AVEO PHARMACEUTICALS INC Form SC 13G February 09, 2012

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE 13G

Under the Securities Exchange Act of 1934

(Amendment No.)*

AVEO PHARMACEUTICALS, INC.

(Name of issuer)

Common Stock (Title of class of securities)

53588109 (CUSIP number)

December 31, 2011 (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. 53588109	Page 2 of 18 Pages
(1) Names of reporting persons	
MPM BioVentures II, L.P. (2) Check the appropriate box if a member of a group (see instructions) (a) " (b) x	
(3) SEC use only	
(4) Citizenship or place of organization	
Delaware (5) Sole voting power	
Number of	
shares 164,567 (6) Shared voting power	
beneficially	
owned by 0 (7) Sole dispositive power	
reporting	
person 164,567 (8) Shared dispositive power	
with:	
0 (9) Aggregate amount beneficially owned by each reporting person	
164,567 (10) Check if the aggregate amount in Row (9) excludes certain shares (see instructions) "	

(11) Percent of class represented by amount in Row (9)

0.4%
(12) Type of reporting person (see instructions)

PN

CUSI	JSIP No. 53588109							
(1)	Names of reporting persons							
(2)			ntures II-QP, L.P. propriate box if a member of a group (see instructions)					
(3)	SEC us							
(4)	Citizen	ship o	or place of organization					
	Delawa	(5)	Sole voting power					
Nun	nber of							
	nares	(6)	1,493,260 Shared voting power					
owi	ned by	(7)	0 Sole dispositive power					
pe	erson	(8)	1,493,260 Shared dispositive power					
(9)	Aggreg	ate ai	0 nount beneficially owned by each reporting person					
(10)	1,493,2 Check		aggregate amount in Row (9) excludes certain shares (see instructions) "					

(11) Percent of class represented by amount in Row (9)

3.5%

(12) Type of reporting person (see instructions)

PN

CUS	IP No. 53	35881	09	Page 4 of 18 Pages					
(1)	Names of reporting persons								
(2)	MPM BioVentures GmbH & Co. Parallel-Beteiligungs KG (2) Check the appropriate box if a member of a group (see instructions)								
	(a) "	(b)	X						
(3)	SEC us	e only	y						
(4)	Citizen	ship o	or place of organization						
	Germai	ny (5)	Sole voting power						
Nuı	mber of								
s	hares	(6)	525,732 Shared voting power						
bene	eficially								
	rned by each	(7)	0 Sole dispositive power						
rep	oorting								
	erson	(8)	525,732 Shared dispositive power						
1	with:								
(9)	Aggreg	ate aı	0 mount beneficially owned by each reporting person						
(10)	525,732 Check i		aggregate amount in Row (9) excludes certain shares (see instructions) "						

(11) Percent of class represented by amount in Row (9)

1.2%

(12) Type of reporting person (see instructions)

PN

CUSI	P No. 5.	35881	109	Page 5 of 18 Page				
(1)	Names of reporting persons							
(2)			Management Investors 2002 LLC oppropriate box if a member of a group (see instructions)					
	(a) "	(b)) x					
(3)	SEC us	se onl	у					
(4)	Citizen	ship o	or place of organization					
	Delawa	are (5)	Sole voting power					
Nun	nber of							
	ares	(6)	25,402 Shared voting power					
bene	ficially							
	ned by ach	(7)	0 Sole dispositive power					
repo	orting							
	erson	(8)	25,402 Shared dispositive power					
	Aggreg		0 mount beneficially owned by each reporting person					
(10)	25,402 Check		aggregate amount in Row (9) excludes certain shares (see instructions) "					

(11) Percent of class represented by amount in Row (9)

0.1%

(12) Type of reporting person (see instructions)

