
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13D

Under the Securities Exchange Act of 1934
(Amendment No. 4)*

Agios Pharmaceuticals, Inc.

(Name of Issuer)

Common Stock, \$0.0001 par value
(Title of Class of Securities)

00847X104
(CUSIP Number)

Mark J. Alles
Chief Executive Officer
Celgene Corporation
86 Morris Avenue
Summit, New Jersey 07901
(908) 673-9000

(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

January 23, 2018
(Date of Event Which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition which is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(e), 13d-1(f) or 13d-1(g) check the following box:

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See Rule 13d-7 for other parties to whom copies are to be sent.

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

SCHEDULE 13D

CUSIP No. 00847X104

1	Name of reporting person: CELGENE SWITZERLAND LLC	
2	Check the appropriate box if a member of a group* (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC use only	
4	Source of funds* WC	
5	Check box if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or place of organization Delaware, U.S.A.	
Number of shares beneficially owned by each reporting person with	7	Sole voting power -0-
	8	Shared voting power 624,575
	9	Sole dispositive power -0-
	10	Shared dispositive power 624,575
11	Aggregate amount beneficially owned by each reporting person 624,575	
12	Check box if the aggregate amount in Row (11) excludes certain shares* <input type="checkbox"/>	
13	Percent of class represented by amount in Row (11) 1.1% ⁽¹⁾	
14	Type of reporting person* OO	

(1) The percentage ownership is based upon 55,707,542 shares of Common Stock outstanding as of January 23, 2018, which includes (a) 48,617,989 shares of Common Stock outstanding as of September 30, 2017, as reported by Agios in its prospectus filed with the Securities and Exchange Commission on January 18, 2018, and (b) 7,089,553 shares of Common Stock issued by Agios in the Offering.

SCHEDULE 13D

CUSIP No. 00847X104

1	Name of reporting person: I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITY ONLY) CELGENE EUROPEAN INVESTMENT COMPANY LLC 90-0587060	
2	Check the appropriate box if a member of a group* (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC use only	
4	Source of funds* WC	
5	Check box if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or place of organization Delaware, U.S.A.	
Number of shares beneficially owned by each reporting person with	7	Sole voting power -0-
	8	Shared voting power 4,010,926
	9	Sole dispositive power -0-
	10	Shared dispositive power 4,010,926
11	Aggregate amount beneficially owned by each reporting person 4,010,926	
12	Check box if the aggregate amount in Row (11) excludes certain shares* <input type="checkbox"/>	
13	Percent of class represented by amount in Row (11) 7.2% ⁽¹⁾	
14	Type of reporting person* OO (limited liability company)	

(1) The percentage ownership is based upon 55,707,542 shares of Common Stock outstanding as of January 23, 2018, which includes (a) 48,617,989 shares of Common Stock outstanding as of September 30, 2017, as reported by Agios in its prospectus filed with the Securities and Exchange Commission on January 18, 2018, and (b) 7,089,553 shares of Common Stock issued by Agios in the Offering.

SCHEDULE 13D

CUSIP No. 00847X104

1	Name of reporting person: I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITY ONLY) CELGENE ALPINE INVESTMENT CO., LLC 45-4054818	
2	Check the appropriate box if a member of a group* (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC use only	
4	Source of funds* WC	
5	Check box if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or place of organization Delaware, U.S.A.	
Number of shares beneficially owned by each reporting person with	7	Sole voting power -0-
	8	Shared voting power 708,333
	9	Sole dispositive power -0-
	10	Shared dispositive power 708,333
11	Aggregate amount beneficially owned by each reporting person 708,333	
12	Check box if the aggregate amount in Row (11) excludes certain shares* <input type="checkbox"/>	
13	Percent of class represented by amount in Row (11) 1.3% ⁽¹⁾	
14	Type of reporting person* OO (limited liability company)	

(1) The percentage ownership is based upon 55,707,542 shares of Common Stock outstanding as of January 23, 2018, which includes (a) 48,617,989 shares of Common Stock outstanding as of September 30, 2017, as reported by Agios in its prospectus filed with the Securities and Exchange Commission on January 18, 2018, and (b) 7,089,553 shares of Common Stock issued by Agios in the Offering.

