires Filing of This Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- .. Rule 13d-1(b)
- .. Rule 13d-1(c)
- x Rule 13d-1(d)

* 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 the disclosures provided in a prior cover page.

The information required in 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).

CUSIP No. 053588109

1. Name of Reporting Persons

MPM BioVentures II, L.P.

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) (b)

3. SEC USE ONLY

4. Citizenship or Place of Organization

Delaware

5. Sole Voting Power

Number of

Shares 102,222

6. Shared Voting Power

Beneficially

Owned by 0

Each 7. Sole Dispositive Power

Reporting

Person 102,222

8. Shared Dispositive Power

With:

0

9. Aggregate Amount Beneficially Owned by Each Reporting Person

102,222

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11. Percent of Class Represented by Amount in Row (9)

0.2%

12. Type of Reporting Person (See Instructions)

PN

Page 2 of 20

CUSIP No. 053588109

1. Name of Reporting Persons

MPM BioVentures II-QP, L.P.

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) (b)

3. SEC USE ONLY

4. Citizenship or Place of Organization

Delaware

5. Sole Voting Power

Number of

Shares 927,554

6. Shared Voting Power

Beneficially

Owned by 0

Each 7. Sole Dispositive Power

Reporting

Person 927,554

8. Shared Dispositive Power

With:

0

9. Aggregate Amount Beneficially Owned by Each Reporting Person

927,554

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11. Percent of Class Represented by Amount in Row (9)

1.8%

12. Type of Reporting Person (See Instructions)

PN

Page 3 of 20

CUSIP No. 053588109

1. Name of Reporting Persons

MPM BioVentures GmbH & Co. Parallel-Beteiligungs KG

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) (b)

3. SEC USE ONLY

4. Citizenship or Place of Organization

Germany

5. Sole Voting Power

Number of

Shares 326,563

6. Shared Voting Power

Beneficially

Owned by 0

Each 7. Sole Dispositive Power

Reporting

Person 326,563

8. Shared Dispositive Power

With:

0

9. Aggregate Amount Beneficially Owned by Each Reporting Person

326,563

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11. Percent of Class Represented by Amount in Row (9)

0.6%

12. Type of Reporting Person (See Instructions)

PN

Page 4 of 20

CUSIP No. 053588109

1. Name of Reporting Persons

MPM Asset Management Investors 2002 BVII LLC

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) (b)

3. SEC USE ONLY

4. Citizenship or Place of Organization

Delaware

5. Sole Voting Power

Number of

Shares 15,779

6. Shared Voting Power

Beneficially

Owned by 0

Each 7. Sole Dispositive Power

Reporting

Person 15,779

8. Shared Dispositive Power

With:

0

9. Aggregate Amount Beneficially Owned by Each Reporting Person

15,779

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11. Percent of Class Represented by Amount in Row (9)

0.0%

12. Type of Reporting Person (See Instructions)

OO

CUSIP No. 053588109

1. Name of Reporting Persons

MPM Asset Management II, L.P.

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) (b)

3. SEC USE ONLY

4. Citizenship or Place of Organization

Delaware

5. Sole Voting Power

Number of

Shares 0

6. Shared Voting Power

Beneficially

Owned by 1,356,339*

7. Sole Dispositive Power

Each

Reporting

Person 0

8. Shared Dispositive Power

With:

1,356,339*

9. Aggregate Amount Beneficially Owned by Each Reporting Person

1,356,339*

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11. Percent of Class Represented by Amount in Row (9)

2.6%

12. Type of Reporting Person (See Instructions)

PN

* The shares are held as follows: 927,554 by MPM BioVentures II-QP, L.P. (BV II QP); 102,222 by MPM BioVentures II, L.P. (BV II); and 326,563 by MPM BioVentures GmbH & Co. Parallel-Beteiligungs KG (BV KG). The Reporting Person is the direct general partner of BV II QP, BV II and BV KG.

CUSIP No. 053588109

1. Name of Reporting Persons

MPM Asset Management II LLC

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) (b)

3. SEC USE ONLY

4. Citizenship or Place of Organization

Delaware

5. Sole Voting Power

Number of

Shares 0

6. Shared Voting Power

Beneficially

Owned by 1,356,339*

7. Sole Dispositive Power

Each

Reporting

Person 0

8. Shared Dispositive Power

With:

1,356,339*

9. Aggregate Amount Beneficially Owned by Each Reporting Person

1,356,339*

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11. Percent of Class Represented by Amount in Row (9)

2.6%

12. Type of Reporting Person (See Instructions)

OO

* The shares are held as follows: 927,554 by BV II QP; 102,222 by BV II; and 326,563 by BV KG. The Reporting Person is the indirect general partner of BV II QP, BV II and BV KG.

