Cole Douglas G. Form 4 December 15, 2010

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

Check this box if no longer subject to Section 16.

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF **SECURITIES**

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OMB APPROVAL

3235-0287

January 31,

OMB

Number:

Form 4 or Form 5 obligations may continue. See Instruction

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

1(b).

(Print or Type Responses)

1. Name and Address of Reporting Person * 5. Relationship of Reporting Person(s) to 2. Issuer Name and Ticker or Trading Cole Douglas G. Issuer Symbol AVEO PHARMACEUTICALS INC (Check all applicable) [AVEO] (Last) (First) (Middle) 3. Date of Earliest Transaction _X__ Director 10% Owner Other (specify Officer (give title (Month/Day/Year) C/O AVEO PHARMACEUTICALS, 12/13/2010 INC., 75 SIDNEY STREET (Street) 4. If Amendment, Date Original 6. Individual or Joint/Group Filing(Check Filed(Month/Day/Year) Applicable Line) _X_ Form filed by One Reporting Person Form filed by More than One Reporting CAMBRIDGE, MA 02139

(City)	(State)	(Zip) 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. Transactic Code (Instr. 8)	4. Securities Acquired (A) onor Disposed of (D) (Instr. 3, 4 and 5) (A) or Amount (D) Price		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)		
Common Stock	12/13/2010		S <u>(1)</u>	604	D	\$ 14.5395 (2)	42,651	I	By AGTC Advisors Fund, L.P.	
Common Stock	12/13/2010		S(4)	9,996	D	\$ 14.5395 (2)	755,240	I	by Applied Genomics Technology Capital Fund, L.P.	
	12/14/2010		S(1)	622	D		42,029	I		

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Common Stock				\$ 14.0594 <u>(6)</u>			By AGTC Advisors Fund, L.P.
Common Stock	12/14/2010	S(4)	10,278 D	\$ 14.0594 (6)	744,962	I	by Applied Genomics Technology Capital Fund, L.P.

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

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SEC 1474 (9-02)

> 9. Nu Deriv Secur Bene Own Follo Repo Trans (Instr

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

1. Title of	2.	3. Transaction Date	3A. Deemed	4.	5.	6. Date Exerc	cisable and	7. Titl	e and	8. Price of
Derivative	Conversion	(Month/Day/Year)	Execution Date, if	Transacti	orNumber	Expiration Da	ate	Amou	nt of	Derivative
Security	or Exercise		any	Code	of	(Month/Day/	Year)	Under	lying	Security
(Instr. 3)	Price of		(Month/Day/Year)	(Instr. 8)	Derivative	e		Securi	ties	(Instr. 5)
	Derivative				Securities			(Instr.	3 and 4)	
	Security				Acquired					
					(A) or					
					Disposed					
					of (D)					
					(Instr. 3,					
					4, and 5)					
									Amount	
									or	
						Date	Expiration		Number	
						Exercisable Date		of		
				Code V	(A) (D)				Shares	

Reporting Owners

Reporting Owner Name / Address	Relationships					
	Director	10% Owner	Officer	Other		
Cole Douglas G. C/O AVEO PHARMACEUTICALS, INC. 75 SIDNEY STREET CAMBRIDGE, MA 02139	X					
Cianaturas						

Signatures

/s/ Joseph D. Vittiglio, Esq., attorney-in-fact

**Signature of Reporting Person Date

Reporting Owners 2

Explanation of Responses:

- * 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).
- (1) The sale reported in this Form 4 was effected pursuant to a Rule 10b5-1 trading plan adopted by AGTC Advisors Fund, L.P. on November 9, 2010.
- The price reported in this Column 4 is a weighted average price. The shares were sold in multiple transactions at prices ranging from \$14.24 to \$14.6464, inclusive. The reporting person undertakes to provide AVEO Pharmaceuticals, Inc., any security holder of AVEO Pharmaceuticals, Inc., or the staff of the Securities and Exchange Commission, upon request, full information regarding the number of shares sold at each price within the ranges set forth in this footnote.
 - Held by AGTC Advisors Fund, L.P.; NewcoGen Group, Inc. ("NewcoGen Inc.") is the general partner of AGTC Partners, L.P., which is the general partner of AGTC Advisors Fund, L.P. NewcoGen Inc. is a wholly-owned subsidiary of Flagship Ventures Management, Inc.
- (3) ("Flagship Inc."). Noubar B. Afeyan Ph.D. and Edwin M. Kania, Jr. are the directors of Flagship Inc. and may be deemed to have beneficial ownership with respect to all shares held by AGTC Advisors Fund, L.P. The reporting person disclaims beneficial ownership over shares held by AGTC Advisors Fund, L.P.
- (4) The sale reported in this Form 4 was effected pursuant to a Rule 10b5-1 trading plan adopted by Applied Genomic Technology Capital Fund, L.P. on November 9, 2010.
 - Held by Applied Genomic Technology Captital Fund, L.P.; NewcoGen Inc. is the general partner of AGTC Partners, L.P., which is the general partner of Applied Genomic Technology Captital Fund, L.P. NewcoGen Inc. is a wholly-owned subsidiary of Flagship Inc.
- (5) Noubar B. Afeyan Ph.D. and Edwin M. Kania, Jr. are the directors of Flagship Inc. and may be deemed to have beneficial ownership with respect to all shares held by Applied Genomic Technology Captital Fund, L.P. The reporting person disclaims beneficial ownership over shares held by Applied Genomic Technology Captital Fund, L.P.
- The price reported in this Column 4 is a weighted average price. The shares were sold in multiple transactions at prices ranging from \$13.85 to \$14.55 inclusive. The reporting person undertakes to provide AVEO Pharmaceuticals, Inc., any security holder of AVEO Pharmaceuticals, Inc., or the staff of the Securities and Exchange Commission, upon request, full information regarding the number of shares sold at each price within the ranges set forth in this footnote.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.