UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8 REGISTRATION STATEMENT

UNDER
THE SECURITIES ACT OF 1933

CERULEAN PHARMA INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

35 Gatehouse Drive Waltham, MA

(Address of principal executive offices)

20-4139823

(I.R.S. Employer Identification No.)

02451 (Zip Code)

2014 Stock Incentive Plan
2014 Employee Stock Purchase Plan
(Full title of the plan)

(Full title of the plan)

Christopher D.T. Guiffre President and Chief Executive Officer Cerulean Pharma Inc. 35 Gatehouse Drive Waltham, MA 02451

(Name and address of agent for service)

781-996-4300

(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, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

| Large accelerated filer | | Accelerated filer | \times |
|-------------------------|---|---------------------------|----------|
| Non-accelerated filer | \square (Do not check if a smaller reporting company) | Smaller reporting company | |

CALCULATION OF REGISTRATION FEE

| Title of Securities to be Registered | Amount to be Registered(1) | Proposed Maximum Offering Price Per Share | Proposed Maximum Aggregate Offering Price | Amount of Registration Fee |
|--|----------------------------------|---|---|-------------------------------|
| Common Stock, \$0.0001 par value per share | 1,273,468 shares(2) | \$2.33(3) | \$2,967,180(3) | \$300 |

- 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.
- Consists of (i) 1,000,000 shares issuable under the 2014 Stock Incentive Plan, and (ii) 273,468 shares issuable under the 2014 Employee Stock Purchase Plan.
- Estimated solely for the purpose of calculating the registration fee pursuant to Rules 457(c) and 457(h) and based upon the average of the high and low prices of the registrant's common stock on the NASDAQ Global Market on May 23, 2016.

Statement of Incorporation by Reference

This Registration Statement on Form S-8 is being filed to register the offer and sale of an additional 1,000,000 shares of Common Stock, \$0.0001 par value per share (the "Common Stock"), of Cerulean Pharma Inc. (the "Registrant") to be issued under the Registrant's 2014 Stock Incentive Plan (the "Stock Incentive Plan") and an additional 273,468 shares of Common Stock to be issued under the Registrant's 2014 Employee Stock Purchase Plan (together with the Stock Incentive Plan, the "Plans"). In accordance with General Instruction E to Form S-8, this Registration Statement incorporates by reference the contents of the Registration Statement on Form S-8 filed by the Registrant on August 13, 2014 (File No. 333-198126) relating to the Plans and the Registration Statement on Form S-8 filed by the Registrant on May 8, 2015 (File No. 333-204007) relating to the Plans, except in each case for Item 8, Exhibits, with respect to which the Exhibit Index immediately preceding the exhibits attached hereto is incorporated by reference.

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 Waltham, Commonwealth of Massachusetts, on this 27th day of May, 2016.

CERULEAN PHARMA INC.

By: /s/ Christopher D.T. Guiffre

Name: Christopher D.T. Guiffre

Title: President and Chief Executive Officer

POWER OF ATTORNEY AND SIGNATURES

We, the undersigned officers and directors of Cerulean Pharma Inc., hereby severally constitute and appoint Christopher D. T. Guiffre and Gregg Beloff, 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 Cerulean Pharma 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 /s/ Christopher D.T. Guiffre Christopher D.T. Guiffre. | Title President, Chief Executive Officer and Director (principal executive officer) | <u>Date</u> May 27, 2016 |
|--|---|------------------------------------|
| <u>/s/ Gregg Beloff</u> Gregg Beloff | Interim Chief Financial Officer (principal financial officer) | May 27, 2016 |
| /s/ James E. O'Neill James E. O'Neill | Controller (principal accounting officer) | May 27, 2016 |
| /s/ Paul A. Friedman Paul A. Friedman, M.D. | Director | May 27, 2016 |
| /s/ William H. Rastetter William H. Rastetter, Ph.D. | Director | May 27, 2016 |
| _/s/ Stuart A. Arbuckle Stuart A. Arbuckle | Director | May 27, 2016 |
| _/s/ Alan L. Crane Alan L. Crane | Director | May 27, 2016 |
| _/s/ Steven E. Hall Steven E. Hall, Ph.D. | Director | May 27, 2016 |
| _/s/ Susan L. Kelley Susan L. Kelley, M.D. | Director | May 27, 2016 |
| <u>/s/ William T. McKee</u> William T. McKee | Director | May 27, 2016 |
| /s/ David R. Parkinson David R. Parkinson, M.D. | Director | May 27, 2016 |
| /s/ David R. Walt David R. Walt, Ph.D. | Director | May 27, 2016 |
| | 3. | |

INDEX TO EXHIBITS

| Number | <u>Description</u> |
|---------|--|
| 4.1(1) | Restated Certificate of Incorporation of the Registrant |
| 4.2(1) | Amended and Restated By-Laws of the Registrant |
| 5.1 | Opinion of Wilmer Cutler Pickering Hale and Dorr LLP, counsel to the Registrant |
| 23.1 | Consent of Wilmer Cutler Pickering Hale and Dorr LLP (included in Exhibit 5.1) |
| 23.2 | Consent of Deloitte & Touche LLP |
| 24.1 | Power of attorney (included on the signature pages of this registration statement) |
| 99.1(2) | 2014 Stock Incentive Plan |
| 99.2(2) | 2014 Employee Stock Purchase Plan |

⁽¹⁾ Previously filed with the Securities and Exchange Commission as an Exhibit to the Registrant's Current Report on Form 8-K (File No. 001- 36395) on April 16, 2014 and incorporated herein by reference.

Previously filed with the Securities and Exchange Commission as an Exhibit to Amendment No. 2 to the Registrant's Registration Statement on Form S-1 (File No. 333- 194442) on March 31, 2014 and incorporated herein by reference.

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May 27, 2016

Cerulean Pharma Inc. 35 Gatehouse Drive Waltham, MA 02451

Re: Registration Statement on Form S-8: 2014 Stock Incentive Plan and 2014 Employee Stock Purchase 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 1,273,468 shares of common stock, \$0.0001 par value per share (the "Shares"), of Cerulean Pharma Inc., a Delaware corporation (the "Company"), issuable under the Company's 2014 Stock Incentive Plan and 2014 Employee Stock Purchase Plan (collectively, the "Plans").

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 Plans, 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 applicable 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

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/ Lia Der Marderosian

Lia Der Marderosian, a Partner

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-8 of our report relating to the consolidated financial statement of Cerulean Pharma Inc. (the "Company") dated March 10, 2016 appearing in the Annual Report on Form 10-K of the Company for the year ended December 31, 2015.

/s/ Deloitte & Touche LLP

Boston, MA May 27, 2016