SCHEDULE 13D

CUSIP No. 00847X104

1	Name of reporting person: I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITY ONLY) CELGENE CORPORATION 22-2711928	
2	Check the appropriate box if a member of a group* (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC use only	
4	Source of funds* WC	
5	Check box if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or place of organization Delaware, U.S.A.	
Number of shares beneficially owned by each reporting person with	7	Sole voting power 1,374,599
	8	Shared voting power 5,343,834
	9	Sole dispositive power 1,374,599
	10	Shared dispositive power 5,343,834
11	Aggregate amount beneficially owned by each reporting person 6,718,433	
12	Check box if the aggregate amount in Row (11) excludes certain shares* <input type="checkbox"/>	
13	Percent of class represented by amount in Row (11) 12.1% ⁽¹⁾	
14	Type of reporting person* CO	

(1) The percentage ownership is based upon 55,707,542 shares of Common Stock outstanding as of January 23, 2018, which includes (a) 48,617,989 shares of Common Stock outstanding as of September 30, 2017, as reported by Agios in its prospectus filed with the Securities and Exchange Commission on January 18, 2018, and (b) 7,089,553 shares of Common Stock issued by Agios in the Offering.

This Amendment No. 4 amends the Schedule 13D (the “**Schedule 13D**”) filed with the Securities and Exchange Commission (the “**Commission**”) on August 6, 2013 by Celgene European Investment Company LLC, Celgene Alpine Investment Co., LLC (“**Celgene Alpine**”) and Celgene Corporation (“**Celgene**”), as amended by Amendment No. 1 thereto filed with the Commission on April 30, 2014, as amended by Amendment No. 2 thereto filed with the Commission on December 17, 2014, and as amended by Amendment No. 3 thereto filed with the Commission on April 24, 2017, with respect to common stock, par value \$0.0001 per share (“**Common Stock**”), of Agios Pharmaceuticals, Inc., a Delaware corporation (“**Agios**”). Capitalized terms used, but not defined herein, have the meanings ascribed to them in the Schedule 13D.

Item 1. Security and Issuer.

No modification.

Item 2. Identity and Background.

Item 2 is hereby amended and supplemented by adding the Schedule A hereto. During the past five years, none of the Reporting Persons, nor, to the knowledge of the Reporting Persons, any of the persons listed on Schedule A hereto, has been (i) convicted in a criminal proceeding (excluding traffic violations and similar misdemeanors), or (ii) a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

Item 3. Source and Amount of Funds or Other Consideration.

No modification.

Item 4. Purpose of Transaction.

Item 4 is hereby amended and supplemented by adding the following:

On January 23, 2018, Agios completed its underwritten public offering (the “**Offering**”) of 7,089,553 shares of Common Stock at a public offering price of \$67.00 per share, and Celgene purchased (the “**Purchase**”) 851,154 shares of Common Stock at a purchase price of \$67.00 per share in the Offering for investment purposes. Following the Offering and the Purchase, Celgene beneficially owns 1,374,599 shares of Common Stock and Celgene shares beneficial ownership of an aggregate of 6,718,433 shares of Common Stock, collectively representing approximately 12.1% of the shares of Common Stock outstanding as of January 23, 2018, which includes (a) 48,617,989 shares of Common Stock outstanding as of September 30, 2017, as reported by Agios in its prospectus filed with the Commission on January 18, 2018, and (b) 7,089,553 shares of Common Stock issued by Agios in the Offering.

Item 5. Interest in Securities of the Issuer.

Item 5(a)-(c) is hereby amended and restated as follows:

On January 23, 2018, Agios completed the Offering and Celgene completed the Purchase. Following the Offering and the Purchase, Celgene beneficially owns 1,374,599 shares of Common Stock and Celgene shares beneficial ownership of an aggregate of 6,718,433 shares of Common Stock, collectively representing approximately 12.1% of the shares of Common Stock outstanding as of January 23, 2018, which includes (a) 48,617,989 shares of Common Stock outstanding as of September 30, 2017, as reported by Agios in its prospectus filed with the Commission on January 18, 2018, and (b) 7,089,553 shares of Common Stock issued by Agios in the Offering.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer.

Item 6 is hereby amended and supplemented by adding the following:

In connection with the Offering, Celgene and the underwriters of the Offering entered into a letter agreement (the “**Lock-up Agreement**”), pursuant to which Celgene agreed not to, among other things, offer, pledge, sell or transfer any Agios securities for a period of 60 days after the date of the final prospectus relating to the Offering without the consent of the underwriters of the Offering, subject to certain limited exceptions.