CUSIP No. 053588109

1 Name of Reporting Persons

Ansbert Gadicke

2 Check the Appropriate Box if a Member of a Group (See Instructions)

(a) (b)

3 SEC USE ONLY

4 Citizenship or Place of Organization

United States

5 Sole Voting Power

Number of

Shares 0
6 Shared Voting Power

Beneficially

Owned by 1,372,118*
Each 7 Sole Dispositive Power

Reporting

Person 0
8 Shared Dispositive Power

With:

1,372,118*

9 Aggregate Amount Beneficially Owned by Each Reporting Person

1,372,118*

10 Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11 Percent of Class Represented by Amount in Row (9)

2.7%

12 Type of Reporting Person (See Instructions)

IN

* The shares are held as follows: 927,554 by BV II QP; 102,222 by BV II; 15,779 by MPM Asset Management Investors 2002 BVII LLC (AM 2002); and 326,563 by BV KG. MPM Asset Management II, L.P. (AM LP) and MPM Asset Management II LLC (AM II LLC) are the direct and indirect general partners of BV II QP, BV II and BV KG. The Reporting Person is an investment manager of AM II LLC and AM 2002.

CUSIP No. 053588109

1. Name of Reporting Persons

Luke Evin

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) (b)

3. SEC USE ONLY

4. Citizenship or Place of Organization

United States

5. Sole Voting Power

Number of

Shares 0

6. Shared Voting Power

Beneficially

Owned by 1,372,118*

7. Sole Dispositive Power

Each

Reporting

Person 0

8. Shared Dispositive Power

With:

1,372,118*

9. Aggregate Amount Beneficially Owned by Each Reporting Person

1,372,118*

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11. Percent of Class Represented by Amount in Row (9)

2.7%

12. Type of Reporting Person (See Instructions)

IN

* The shares are held as follows: 927,554 by BV II QP; 102,222 by BV II; 15,779 by AM 2002; and 326,563 by BV KG. AM LP and AM II LLC are the direct and indirect general partners of BV II QP, BV II and BV KG. The Reporting Person is an investment manager of AM II LLC and AM 2002.

CUSIP No. 053588109

1. Name of Reporting Persons

Nicholas Galakatos

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) (b)

3. SEC USE ONLY

4. Citizenship or Place of Organization

United States

5. Sole Voting Power

Number of

Shares 0

6. Shared Voting Power

Beneficially

Owned by 1,372,118*

7. Sole Dispositive Power

Each

Reporting

Person 0

8. Shared Dispositive Power

With:

1,372,118*

9. Aggregate Amount Beneficially Owned by Each Reporting Person

1,372,118*

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11. Percent of Class Represented by Amount in Row (9)

2.7%

12. Type of Reporting Person (See Instructions)

IN

* The shares are held as follows: 927,554 by BV II QP; 102,222 by BV II; 15,779 by AM 2002; and 326,563 by BV KG. AM LP and AM II LLC are the direct and indirect general partners of BV II QP, BV II and BV KG. The Reporting Person is an investment manager of AM II LLC and AM 2002.

CUSIP No. 053588109

1. Name of Reporting Persons

Michael Steinmetz

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) (b)

3. SEC USE ONLY

4. Citizenship or Place of Organization

United States

5. Sole Voting Power

Number of

Shares 0

6. Shared Voting Power

Beneficially

Owned by 1,372,118*

Each 7. Sole Dispositive Power

Reporting

Person 0

8. Shared Dispositive Power

With:

1,372,118*

9. Aggregate Amount Beneficially Owned by Each Reporting Person

1,372,118*

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11. Percent of Class Represented by Amount in Row (9)

2.7%

12. Type of Reporting Person (See Instructions)

IN

* The shares are held as follows: 927,554 by BV II QP; 102,222 by BV II; 15,779 by AM 2002; and 326,563 by BV KG. AM LP and AM II LLC are the direct and indirect general partners of BV II QP, BV II and BV KG. The Reporting Person is an investment manager of AM II LLC and AM 2002.

