UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8 REGISTRATION STATEMENT UNDER

THE SECURITIES ACT OF 1933

Agios Pharmaceuticals, Inc.

(Exact Name of Registrant as Specified in Its Charter)

Delaware (State or Other Jurisdiction of Incorporation or Organization)

88 Sidney Street Cambridge, MA (Address of Principal Executive Offices) 26-0662915 (I.R.S. Employer Identification No.)

> 02139 (Zip Code)

> > Accelerated filer

Smaller reporting company Emerging growth company 2013 Stock Incentive Plan (Full Title of the Plan)

David P. Schenkein, M.D. President and Chief Executive Officer Agios Pharmaceuticals, Inc. 88 Sidney Street Cambridge, MA 02139 (Name and Address of Agent For Service)

(617) 649-8600

(Telephone Number, Including Area Code, of Agent For Service)

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Non-accelerated filer \Box (Do not check if a smaller reporting company)

CALCULATION OF REGISTRATION FEE

Title of Securities	Amount to be	Proposed Maximum Offering Price	Proposed Maximum Aggregate	Amount of
to be Registered	Registered(1)	Per Share	Offering Price	Registration Fee
Common Stock, \$0.001 par value per share	1,953,046	\$76.27(2)	\$148,958,818(2)	\$18,546

(1) In accordance with Rule 416 under the Securities Act of 1933, as amended, this registration statement shall be deemed to cover any additional securities that may from time to time be offered or issued to prevent dilution resulting from stock splits, stock dividends or similar transactions.

(2) Estimated solely for the purpose of calculating the registration fee pursuant to Rules 457(c) and 457(h) of the Securities Act of 1933, as amended, and based upon the average of the high and low sale prices of the Registrant's Common Stock as reported on the Nasdaq Global Select Market on February 8, 2018.

Statement of Incorporation by Reference

This Registration Statement on Form S-8, relating to the 2013 Stock Incentive Plan of Agios Pharmaceuticals, Inc. (the "Registrant"), is being filed for the purpose of registering additional securities of the same class as other securities for which a Registration Statement on Form S-8 has previously been filed and is effective. Accordingly, this Registration Statement incorporates by reference the contents of (i) the Registration Statement on Form S-8, File No. 333-190101, filed with the Securities and Exchange Commission on July 24, 2013 by the Registrant, relating to the Registrant's 2007 Stock Incentive Plan, 2013 Stock Incentive Plan and 2013 Employee Stock Purchase Plan, (ii) the Registration Statement on Form S-8, File No. 333-193802, filed with the Securities and Exchange Commission on January 30, 2015, relating to the Registrant's 2013 Stock Incentive Plan, (iv) the Registration Statement on Form S-8, File No. 333-209755, filed with the Securities and Exchange Commission on February 26, 2016 and (v) the Registration Statement on Form S-8, File No. 333-216106, filed with the Securities and Exchange Commission on February 16, 2017, relating to the Registrant's 2013 Stock Incentive Plan, in each case except for Item 8, Exhibits.

Item 8. Exhibits

Exhibit		Incorporate		ed by Reference		Filed
Number 4.1	Description of Exhibit <u>Restated Certificate of Incorporation of the Registrant</u>	<u>Form</u> 8-K	<u>File Number</u> 001-36014	Date of Filing July 30, 2013	Exhibit <u>Number</u> 3.1	Flied <u>Herewith</u>
4.2	Amended and Restated By-Laws of the Registrant	8-K	001-36014	July 30, 2013	3.2	
5.1	Opinion of Wilmer Cutler Pickering Hale and Dorr LLP, counsel to the Registrant					Х
23.1	Consent of Wilmer Cutler Pickering Hale and Dorr LLP (included in Exhibit 5.1)					Х
23.2	Consent of PricewaterhouseCoopers LLP, an independent registered public accounting <u>firm</u>					Х
23.3	Consent of Ernst & Young LLP, an independent registered public accounting firm					Х
24.1	Power of attorney (included on the signature pages of this registration statement)					Х
99.1	2013 Stock Incentive Plan	S-1	333-189216	June 24, 2013	10.4	

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cambridge, Commonwealth of Massachusetts, on this 14th day of February, 2018.

AGIOS PHARMACEUTICALS, INC.