A copy of the Form of Lock-up Agreement is filed as an exhibit to this Amendment and incorporated herein by reference.

Item 7. Material to Be Filed as Exhibits.

Item 7 is hereby amended and supplemented by adding the following:

Exhibit 7 – Form of Lock-up Agreement.

SIGNATURE

After reasonable inquiry and to the best of its knowledge and belief, the undersigned certifies that the information set forth in this statement is true, complete and correct.

CELGENE SWITZERLAND LLC

Date: January 23, 2018

By: /s/ Kevin Mello
Kevin Mello
Manager

CELGENE EUROPEAN INVESTMENT COMPANY LLC

Date: January 23, 2018

By: /s/ Kevin Mello
Kevin Mello
Manager

CELGENE ALPINE INVESTMENT CO., LLC

Date: January 23, 2018

By: /s/ Kevin Mello
Kevin Mello
Manager

CELGENE CORPORATION

Date: January 23, 2018

By: /s/ Peter N. Kellogg
Peter N. Kellogg
Executive Vice President and
Chief Financial Officer

SCHEDULE A

Name, business address, present principal occupation or employment and place of citizenship of the directors and executive officers of the Reporting Persons

The name, business address and present principal occupation or employment of each of the directors and executive officers of the Reporting Persons are set forth below. The business address of each director and executive officer is c/o 86 Morris Avenue, Summit, New Jersey 07901. Unless otherwise indicated, each director and executive officer is a citizen of the United States.

CELGENE CORPORATION — BOARD OF DIRECTORS

<u>Name and Position</u>	<u>Present Principal Occupation or Employment</u>
Robert J. Hugin Executive Chairman	Executive Chairman of Celgene Corporation
Mark J. Alles Chief Executive Officer	Chief Executive Officer of Celgene Corporation
Richard W. Barker, D.Phil. Director (Citizen of the United Kingdom)	Director of the Centre for Accelerating Medical Innovations; Chairman of the Health Innovation Network of South London, UK; Chairman of International Health Partners; Chairman of Image Analysis Group
Michael W. Bonney Director	Formerly Chief Executive Officer and a director of Cubist Pharmaceuticals Inc.; Chairman of the Board of Alnylam Pharmaceuticals, Inc.; member of the Board of Directors of Global Blood Therapeutics, Inc.; Trustee of the Tekla complex of life sciences and dedicated funds; Board of Trustee Chair of Bates College
Michael D. Casey Director	Formerly Chairman, President, Chief Executive Officer and a director of Matrix Pharmaceutical, Inc.; Director of Abaxis, Inc.
Carrie S. Cox Director	Chairman of the Board of Directors and Chief Executive Officer of Humacyte, Inc.; member of Board of Directors of Texas Instruments; member of Board of Directors of Cardinal Health, Inc.
Michael A. Friedman, M.D. Director	Emeritus Chief Executive Officer of City of Hope; member of Board of Directors of MannKind Corporation; member of Board of Directors of Smith & Nephew plc; member of the Board of Directors of Intuitive Surgical, Inc.; member of Board of Trustees of Tulane University
Julia A. Haller, M.D. Director	Ophthalmologist-in-Chief of the Wills Eye Hospital, Philadelphia, PA; Professor and Chair of the Department of Ophthalmology at Jefferson Medical College of Thomas Jefferson University and Thomas Jefferson University Hospitals
Gilla Kaplan, Ph.D. Director	Director of the Global Health Program, Tuberculosis, at the Bill and Melinda Gates Foundation
James J. Loughlin Director	Formerly National Director of the Pharmaceuticals Practice at KPMG LLP; member of Board of Directors of each of Edge Therapeutics, Inc.
Ernest Mario, Ph.D. Director	Chairman of the Board of each of Soleno Therapeutics Inc. (formerly Capnia, Inc.) and Chimerix Inc.; member of the Board of Directors of Tonix Pharmaceutical Holding Corp.

