

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 | |
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| 1. Name and Address of Reporting Person * <u>Schenkein David P</u> <hr/> (Last) (First) (Middle) C/O AGIOS PHARMACEUTICALS, INC. 88 SIDNEY STREET <hr/> (Street) CAMBRIDGE MA 02139 <hr/> (City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol <u>AGIOS PHARMACEUTICALS INC [AGIO]</u> | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) Chief Executive Officer |
| | 3. Date of Earliest Transaction (Month/Day/Year) 02/01/2018 | |
| 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 | 02/01/2018 | | M ⁽¹⁾ | | 13,000 | A | \$0.3025 | 13,000 | D | |
| Common stock | 02/01/2018 | | S ⁽²⁾ | | 8,540 | D | \$78.5 ⁽³⁾ | 4,460 | D | |
| Common stock | 02/01/2018 | | S ⁽²⁾ | | 4,460 | D | \$79.23 ⁽⁴⁾ | 0 | D | |
| Common stock | | | | | | | | 271,772 | I | See footnote ⁽⁵⁾ |
| Common stock | | | | | | | | 79,082 | I | See footnote ⁽⁶⁾ |

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 | | | | | | Amount or Number of Shares |
| Stock option (right to buy) | \$0.3025 | 02/01/2018 | | M ⁽¹⁾ | | | 13,000 | (7) | 08/12/2019 | Common stock | 13,000 | \$0.00 | 104,567 | D | |

Explanation of Responses:

- This exercise was effected pursuant to a Rule 10b5-1 trading plan adopted by the reporting person.
- This sale was effected pursuant to a Rule 10b5-1 trading plan adopted by the reporting person.
- The price reported is the weighted average of the shares sold. The shares were sold at varying prices in the range of \$78.01 to \$79.00. The reporting person undertakes, upon request by the staff of the Securities and Exchange Commission, the issuer, or a security holder of the issuer, to provide full information regarding the number of shares sold at each separate price.
- The price reported is the weighted average of the shares sold. The shares were sold at varying prices in the range of \$79.03 to \$79.72. The reporting person undertakes, upon request by the staff of the Securities and Exchange Commission, the issuer, or a security holder of the issuer, to provide full information regarding the number of shares sold at each separate price.
- Shares held by David P. Schenkein 2004 Revocable Trust, of which the reporting person is trustee and beneficiary.
- Shares held by Amy P. Schenkein 2004 Revocable Trust, of which the reporting person's spouse is trustee and beneficiary.
- This option was granted on August 13, 2009. The option vested as to 50% of the underlying shares upon the achievement of a performance milestone, as determined by the issuer's Board of Directors on June 3, 2010, and as to the remaining 50% of the underlying shares in equal monthly installments through June 3, 2013.

Remarks:

/s/ William Cook, as Attorney in Fact for David Schenkein 02/05/2018

** 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.