By: /s/ David P. Schenkein

David P. Schenkein, M.D. President and Chief Executive Officer

POWER OF ATTORNEY AND SIGNATURES

We, the undersigned officers and directors of Agios Pharmaceuticals, Inc., hereby severally constitute and appoint David P. Schenkein, M.D. and Andrew Hirsch and each of them singly, our true and lawful attorneys with full power to them, and each of them singly, to sign for us and in our names in the capacities indicated below, the registration statement on Form S-8 filed herewith and any and all subsequent amendments to said registration statement, and generally to do all such things in our names and on our behalf in our capacities as officers and directors to enable Agios Pharmaceuticals, Inc. to comply with the provisions of the Securities Act of 1933, as amended, and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys, or any of them, to said registration statement and any and all amendments thereto.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ David P. Schenkein David P. Schenkein, M.D.	President, Chief Executive Officer and Director (Principal executive officer)	February 14, 2018
/s/ Andrew Hirsch Andrew Hirsch	Chief Financial Officer (Principal financial officer)	February 14, 2018
/s/ Carman Alenson Carman Alenson	Vice President of Accounting, Treasury and Tax (Principal accounting officer)	February 14, 2018
/s/ Paul J. Clancy Paul J. Clancy	Director	February 14, 2018
/s/ Ian Clark Ian Clark	Director	February 14, 2018
/s/ Kaye Foster Kaye Foster	Director	February 14, 2018
/s/ Jacqualyn Fouse Jacqualyn Fouse, Ph.D.	Director	February 14, 2018
/s/ Maykin Ho Maykin Ho, Ph.D.	Director	February 14, 2018
/s/ John M. Maraganore John M. Maraganore, Ph.D.	Director	February 14, 2018
/s/ David Scadden David Scadden, M.D.	Director	February 14, 2018

WILMERHALE

+1 617 526 6000 (t) +1 617 526 5000 (f) wilmerhale.com

February 14, 2018

Agios Pharmaceuticals, Inc. 88 Sidney Street Cambridge, MA 02139

Re: Registration Statement on Form S-8: 2013 Stock Incentive Plan

Ladies and Gentlemen:

We have assisted in the preparation of a Registration Statement on Form S-8 (the "Registration Statement") to be filed with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), relating to an aggregate of 1,953,046 shares of common stock, \$0.001 par value per share (the "Shares"), of Agios Pharmaceuticals, Inc., a Delaware corporation (the "Company"), issuable under the Company's 2013 Stock Incentive Plan (the "Plan").

We have examined the Certificate of Incorporation and By-Laws of the Company, each as amended and restated to date, and originals, or copies certified to our satisfaction, of all pertinent records of the meetings of the directors and stockholders of the Company, the Registration Statement and such other documents relating to the Company as we have deemed material for the purposes of this opinion.

In our examination of the foregoing documents, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified, photostatic or other copies, the authenticity of the originals of any such documents and the legal competence of all signatories to such documents.

We assume that the appropriate action will be taken, prior to the offer and sale of the Shares in accordance with the Plan, to register and qualify the Shares for sale under all applicable state securities or "blue sky" laws.

We express no opinion herein as to the laws of any state or jurisdiction other than the state laws of the Commonwealth of Massachusetts, the General Corporation Law of the State of Delaware and the federal laws of the United States of America.

It is understood that this opinion is to be used only in connection with the offer and sale of the Shares while the Registration Statement is in effect.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters.

Based on the foregoing, we are of the opinion that the Shares have been duly authorized for issuance and, when the Shares are issued and paid for in accordance with the terms and conditions of the Plan, the Shares will be validly issued, fully paid and nonassessable.

Wilmer Cutler Pickering Hale and Dorr LLP, 60 State Street, Boston, Massachusetts 02109

Beijing Berlin Boston Brussels Denver Frankfurt London Los Angeles New York Palo Alto Washington

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Agios Pharmaceuticals, Inc. February 14, 2018 Page 2

We hereby consent to the filing of this opinion with the Commission in connection with the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act. In giving such consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission.

Very truly yours,

WILMER CUTLER PICKERING HALE AND DORR LLP

By: /s/ Cynthia T. Mazareas Cynthia T. Mazareas, a Partner

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated February 14, 2018 relating to the financial statements and the effectiveness of internal controls over financial reporting, which appears in Agios Pharmaceuticals, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2017.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts February 14, 2018

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the 2013 Stock Incentive Plan of Agios Pharmaceuticals, Inc. of our report dated February 16, 2017, with respect to the consolidated financial statements of Agios Pharmaceuticals, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2017, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Boston, Massachusetts February 14, 2018