

**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*<br><u>Cantley Lewis Clayton Jr.</u><br><br>(Last) (First) (Middle)<br><u>C/O AGIOS PHARMACEUTICALS, INC.</u><br><u>88 SIDNEY STREET</u><br><br>(Street)<br><u>CAMBRIDGE MA 02139</u><br><br>(City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol<br><u>AGIOS PHARMACEUTICALS INC [</u><br><u>AGIO ]</u> | 5. Relationship of Reporting Person(s) to Issuer<br>(Check all applicable)<br><br><input checked="" type="checkbox"/> Director 10% Owner<br><br>Officer (give title below) Other (specify below) |
|   | 3. Date of Earliest Transaction (Month/Day/Year)<br><u>08/22/2017</u>                              |  |
|   |  | 6. Individual or Joint/Group Filing (Check Applicable Line)<br><br><input checked="" type="checkbox"/> Form filed by One Reporting Person<br><br>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                    | 08/22/2017                           |  | S <sup>(1)</sup>               |   | 500   | D          | \$56.63 <sup>(2)</sup> | 88,894 <sup>(3)</sup>   | D  |   |
| Common stock                    | 08/22/2017                           |  | S <sup>(1)</sup>               |   | 500   | D          | \$56.63 <sup>(2)</sup> | 88,934 <sup>(4)</sup>   | I  | See footnote <sup>(5)</sup>                           |
| Common stock                    | 08/22/2017                           |  | S <sup>(1)</sup>               |   | 500   | D          | \$56.61 <sup>(6)</sup> | 88,394  | D  |   |
| Common stock                    | 08/22/2017                           |  | S <sup>(1)</sup>               |   | 500   | D          | \$56.61 <sup>(6)</sup> | 88,434  | I  | See footnote <sup>(5)</sup>                           |
| Common stock                    | 08/23/2017                           |  | S <sup>(1)</sup>               |   | 500   | D          | \$57.09 <sup>(7)</sup> | 87,894  | D  |   |
| Common stock                    | 08/23/2017                           |  | S <sup>(1)</sup>               |   | 500   | D          | \$57.09 <sup>(7)</sup> | 87,934  | I  | See footnote <sup>(5)</sup>                           |
| Common stock                    | 08/23/2017                           |  | S <sup>(1)</sup>               |   | 500   | D          | \$57.07 <sup>(8)</sup> | 87,394  | D  |   |
| Common stock                    | 08/23/2017                           |  | S <sup>(1)</sup>               |   | 500   | D          | \$57.07 <sup>(8)</sup> | 87,434  | I  | See footnote <sup>(5)</sup>                           |
| Common stock                    |                                      |  |                                |   |   |            |                        | 20,803 <sup>(3)</sup>   | I  | See footnote <sup>(9)</sup>                           |
| Common stock                    |                                      |  |                                |   |   |            |                        | 20,803 <sup>(4)</sup>   | I  | See footnote <sup>(10)</sup>                          |

**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 \$55.31 to \$57.52. 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.
- This amount reflects 4,197 shares transferred from indirect to direct ownership from a grantor retained annuity trust distribution on July 28, 2017.
- This amount reflects 4,197 shares transferred from a grantor retained annuity trust distribution on July 28, 2017.
- 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 \$55.33 to \$57.52. 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 \$56.77 to \$57.34. 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 \$56.77 to \$57.33. 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 grantor retained annuity trusts for the benefit of the reporting person and his two children, of which the reporting person is trustee and sole annuitant.

10. Shares held by grantor retained annuity trusts for the benefit of the reporting person's spouse and their two children, of which the reporting person's spouse is trustee and sole annuitant.

**Remarks:**

/s/ Andrew Hirsch, as  
Attorney-in-fact for Lewis C. Cantley Jr.    08/24/2017

\*\* 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.

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