

**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP**

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

OMB APPROVAL	
OMB Number:	3235-0287
Estimated average burden	
hours per response:	0.5

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See instruction 1(b).

1. Name and Address of Reporting Person* <u>MPM BIOVENTURES II QP LP</u>  (Last) (First) (Middle) C/O MPM ASSET MANAGEMENT 200 CLARENDON STREET, 54TH FLOOR  (Street) BOSTON MA 02116  (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>AVEO PHARMACEUTICALS INC [ AVEO ]</u>	5. Relationship of Reporting Person(s) to Issuer (Check all applicable)  Director 10% Owner Officer (give title below) <input checked="" type="checkbox"/> Other (specify below)  <b>Former 10% Stockholder</b>
	3. Date of Earliest Transaction (Month/Day/Year) 03/17/2010	
4. If Amendment, Date of Original Filed (Month/Day/Year)		

**Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned**

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	03/17/2010		C		1,037,036 <sup>(3)</sup>	A	(2)	1,037,036	I	See Footnote <sup>(6)</sup>
Common Stock	03/17/2010		C		977,850 <sup>(4)</sup>	A	(2)	2,014,886	I	See Footnote <sup>(7)</sup>
Common Stock	03/17/2010		C		194,075 <sup>(5)</sup>	A	(2)	2,208,961	I	See Footnote <sup>(8)</sup>

**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)**

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)		8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Series A Convertible Preferred Stock	(2)	03/17/2010		C		4,148,148		(1)	(1)	Common Stock	1,037,036 <sup>(3)</sup>	\$0	0	I	No securities owned
Series B Convertible Preferred Stock	(2)	03/17/2010		C		3,911,405		(1)	(1)	Common Stock	977,850 <sup>(4)</sup>	\$0	0	I	No securities owned
Series D Convertible Preferred Stock	(2)	03/17/2010		C		776,307		(1)	(1)	Common Stock	194,075 <sup>(5)</sup>	\$0	0	I	No securities owned

1. Name and Address of Reporting Person\*  
MPM BIOVENTURES II QP LP  
 (Last) (First) (Middle)  
 C/O MPM ASSET MANAGEMENT  
 200 CLARENDON STREET, 54TH FLOOR  
 (Street)  
 BOSTON MA 02116  
 (City) (State) (Zip)

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MPM BIOVENTURES II LP  
 (Last) (First) (Middle)  
 C/O MPM ASSET MANAGEMENT  
 200 CLARENDON STREET, 54TH FLOOR  
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 BOSTON MA 02116

(City) (State) (Zip)

1. Name and Address of Reporting Person\*

[MPM ASSET MANAGEMENT II LLC](#)

(Last) (First) (Middle)

C/O MPM ASSET MANAGEMENT  
200 CLARENDON STREET, 54TH FLOOR

(Street)  
BOSTON MA 02116

(City) (State) (Zip)

1. Name and Address of Reporting Person\*

[MPM ASSET MANAGEMENT INVESTORS 2002 BVII LLC](#)

(Last) (First) (Middle)

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200 CLARENDON STREET, 54TH FLOOR

(Street)  
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(City) (State) (Zip)

1. Name and Address of Reporting Person\*

[MPM BIOVENTURES GMBH & CO PARALLEL BETEILIGUNGS KG](#)

(Last) (First) (Middle)

C/O MPM ASSET MANAGEMENT  
200 CLARENDON STREET, 54TH FLOOR

(Street)  
BOSTON MA 02116

(City) (State) (Zip)

1. Name and Address of Reporting Person\*

[MPM ASSET MANAGEMENT II LP](#)

(Last) (First) (Middle)

C/O MPM ASSET MANAGEMENT  
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(Street)  
BOSTON MA 02116

(City) (State) (Zip)

1. Name and Address of Reporting Person\*

[EVNIN LUKE](#)

(Last) (First) (Middle)

C/O MPM ASSET MANAGEMENT  
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(Street)  
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(City) (State) (Zip)

1. Name and Address of Reporting Person\*

[GADICKE ANSBERT](#)

(Last) (First) (Middle)