OO

CUS	JSIP No. 53588109 Pa				
(1)	Names	of rep	porting persons		
(2)	MPM A	Asset the ap	Management II, L.P. propriate box if a member of a group (see instructions)		
	(a) "	(b)	x		
(3)	SEC us	e only	y		
(4)	Citizen	ship o	or place of organization		
	Delawa	re (5)	Sole voting power		
Nuı	mber of				
s	hares	(6)	0 Shared voting power		
bene	eficially				
	rned by	(7)	2,183,559* Sole dispositive power		
rep	oorting				
-	erson	(8)	0 Shared dispositive power		
1	with:				
(9)	Aggreg	ate ai	2,183,559* mount beneficially owned by each reporting person		
(10)	2,183,5 Check i		aggregate amount in Row (9) excludes certain shares (see instructions) "		

(11) Percent of class represented by amount in Row (9)

5.1%

(12) Type of reporting person (see instructions)

PN

^{*} The shares are held as follows: 1,493,260 by MPM BioVentures II-QP, L.P. ($BV\ II\ QP$); 164,567 by MPM BioVentures II, L.P. ($BV\ II$); and 525,732 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.	CUSIP No. 53588109					
(1) Nam	es of re	porting persons				
MPM (2) Chec	k the ap	Management II LLC propriate box if a member of a group (see instructions)				
	use onl					
(4) Citiz	enship (or place of organization				
Dela	ware (5)	Sole voting power				
Number o	f					
shares	(6)	0 Shared voting power				
beneficiall	y					
owned by	(7)	2,183,559* Sole dispositive power				
reporting						
person	(8)	0 Shared dispositive power				
with:						
(9) Aggr	egate a	2,183,559* mount beneficially owned by each reporting person				
	3,559* k if the	aggregate amount in Row (9) excludes certain shares (see instructions)				

(11) Percent of class represented by amount in Row (9)

5.1%

(12) Type of reporting person (see instructions)

00

^{*} The shares are held as follows: 1,493,260 by BV II QP; 164,567 by BV II; and 525,732 by BV KG. The Reporting Person is the indirect general partner of BV II QP, BV II and BV KG.

CUS	SIP No. 53	35881	09	Page 8 of 18 Pages
(1)	Names	of rep	porting persons	
(2)	Ansber Check		icke propriate box if a member of a group (see instructions)	
	(a) "	(b)	X	
(3)	SEC us	se only	y	
(4)	Citizen	ship o	or place of organization	
	United		s Sole voting power	
Nu	mber of			
s	hares	(6)	0 Shared voting power	
ben	eficially			
	ned by	(7)	2,208,961* Sole dispositive power	
	each			
	porting	(8)	0 Shared dispositive power	
,	with:			
(9)	Aggreg	gate ai	2,208,961* mount beneficially owned by each reporting person	
(10)	2,208,9 Check		aggregate amount in Row (9) excludes certain shares (see instructions) "	

(11) Percent of class represented by amount in Row (9)

5.1%

(12) Type of reporting person (see instructions)

ΙN

* The shares are held as follows: 1,493,260 by BV II QP; 164,567 by BV II; 25,402 by MPM Asset Management Investors 2002 BVII LLC (AM 2002); and 525,732 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. The Reporting Person disclaims beneficial ownership of all such shares except to the extent of his proportionate pecuniary interests therein.

CUS	IP No. 53	35881	09	Page 9 of 18 Pages
(1)	Names	of rep	porting persons	
(2)	Luke E Check t		opropriate box if a member of a group (see instructions)	
	(a) "	(b)	X	
(3)	SEC us	e only	y	
(4)	Citizen	ship o	or place of organization	
	United		s Sole voting power	
Nuı	mber of			
sl	hares	(6)	0 Shared voting power	
bene	eficially			
	rned by	(7)	2,208,961* Sole dispositive power	
rer	oorting			
	erson	(8)	0 Shared dispositive power	
V	with:			
(9)	Aggreg	ate aı	2,208,961* mount beneficially owned by each reporting person	
(10)	2,208,9 Check i		aggregate amount in Row (9) excludes certain shares (see instructions) "	

(11) Percent of class represented by amount in Row (9)

5.1%

(12) Type of reporting person (see instructions)

IN

^{*} The shares are held as follows: 1,493,260 by BV II QP; 164,567 by BV II; 25,402 by AM 2002; and 525,732 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. The Reporting Person disclaims beneficial ownership of all such shares except to the extent of his proportionate pecuniary interests therein.

