

| 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

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| 1. Name and Address of Reporting Person* <u>Cantley Lewis Clayton Jr.</u> (Last) (First) (Middle) <u>C/O AGIOS PHARMACEUTICALS, INC.</u> <u>38 SIDNEY STREET, 2ND FLOOR</u> (Street) <u>CAMBRIDGE MA 02139</u> (City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol <u>AGIOS PHARMACEUTICALS INC [</u> <u>AGIO]</u> | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director 10% Owner Officer (give title below) Other (specify below) |
| | 3. Date of Earliest Transaction (Month/Day/Year) <u>05/19/2015</u> | |
| 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 | 05/19/2015 | | s ⁽¹⁾ | | 2,426 | D | \$116.69 ⁽²⁾ | 169,688 | D | |
| Common stock | 05/19/2015 | | s ⁽¹⁾ | | 2,426 | D | \$116.66 ⁽²⁾ | 169,688 | I | See footnote ⁽³⁾ |
| Common stock | 05/20/2015 | | s ⁽¹⁾ | | 2,426 | D | \$116.6 ⁽⁴⁾ | 167,262 | D | |
| Common stock | 05/20/2015 | | s ⁽¹⁾ | | 2,426 | D | \$116.6 ⁽⁵⁾ | 167,262 | I | See footnote ⁽³⁾ |

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 | | Date Exercisable | Expiration Date | | | | | |

Explanation of Responses:

- 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 \$115.00 to \$118.92. 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 Vicki Lee Sato, who is the reporting person's spouse.
- The price reported is the weighted average of the shares sold. The shares were sold at varying prices in the range of \$116.09 to \$117.24. 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 \$116.13 to \$117.24. 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.

Remarks:

/s/ Glenn Goddard, as
Attorney-in-Fact for Lewis C. Cantley Jr. 05/21/2015

** 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.