

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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

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

1. Name and Address of Reporting Person* <u>MUELLER PETER</u> (Last) (First) (Middle) <u>C/O VERTEX PHARMACEUTICALS</u> <u>INCORPORATED</u> <u>130 WAVERLY STREET</u> (Street) <u>CAMBRIDGE MA 02139</u> (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>VERTEX PHARMACEUTICALS INC /</u> <u>MA [VRTX]</u>	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <u>EVP, Global R&D, CSO</u>
	3. Date of Earliest Transaction (Month/Day/Year) <u>09/15/2010</u>	
	4. If Amendment, Date of Original Filed (Month/Day/Year)	
		6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person

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	09/15/2010		M		1,600	A	\$10.41	120,834	D	
Common Stock	09/15/2010		S ⁽¹⁾		1,600	D	\$37.22 ⁽²⁾⁽³⁾	119,234	D	
Common Stock								4,150	I	401(k)

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
Stock Option	\$10.41	09/15/2010		M			1,600	(4)	02/02/2015	Common Stock	1,600	\$0	20,000	D	

Explanation of Responses:

- Transaction made pursuant to Dr. Mueller's company approved trading plan under Rule 10b5-1.
- Open market sales reported on this line occurred at a weighted average price of \$37.22 (range \$37.08 to \$37.36).
- Dr. Mueller undertakes to provide (upon request by the SEC staff, the issuer or a security holder of the issuer) full information regarding the number of shares sold at each separate price.
- Fully vested.

Remarks:

Valerie L. Andrews, Attorney- 09/16/2010
In-Fact

** 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.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.