UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8 REGISTRATION STATEMENT

UNDER
THE SECURITIES ACT OF 1933

NEUROCRINE BIOSCIENCES, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware (State or Other Jurisdiction of Incorporation or Organization) 33-0525145 (I.R.S. Employer Identification No.)

12780 El Camino Real San Diego, CA 92130 (Address of Principal Executive Offices)

Neurocrine Biosciences, Inc. 2011 Equity Incentive Plan (Full Title of the Plan)

Kevin C. Gorman
President and Chief Executive Officer
Neurocrine Biosciences, Inc.
12780 El Camino Real
San Diego, CA 92130
(Name and Address of Agent for Service)

(858) 617-7600 (Telephone Number, Including Area Code, of Agent for Service)

Copies to:

Darin M. Lippoldt Chief Legal Officer Neurocrine Biosciences, Inc. 12780 El Camino Real San Diego, CA 92130 (858) 617-7600 Jason L. Kent, Esq.
Nathan J. Nouskajian, Esq.
Cooley LLP
4401 Eastgate Mall
San Diego, CA 92121
(858) 550-6000

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

Non-accelerated filer

(Do not check if a smaller reporting company)

Accelerated filer

Smaller reporting company □

CALCULATION OF REGISTRATION FEE

		Proposed	Proposed	
		Maximum	Maximum	
Title of Each Class		Offering	Aggregate	Amount of
of Securities to	Amount to be	Price per Share	Offering Price	Registration
be Registered	Registered (1)	(2)	(2)	Fee
Common Stock (par value \$0.001 per share) issuable under 2011				
Equity Incentive Plan	2,000,000 shares (3)	\$51.45	\$102,900,000	\$10,362.03

⁽¹⁾ Pursuant to Rule 416(a) of the Securities Act of 1933, as amended (the "*Securities Act*"), this registration statement shall also cover any additional shares of the Registrant's common stock that may become issuable under the Neurocrine Biosciences, Inc. 2011 Equity Incentive Plan (the "*2011 Plan*") by reason of any stock dividend, stock split, recapitalization or other similar transaction.

- (2) This estimate is made pursuant to Rule 457(c) and Rule 457(h)(1) of the Securities Act solely for purposes of calculating the registration fee. The price per share and aggregate offering price are based upon the average of the high and low prices of the Registrant's common stock on August 1, 2016, as reported on the Nasdaq Global Select Market.
- (3) Represents shares of the Registrant's common stock that were added to the 2011 Plan pursuant to a share reserve increase approved by the Registrant's stockholders on May 20, 2016.

INCORPORATION BY REFERENCE OF CONTENTS OF REGISTRATION STATEMENTS ON FORM S-8

This Registration Statement on Form S-8 is being filed for the purpose of increasing the number of securities of the same class as other securities for which Registration Statements on Form S-8 relating to the same benefit plans are effective. This Registration Statement on Form S-8 registers the offer and sale of an additional 2,000,000 shares of the Registrant's common stock for issuance under the 2011 Plan. The Registrant previously registered shares of its common stock for issuance under the 2011 Plan on July 29, 2015 (File No. 333-205933), August 6, 2014 (File No. 333-197916), July 26, 2013 (File No. 333-190178) and July 29, 2011 (File No. 333-175889). Pursuant to General Instruction E to Form S-8, this Registration Statement hereby incorporates by reference the contents of the Registration Statements referenced above.

Description

Item 8. Exhibits.

Exhibits:

Certificate of Incorporation. (1)
Certificate of Amendment to Certificate of Incorporation. (1)
Certificate of Amendment to Certificate of Incorporation. (3)
Bylaws, as amended. (1)
Certificate of Amendment of Bylaws. (3)
Reference is made to Exhibits 3.1, 3.2, 3.3, 3.4 and 3.5.
Form of Common Stock Certificate of the Registrant. (2)
Opinion of Cooley LLP.
Consent of Cooley LLP (included in Exhibit 5.1).
Consent of Independent Registered Public Accounting Firm.
Power of Attorney (included on the signature page hereto).
Neurocrine Biosciences, Inc. 2011 Equity Incentive Plan, as amended. (3)
Form of Stock Option Grant Notice and Option Agreement for use under the Neurocrine Biosciences, Inc. 2011 Equity Incentive Plan, and Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Agreement for use under the Neurocrine Biosciences, Inc. 2011 Equity Incentive Plan. (4)

⁽¹⁾ Incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K dated October 2, 2015, and Exhibits 3.1, 3.2 and 3.3 to the Company's Annual Report on From 10-K filed on February 8, 2013 (Registration No. 333-03172).