CUS	IP No. 53	35881	09	Page 10 of 18 Page
(1)	Names	of rej	porting persons	
(2)	Nichola Check		lakatos propriate box if a member of a group (see instructions)	
	(a) "	(b)	x	
(3)	SEC us	e onl	y	
(4)	Citizen	ship o	or place of organization	
	United		s Sole voting power	
Nun	nber of			
sł	nares	(6)	30,833* Shared voting power	
bene	eficially			
	ned by	(7)	2,208,961** Sole dispositive power	
rep	orting			
•	erson	(8)	30,833* Shared dispositive power	
V	vith:			
(9)	Aggreg	ate aı	2,208,961** mount beneficially owned by each reporting person	
(10)	2,239,7 Check		aggregate amount in Row (9) excludes certain shares (see instructions) "	

(11) Percent of class represented by amount in Row (9)

5.2%

(12) Type of reporting person (see instructions)

IN

^{*} Represents shares issuable pursuant to options exercisable within 60 days of December 31, 2011.

^{**} The shares are held as follows: 1,493,260 by BV II QP; 164,567 by BV II; 525,732 by BV KG; and 25,402 by AM 2002. 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. The Reporting Person disclaims beneficial ownership of all such shares except to the extent of his proportionate pecuniary interests therein.

CUSIP	CUSIP No. 53588109						
(1) N	James o	of rep	porting persons				
(2) C	Michael Check tl		propriate box if a member of a group (see instructions)				
(3) S	EC use	e only	y				
(4) C	Citizens	ship o	or place of organization				
U	Jnited S		s Sole voting power				
Numbe	er of						
shar	es	(6)	0 Shared voting power				
benefic	cially						
owned		(7)	2,208,961* Sole dispositive power				
report	ting						
pers	on	(8)	0 Shared dispositive power				
witl	h:						
(9) A	Aggrega	ate ar	2,208,961* mount beneficially owned by each reporting person				
	,208,96 Check it		aggregate amount in Row (9) excludes certain shares (see instructions) "				

(11) Percent of class represented by amount in Row (9)

5.1%

(12) Type of reporting person (see instructions)

IN

^{*} The shares are held as follows: 1,493,260 by BV II QP; 164,567 by BV II; 525,732 by BV KG; and 25,402 by AM 2002. 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. The Reporting Person disclaims beneficial ownership of all such shares except to the extent of his proportionate pecuniary interests therein.

CUSI	CUSIP No. 53588109					
(1)	Names	of rep	porting persons			
(2)	Kurt W Check t		propriate box if a member of a group (see instructions)			
(3)	SEC us					
(4)	Citizens	ship o	or place of organization			
	United		s Sole voting power			
Nun	nber of					
sh	nares	(6)	0 Shared voting power			
bene	ficially					
	ned by	(7)	2,208,961* Sole dispositive power			
rep	orting					
pe	erson	(8)	0 Shared dispositive power			
W	vith:					
(9)	Aggreg	ate ar	2,208,961* mount beneficially owned by each reporting person			
(10)	2,208,9 Check i		aggregate amount in Row (9) excludes certain shares (see instructions)			

(11) Percent of class represented by amount in Row (9)

5.1%

(12) Type of reporting person (see instructions)

ΙN

^{*} The shares are held as follows: 1,493,260 by BV II QP; 164,567 by BV II; 525,732 by BV KG; and 25,402 by AM 2002. 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. The Reporting Person disclaims beneficial ownership of all such shares except to the extent of his proportionate pecuniary interests therein.

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Item 1.

(a) Name of Issuer

AVEO Pharmaceuticals, Inc.

(b) Address of Issuer s Principal Executive Offices

75 Sidney Street, 4th Floor

Cambridge, MA 02139

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 Evnin

Nicholas Galakatos

Michael Steinmetz

Kurt Wheeler

(b) Address of Principal Business Office or, if none, Residence

c/o MPM Capital L.P.