CELGENE CORPORATION — EXECUTIVE OFFICERS

Name	Title
Robert J. Hugin	Executive Chairman
Mark J. Alles	Chief Executive Officer
Peter N. Kellogg	Executive Vice President and Chief Financial Officer
Scott A. Smith	President and Chief Operating Officer
Terrie Curran	President, Inflammation & Immunology
Rupert Vessey	President, Research and Early Development
Nadim Ahmed	President, Hematology & Oncology
Gerald Masoudi	Executive Vice President, General Counsel and Corporate Secretary

CELGENE SWITZERLAND LLC

Name	Present Principal Occupation or Employment
Kevin Mello (Citizen of Bermuda)	Manager of Celgene Switzerland LLC

CELGENE EUROPEAN INVESTMENT COMPANY LLC

Name	Present Principal Occupation or Employment
Kevin Mello (Citizen of Bermuda)	Manager of Celgene European Investment Company LLC

CELGENE ALPINE INVESTMENT CO., LLC

Name	Present Principal Occupation or Employment
Kevin Mello (Citizen of Bermuda)	Manager of Celgene Alpine Investment Co., LLC

EXHIBIT 7

FORM OF LOCK-UP AGREEMENT

January 17, 2018

J.P. Morgan Securities LLC
Goldman Sachs & Co. LLC
Cowen and Company, LLC
As Representatives of
the several Underwriters listed in
Schedule 1 to the Underwriting
Agreement referred to below

c/o J.P. Morgan Securities LLC
383 Madison Avenue
New York, New York 10179

c/o Goldman Sachs & Co. LLC
200 West Street
New York, New York 10282

c/o Cowen and Company, LLC
599 Lexington Avenue
New York, New York 10022

Re: Agios Pharmaceuticals, Inc. — Public Offering

Ladies and Gentlemen:

The undersigned understands that you, as Representatives of the several Underwriters, propose to enter into an Underwriting Agreement (the “Underwriting Agreement”) with Agios Pharmaceuticals, Inc., a Delaware corporation (the “Company”), providing for the public offering (the “Public Offering”) by the several Underwriters named in Schedule 1 to the Underwriting Agreement (the “Underwriters”), of common stock, of the Company (the “Securities”). Capitalized terms used herein and not otherwise defined shall have the meanings set forth in the Underwriting Agreement.

In consideration of the Underwriters' agreement to purchase and make the Public Offering of the Securities, and for other good and valuable consideration receipt of which is hereby acknowledged, the undersigned hereby agrees that, without the prior written consent of J.P. Morgan Securities LLC and Goldman Sachs & Co. LLC on behalf of the Underwriters, the undersigned will not, during the period commencing on the date hereof and ending 60 days after the date of the final prospectus relating to the Public Offering (the "Prospectus") such period, the "Restricted Period"), (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of common stock, \$0.001 per share par value, of the Company (the "Common Stock") or any securities convertible into or exercisable or exchangeable for Common Stock (including without limitation, Common Stock or such other securities which may be deemed to be beneficially owned by the undersigned in accordance with the rules and regulations of the Securities and Exchange Commission (the "Commission") and securities which may be issued upon exercise of a stock option or warrant), or publicly disclose the intention to make any offer, sale, pledge or disposition, (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Common Stock or such other securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise or (3) make any demand for or exercise any right with respect to the registration of any shares of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock, in each case other than (A) transfers of shares of Common Stock or such other securities as a bona fide gift or gifts, (B) transfers or dispositions of shares of Common Stock or such other securities to any trust for the direct or indirect benefit of the undersigned or the immediate family of the undersigned in a transaction not involving a disposition for value, (C) transfers or dispositions of shares of Common Stock or such other securities to any corporation, partnership, limited liability company or other entity all of the beneficial ownership interests of which are held by the undersigned or the immediate family of the undersigned in a transaction not involving a disposition for value, (D) transfers or dispositions of shares of Common Stock or such other securities by will, other testamentary document or intestate succession to the legal representative, heir, beneficiary or a member of the immediate family of the undersigned, and (E) distributions of shares of Common Stock or such other securities to partners, members or stockholders of the undersigned; provided that in the case of any transfer, disposition or distribution pursuant to clause (A), (B), (C), (D) or (E) each transferee, donee or distributee shall execute and deliver to the Representatives a lock-up letter in the form of this paragraph; and provided, further, that in the case of any transfer, disposition or distribution pursuant to clause (A), (B), (C), (D) or (E), no filing by any party (donor, donee, transferor or transferee) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or other public announcement shall be required or shall be made voluntarily in connection with such transfer, disposition or distribution (other than a filing on a Form 5 made after the expiration of the Restricted Period). For purposes of this Letter Agreement, "immediate family" shall mean any relationship by blood, marriage or adoption, not more remote than first cousin. Furthermore, notwithstanding the restrictions imposed by this Letter Agreement, the undersigned may, without the prior written consent of J.P. Morgan Securities LLC and Goldman Sachs & Co. LLC, (i) transfer the undersigned's Common Stock or any security convertible into or exercisable or exchangeable for Common Stock to the Company pursuant to any contractual arrangement in effect on the date of this Letter Agreement that provides for the repurchase of the undersigned's Common Stock or such other securities by the Company or in connection with the termination of the undersigned's employment with the Company, provided that no filing by any party under the Exchange Act or other public announcement shall be required or shall be made voluntarily in connection with such transfer, disposition or distribution (other than a filing on a Form 5 made after the expiration of the Restricted Period), (ii) establish a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of Common Stock, provided that such plan does not provide for any transfers of Common Stock during the Restricted Period or any extension thereof pursuant to this Letter Agreement and provided, further, that no filing with the Commission or other public announcement shall be required or voluntarily made by the undersigned or any other person in connection therewith and (iii) transfer or dispose of shares of Common Stock acquired on the open market following the Public Offering, provided that no filing by any party under the Exchange Act or other public announcement reporting a reduction in the beneficial ownership of Common Stock held by the undersigned shall be required or shall be made voluntarily in connection with such transfer or disposition (other than a filing on Form 5 made after the expiration of the Restricted Period referred to above).