⁽²⁾ Incorporated by reference to the Registrant's Registration Statement on Form S-1 (Registration No. 333-03172).

⁽³⁾ Incorporated by reference to the Registrant's Current Report on Form 8-K filed with the SEC on May 24, 2016.

⁽⁴⁾ Incorporated by reference to the Registrant's Current Report on Form 8-K filed with the SEC on June 1, 2015.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, 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 San Diego, State of California, on August 3, 2016.

NEUROCRINE BIOSCIENCES, INC.

By: /s/ Kevin C. Gorman

Kevin C. Gorman

President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints KEVIN C. GORMAN and TIMOTHY P. COUGHLIN, and each or either of them, his true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Kevin C. Gorman Kevin C. Gorman, Ph.D.	President, Chief Executive Officer and Director (Principal Executive Officer)	August 3, 2016
/s/ Timothy P. Coughlin Timothy P. Coughlin	Chief Financial Officer (Principal Financial and Accounting Officer)	August 3, 2016
/s/ William H. Rastetter William H. Rastetter, Ph.D.	Chairman of the Board of Directors	August 3, 2016
/s/ Gary A. Lyons Gary A. Lyons	Director	August 3, 2016
/s/ Joseph A. Mollica Joseph A. Mollica, Ph.D.	Director	August 3, 2016
/s/ George J. Morrow George J. Morrow	Director	August 3, 2016
/s/ Corinne H. Nevinny Corinne H. Nevinny	Director	August 3, 2016
/s/ Alfred W. Sandrock Alfred W. Sandrock, Jr., M.D., Ph.D.	Director	August 3, 2016
/s/ Stephen A. Sherwin Stephen A. Sherwin, M.D.	Director	August 3, 2016

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Jason L. Kent T: +1 858 550 6044 jkent@cooley.com

August 3, 2016

Neurocrine Biosciences, Inc. 12780 El Camino Real San Diego, CA 92130

Ladies and Gentlemen:

You have requested our opinion, as counsel to Neurocrine Biosciences, Inc., a Delaware corporation (the "*Company*"), with respect to certain matters in connection with the filing by the Company of a Registration Statement on Form S-8 (the "*Registration Statement*") with the Securities and Exchange Commission, covering the offering of up to 2,000,000 shares of the Company's Common Stock, \$0.001 par value (the "*Shares*"), pursuant to the Company's 2011 Equity Incentive Plan (the "*2011 Plan*").

In connection with this opinion, we have examined and relied upon the Registration Statement and related prospectus, the 2011 Plan, the Company's Certificate of Incorporation and Bylaws, each as amended, and the originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. We have assumed the genuineness and authenticity of all documents submitted to us as originals and the conformity to originals of all documents submitted to us as copies thereof. Our opinion is expressed only with respect to the General Corporation Law of the State of Delaware.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when issued and sold in accordance with the 2011 Plan, the Registration Statement and related prospectus, will be validly issued, fully paid and nonassessable (except as to shares issued pursuant to certain deferred payment arrangements, which will be fully paid and nonassessable when such deferred payments are made in full).

We consent to the filing of this opinion as an exhibit to the Registration Statement.

Sincerely,

Cooley LLP

By: /s/ Jason L. Kent
Jason L. Kent

4401 EASTGATE MALL, SAN DIEGO, CA 92121 T: (858) 550-6000 F: (858) 550-6420 WWW.COOLEY.COM

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the Neurocrine Biosciences, Inc. 2011 Equity Incentive Plan of our reports dated February 11, 2016, with respect to the consolidated financial statements of Neurocrine Biosciences, Inc. and the effectiveness of internal control over financial reporting of Neurocrine Biosciences, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2015, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

San Diego, California August 3, 2016