CUSIP No. 053588109

1. Name of Reporting Persons

Kurt Wheeler

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) (b)

3. SEC USE ONLY

4. Citizenship or Place of Organization

United States

5. Sole Voting Power

Number of

Shares 0

6. Shared Voting Power

Beneficially

Owned by 1,372,118*

7. Sole Dispositive Power

Each

Reporting

Person 0

8. Shared Dispositive Power

With:

1,372,118*

9. Aggregate Amount Beneficially Owned by Each Reporting Person

1,372,118*

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11. Percent of Class Represented by Amount in Row (9)

2.7%

12. Type of Reporting Person (See Instructions)

IN

* The shares are held as follows: 927,554 by BV II QP; 102,222 by BV II; 15,779 by AM 2002; and 326,563 by BV KG. AM LP and AM II LLC are the direct and indirect general partners of BV II QP, BV II and BV KG. The Reporting Person is an investment manager of AM II LLC and AM 2002.

Item 1.

(a) Name of Issuer

AVEO Pharmaceuticals, Inc.

(b) Address of Issuer's Principal Executive Offices

650 E. Kendall Street

Cambridge, MA 02142

Item 2.

(a) Name of Person Filing

MPM BioVentures II, LP

MPM BioVentures II-QP, L.P.

MPM BioVentures GmbH & Co. Parallel-Beteiligungs KG

MPM Asset Management Investors 2002 BVII LLC

MPM Asset Management II, L.P.

MPM Asset Management II LLC

Ansbert Gadicke

Luke Evin

Nicholas Galakatos

Michael Steinmetz

Kurt Wheeler

(b) Address of Principal Business Office or, if none, Residence
c/o MPM Capital LLC

The John Hancock Tower

200 Clarendon Street, 54th Floor

Boston, MA 02116

(c) Citizenship

All entities were organized in Delaware except MPM BioVentures GmbH & Co. Parallel-Beteiligungs KG, which was organized in Germany. The individuals are all United States citizens.

(d) Title of Class of Securities

Common Stock

(e) CUSIP Number

053588109

Item 3. If this statement is filed pursuant to §§240.13d-1(b), or 240.13d-2(b) or (c), check whether the person filing is a:

Not applicable

Item 4. Ownership

(a) Amount Beneficially Owned:

MPM BioVentures II, L.P.	102,222
MPM BioVentures II-QP, L.P.	927,554
MPM BioVentures GmbH & Co. Parallel-Beteiligungs KG	326,563
MPM Asset Management Investors 2002 BVII LLC	15,779
MPM Asset Management II, L.P.	1,356,339(1)
MPM Asset Management II LLC	1,356,339(1)
Ansbert Gadicke	1,372,118(2)
Luke B. Evnin	1,372,118(2)
Nicholas Galakatos	1,372,118(2)
Michael Steinmetz	1,372,118(2)
Kurt Wheeler	1,372,118(2)

Percent of Class:

MPM BioVentures II, L.P.	0.2%
MPM BioVentures II-QP, L.P.	1.8%
MPM BioVentures GmbH & Co. Parallel-Beteiligungs KG	0.6%
MPM Asset Management Investors 2002 BVII LLC	0.0%
MPM Asset Management II, L.P.	2.6%
MPM Asset Management II LLC	2.6%
Ansbert Gadicke	2.7%
Luke B. Evnin	2.7%
Nicholas Galakatos	2.7%
Michael Steinmetz	2.7%
Kurt Wheeler	2.7%

(b) Number of shares as to which the person has:

(i) Sole power to vote or to direct the vote

MPM BioVentures II, L.P.	102,222
MPM BioVentures II-QP, L.P.	927,554
MPM BioVentures GmbH & Co. Parallel-Beteiligungs KG	326,563
MPM Asset Management Investors 2002 BVII LLC	15,779
MPM Asset Management II, L.P.	0
MPM Asset Management II LLC	0
Ansbert Gadicke	0
Luke B. Evnin	0
Nicholas Galakatos	0
Michael Steinmetz	0