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

53588109

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

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Item 4. Ownership

(a) Amount Beneficially Owned:

	September 30,
MPM BioVentures II, L.P.	164,567
MPM BioVentures II-QP, L.P.	1,493,260
MPM BioVentures GmbH & Co. Parallel-Beteiligungs KG	525,732
MPM Asset Management Investors 2002 BVII LLC	25,402
MPM Asset Management II, L.P.	2,183,559(1)
MPM Asset Management II LLC	2,183,559(1)
Ansbert Gadicke	2,208,961(2)
Luke B. Evnin	2,208,961(2)
Nicholas Galakatos	2,239,794(2)(3)
Michael Steinmetz	2,208,961(2)
Kurt Wheeler	2,208,961(2)
Percent of Class:	

	September 30,
MPM BioVentures II, L.P.	0.4%
MPM BioVentures II-QP, L.P.	3.5%
MPM BioVentures GmbH & Co. Parallel-Beteiligungs KG	1.2%
MPM Asset Management Investors 2002 BVII LLC	0.1%
MPM Asset Management II, L.P.	5.1%
MPM Asset Management II LLC	5.1%
Ansbert Gadicke	5.1%
Luke B. Evnin	5.1%
Nicholas Galakatos	5.2%
Michael Steinmetz	5.1%
Kurt Wheeler	5.1%

- (b) Number of shares as to which the person has:
 - (i) Sole power to vote or to direct the vote

	September 30,
MPM BioVentures II, L.P.	164,567
MPM BioVentures II-QP, L.P.	1,493,260
MPM BioVentures GmbH & Co. Parallel-Beteiligungs KG	525,732
MPM Asset Management Investors 2002 BVII LLC	25,402
MPM Asset Management II, L.P.	0
MPM Asset Management II LLC	0
Ansbert Gadicke	0

Luke B. Evnin	0
Nicholas Galakatos	30,833(3)
Michael Steinmetz	0
Kurt Wheeler	0

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

	September 30,
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.	2,183,559(1)
MPM Asset Management II LLC	2,183,559(1)
Ansbert Gadicke	2,208,961(2)
Luke B. Evnin	2,208,961(2)
Nicholas Galakatos	2,208,961(2)
Michael Steinmetz	2,208,961(2)
Kurt Wheeler	2,208,961(2)

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

	September 30,
MPM BioVentures II, LP	164,567
MPM BioVentures II-QP, L.P.	1,493,260
MPM BioVentures GmbH & Co. Parallel-Beteiligungs KG	525,732
MPM Asset Management Investors 2002 LLC	25,402
MPM Asset Management II, L.P.	0
MPM Asset Management II LLC	0
Ansbert Gadicke	0
Luke Evnin	0
Nicholas Galakatos	30,833(3)
Michael Steinmetz	0
Kurt Wheeler	0

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

	September 30,
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.	2,183,559(1)
MPM Asset Management II LLC	2,183,559(1)
Ansbert Gadicke	2,208,961(2)
Luke B. Evnin	2,208,961(2)
Nicholas Galakatos	2,208,961(2)
Michael Steinmetz	2,208,961(2)
Kurt Wheeler	2,208,961(2)

- (1) The shares are held as follows: 1,493,260 by BV II QP; 164,567 by BV II; and 525,732 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: 1,493,260 by BV II QP; 164,567 by BV II; 525,732 by BV KG; and 25,402 by AM 2002. 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.
- (3) Includes 30,833 shares issuable upon exercise of options within 60 days of December 31, 2011.

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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 ".

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

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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 8, 2012

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 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 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 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 ASSET MANAGEMENT INVESTORS 2002 BVII

LLC

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

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/s/ Ansbert Gadicke Ansbert Gadicke

/s/ Nicholas Galakatos Nicholas Galakatos

/s/ Kurt Wheeler Kurt Wheeler **EXHIBITS**

A: Joint Filing Agreement

/s/ Luke B. Evnin Luke B. Evnin

/s/ Michael Steinmetz Michael Steinmetz