C/O MPM ASSET MANAGEMENT  
200 CLARENDON STREET, 54TH FLOOR

(Street)  
BOSTON MA 02116

(City)	(State)	(Zip)
1. Name and Address of Reporting Person*		
<a href="#">STEINMETZ MICHAEL</a>		
(Last)	(First)	(Middle)
C/O MPM ASSET MANAGEMENT		
200 CLARENDON STREET, 54TH FLOOR		
(Street)		
BOSTON	MA	02116
(City)	(State)	(Zip)
1. Name and Address of Reporting Person*		
<a href="#">WHEELER KURT</a>		
(Last)	(First)	(Middle)
C/O MPM ASSET MANAGEMENT		
200 CLARENDON STREET, 54TH FLOOR		
(Street)		
BOSTON	MA	02116
(City)	(State)	(Zip)

**Explanation of Responses:**

- These securities are preferred stock of the Issuer and do not have an expiration date. These securities automatically converted into shares of common stock upon the closing of the Issuer's initial public offering.
- Each share of Series A Convertible Preferred Stock, Series B Convertible Preferred Stock and Series D Convertible Preferred Stock automatically converted into shares of Common Stock on a 0.25 for 1 basis immediately upon the closing of the Issuer's initial public offering.
- The shares, on a post-conversion basis, are held as follows: 701,037 by MPM BioVentures II-QP, L.P. ("BV II QP"), 77,259 by MPM BioVentures II, L.P. ("BV II"), 11,926 by MPM Asset Management Investors 2002 BVII LLC ("AM 2002") and 246,814 by MPM BioVentures GmbH & Co. Parallel-Beteiligungs KG ("BV KG"). MPM Asset Management II, L.P. ("AM II GP") 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. Luke Evnin, Ansbert Gadick, Nicholas Galakatos, Michael Steinmetz and Kurt Wheeler are the investment managers of AM II LLC and AM 2002. Each member of the group disclaims beneficial ownership of the securities except to the extent of his or its respective pecuniary interest therein.
- The shares, on a post-conversion basis, are held as follows: 661,027 by BV II QP, 72,850 by BV II, 11,245 by AM 2002 and 232,728 by BV KG. Each member of the group disclaims beneficial ownership of the securities except to the extent of his or its respective pecuniary interest therein.
- The shares, on a post-conversion basis, are held as follows: 131,196 by BV II QP, 14,458 by BV II, 2,231 by AM 2002 and 46,190 by BV KG. Each member of the group disclaims beneficial ownership of the securities except to the extent of his or its respective pecuniary interest therein.
- The shares are held as follows: 701,037 by BV II QP, 77,259 by BV II, 11,926 by AM 2002 and 246,814 by BV KG. Each member of the group disclaims beneficial ownership of the securities except to the extent of his or its respective pecuniary interest therein.
- The shares are held as follows: 1,362,064 by BV II QP, 150,109 by BV II, 23,171 by AM 2002 and 479,542 by BV KG. Each member of the group disclaims beneficial ownership of the securities except to the extent of his or its respective pecuniary interest therein.
- 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. Each member of the group disclaims beneficial ownership of the securities except to the extent of his or its respective pecuniary interest therein.

[By Luke Evnin, manager of MPM Asset Management II LLC, the general partner of MPM Asset Management II, L.P., the general partner of MPM BioVentures II-QP, L.P. /s/ Luke Evnin](#) 03/17/2010

[By Luke Evnin, manager of MPM Asset Management II LLC, the general partner of MPM Asset Management II, L.P., the general partner of MPM BioVentures II, L.P. /s/ Luke Evnin](#) 03/17/2010

[By Luke Evnin, manager of MPM Asset Management II LLC /s/ Luke Evnin](#) 03/17/2010

[By Luke Evnin, manager of MPM Asset Management Investors 2002 BVII LLC /s/ Luke Evnin](#) 03/17/2010

[By Luke Evnin, manager of MPM Asset Management II LLC, the general partner of MPM Asset Management II, L.P., the special limited partner of MPM BioVentures GmbH & Co. Parallel-Beteiligungs KG /s/ Luke Evnin](#) 03/17/2010

[By Luke Evnin, manager of MPM Asset Management II LLC, the general partner of MPM Asset Management II, L.P. /s/ Luke Evnin](#) 03/17/2010

/s/ Ansbert Gadicke

03/17/2010

/s/ Michael Steinmetz

03/17/2010

/s/ Kurt Wheeler

03/17/2010

\*\* Signature of Reporting Person

Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

\* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

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