(ii) Shared power to vote or to direct the vote

MPM BioVentures II, L.P.	0
MPM BioVentures II-QP, L.P.	0
MPM BioVentures GmbH & Co. Parallel-Beteiligungs KG	0
MPM Asset Management Investors 2002 BVII LLC	0
MPM Asset Management II, L.P.	1,356,339(1)
MPM Asset Management II LLC	1,356,339(1)
Ansbert Gadicke	1,372,118(2)
Luke B. Evnin	1,372,118(2)
Nicholas Galakatos	1,372,118(2)
Michael Steinmetz	1,372,118(2)
Kurt Wheeler	1,372,118(2)

(iii) Sole power to dispose or to direct the disposition of

MPM BioVentures II, LP	102,222
MPM BioVentures II-QP, L.P.	927,554
MPM BioVentures GmbH & Co. Parallel-Beteiligungs KG	326,563
MPM Asset Management Investors 2002 LLC	15,779
MPM Asset Management II, L.P.	0
MPM Asset Management II LLC	0
Ansbert Gadicke	0
Luke Evnin	0
Nicholas Galakatos	0
Michael Steinmetz	0
Kurt Wheeler	0

(iv) Shared power to dispose or to direct the disposition of

MPM BioVentures II, LP	0
MPM BioVentures II-QP, L.P.	0
MPM BioVentures GmbH & Co. Parallel-Beteiligungs KG	0
MPM Asset Management Investors 2002 BVII LLC	0
MPM Asset Management II, L.P.	1,356,339(1)
MPM Asset Management II LLC	1,356,339(1)
Ansbert Gadicke	1,372,118(2)
Luke B. Evnin	1,372,118(2)
Nicholas Galakatos	1,372,118(2)
Michael Steinmetz	1,372,118(2)
Kurt Wheeler	1,372,118(2)

(1) The shares are held as follows: 927,554 by BV II QP; 102,222 by BV II; and 326,563 by BV KG. AM LP and AM II LLC are the direct and indirect general partners of BV II QP, BV II and BV KG.

- (2) The shares are held as follows: 927,554 by BV II QP; 102,222 by BV II; 15,779 by AM 2002; and 326,563 by BV KG. AM LP and AM II LLC are the direct and indirect general partners of BV II QP, BV II and BV KG. The Reporting Person is an investment manager of AM II LLC and AM 2002.

Item 5. Ownership of Five Percent or Less of a Class

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following x.

Item 6. Ownership of More than Five Percent on Behalf of Another Person

Not Applicable

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company or Control Person.

Not Applicable

Item 8. Identification and Classification of Members of the Group

Not Applicable

Item 9. Notice of Dissolution of a Group

Not Applicable

Item 10. Certification

Not Applicable

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.

Dated: February 11, 2014

MPM BIOVENTURES II, L.P.

By: MPM Asset Management II, L.P.,
its General Partner

By: MPM Asset Management II LLC,
its General Partner

By: /s/ Luke B. Evnin
Name: Luke B. Evnin
Title: Investment Manager

MPM BIOVENTURES II-QP, L.P.

By: MPM Asset Management II, L.P.,
its General Partner

By: MPM Asset Management II LLC,
its General Partner

By: /s/ Luke B. Evnin
Name: Luke B. Evnin
Title: Investment Manager

MPM BIOVENTURES GMBH & CO.
PARALLEL- BETEILIGUNGS KG

By: MPM Asset Management II LP, in its
capacity as the
Special Limited Partner

By: MPM Asset Management II LLC, its
General Partner

By: /s/ Luke B. Evnin
Name: Luke B. Evnin
Title: Investment Manager

MPM ASSET MANAGEMENT INVESTORS 2002 BVII
LLC

By: /s/ Luke B. Evnin

Name: Luke B. Evnin
Title: Investment Manager

MPM ASSET MANAGEMENT II L.P.

By: MPM Asset Management II LLC, its
General Partner

By: /s/ Luke B. Evnin
Name: Luke B. Evnin
Title: Investment Manager

MPM ASSET MANAGEMENT II LLC

By: /s/ Luke B. Evnin
Name: Luke B. Evnin
Title: Investment Manager

/s/ Ansbert Gadicke

/s/ Luke B. Evnin

Ansbert Gadicke

Luke B. Evnin

/s/ Nicholas Galakatos

/s/ Michael Steinmetz

Nicholas Galakatos

Michael Steinmetz

/s/ Kurt Wheeler

Kurt Wheeler

EXHIBITS

A: Joint Filing Agreement