In the event that during the Restricted Period, J.P. Morgan Securities LLC and Goldman Sachs & Co. LLC waive any prohibition on the transfer of shares of Common Stock held by any director or executive officer of the Company or any person or entity that beneficially owns 5% or more of the outstanding shares of Common Stock, J.P. Morgan Securities LLC and Goldman Sachs & Co. LLC shall be deemed to have also waived the prohibitions set forth in this Letter Agreement that would otherwise have applied to the undersigned with respect to the same percentage of the undersigned's shares of Common Stock as the relative percentage of aggregate shares held by such party receiving the waiver which are subject to such waiver. The provisions of this paragraph will not apply: (1) unless and until J.P. Morgan Securities LLC and Goldman Sachs & Co. LLC have first waived more than 0.5% of the Company's total outstanding shares of Common Stock from such prohibitions, (2) (a) if the release or waiver is effected solely to permit a transfer not for consideration and (b) the transferee has agreed in writing to be bound by the same terms described in this Letter Agreement to the extent and for the duration that such terms remain in effect at the time of the transfer, or (3) if the release or waiver is granted to a holder of Common Stock in connection with a follow-on public offering of such Securities pursuant to a registration statement on Form S-1 that is filed with the Commission. In the event that, as a result of this paragraph, any shares of Common Stock held by the undersigned are released from the restrictions imposed by this Letter Agreement, J.P. Morgan Securities LLC and Goldman Sachs & Co. LLC shall use their commercially reasonable efforts to notify the undersigned within three business days that the same percentage of shares of Common Stock held by the undersigned has been released; provided that the failure to give such notice shall not give rise to any claim or liability against J.P. Morgan Securities LLC and Goldman Sachs & Co. LLC or the Underwriters.

In furtherance of the foregoing, the Company and any duly appointed transfer agent for the registration or transfer of the securities described herein, are hereby authorized to decline to make any transfer of securities if such transfer would constitute a violation or breach of this Letter Agreement.

The undersigned hereby represents and warrants that the undersigned has full power and authority to enter into this Letter Agreement. All authority herein conferred or agreed to be conferred and any obligations of the undersigned shall be binding upon the successors, assigns, heirs or personal representatives of the undersigned.

This Letter Agreement shall automatically terminate and the undersigned shall be released from all obligations under this Letter Agreement upon the earliest to occur, if any, of: (a) either the Company, on the one hand, or either the Representatives, on the other hand, advising the other in writing, prior to the execution of the Underwriting Agreement, that they have determined not to proceed with the Public Offering, (b) termination of the Underwriting Agreement (other than the provisions thereof which survive termination) prior to the sale of any of the Securities to the Underwriters, and (c) the registration statement filed with the Commission with respect to the Public Offering is withdrawn. The undersigned understands that the Underwriters are entering into the Underwriting Agreement and proceeding with the Public Offering in reliance upon this Letter Agreement.

Very truly yours,

NAME OF STOCKHOLDER

By: _____

Name:

Title:
