FORM 4

## **UNITED STATES SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

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

## 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

1. Name and Address of Reporting Person*  NELSEN ROBERT  (Last) (First) (Middle)  C/O ARCH VENTURE PARTNERS		I	2. Issuer Name and AGIOS PHAI				INC [			tionship of Reportir all applicable) Director		g Person(s) to Issuer 10% Owner	
			3. Date of Earliest T 02/21/2017	ransactio	n (Mo	onth/Day/Yea			Officer (give title below)	Other (specify below)			
8755 WEST HIGGINS RO		025	4. If Amendment, Da	ate of Ori	ginal	Filed (Month/		Indiv	ividual or Joint/Group Filing (Check Applicable				
(Street) CHICAGO IL 60631								X	Form filed by One Reporting Person Form filed by More than One Reporting Person				
(City) (State)	(Zip)												
	Table I		tive Securities		d, C	Disposed o	of, or E	Beneficia	illy	Owned	1		
1. Title of Security (Instr. 3)		2. Transaction Date (Month/Day/Year	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transac Code (Ir 8)		4. Securities Disposed O			5)	5. Amount of Securities Beneficially Owned	6. Ownership Form: Direct (D) or Indirect (I)	7. Nature of Indirect Beneficial Ownership	
				Code	v	Amount	(A) or (D)	Price		Following Reported Transaction(s) (Instr. 3 and 4)	(Instr. 4)	(Instr. 4)	
Common Stock		02/21/2017		S		1,780	D	\$54.173	3(1)	417,265	I	By ARCH Venture Fund VII, L.P. <sup>(7)</sup>	
Common Stock		02/21/2017		S		34,650	D	\$50.557	6(2)	382,615	I	By ARCH Venture Fund VII, L.P. <sup>(7)</sup>	
Common Stock		02/22/2017		S		46,938	D	\$49.904	3(3)	335,677	I	By ARCH Venture Fund VII, L.P. <sup>(7)</sup>	
Common Stock		02/22/2017		S		1,000	D	\$50.345	5(4)	334,677	I	By ARCH Venture Fund VII, L.P. <sup>(7)</sup>	
Common Stock		02/23/2017		S		42,596	D	\$47.727	<b>7</b> <sup>(5)</sup>	292,081	I	By ARCH Venture Fund VII, L.P. <sup>(7)</sup>	
Common Stock		02/23/2017		S		8,400	D	\$48.747	8(6)	283,681	I	By ARCH Venture Fund VII, L.P. <sup>(7)</sup>	
Common Stock		06/30/2016		J <sup>(8)</sup>		25,412	A	(8)		73,078	D		
Common Stock		08/08/2016		J <sup>(8)</sup>		36,152	A	(8)		109,230	D		

	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. Transact Code (In 8)		5. Number of Expiration Date Exercisab Expiration Date (Month/Day/Year) Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		ate Amount of		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				

## **Explanation of Responses:**

- 1. The price reported in Column 4 is a weighted average price. These shares were sold in multiple transactions at prices ranging from \$54.00 to \$54.36. The reporting person undertakes to provide to AGIO, any security holder of AGIO, or the staff of the Securities and Exchange Commission, upon request, full information regarding the number of shares sold at each separate price within the ranges set forth in footnotes (1), (2), (3), (4), (5) and (6) to this Form 4.
- 2. The price reported in Column 4 is a weighted average price. These shares were sold in multiple transactions at prices ranging from \$50.50 to \$50.74.
- 3. The price reported in Column 4 is a weighted average price. These shares were sold in multiple transactions at prices ranging from \$49.25 to \$50.25.
- 4. The price reported in Column 4 is a weighted average price. These shares were sold in multiple transactions at prices ranging from \$50.255 to \$50.68.
- 5. The price reported in Column 4 is a weighted average price. These shares were sold in multiple transactions at prices ranging from \$47.50 to \$48.24.
- 6. The price reported in Column 4 is a weighted average price. These shares were sold in multiple transactions at prices ranging from \$48.51 to \$49.06.
- 7. These shares are owned directly by ARCH Venture Fund VII, L.P. ("ARCH Fund VII"). The sole general partner of ARCH Fund VII is ARCH Venture Partners VII, L.P. ("ARCH Partners VII"). The sole general partner of ARCH Partners VII is ARCH Venture Partners VII, LLC ("ARCH VII LLC"). The Managing Directors of ARCH VII LLC, Robert T. Nelsen, Keith Crandell and Clinton Bybee, are deemed to have voting and dispositive power over the shares and may be deemed to beneficially own certain shares held by ARCH Fund VII. Each Reporting Person disclaims beneficial ownership of these securities, except to the extent of his pecuniary interest therein, and this report shall not be deemed an admission that such Reporting Persons are the beneficial owners of such securities for Section 16 or any other purpose.
- 8. Distribution of Common Stock held by a limited partnership to its partners for no consideration. Change from indirect to direct ownership of shares previously reported as beneficially owned by the reporting person.

## Remarks:

/s/ Robert T. Nelsen 02/23/2017

\*\* 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.