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:

Margaret Valeur-Jensen, J.D., Ph.D. Executive Vice President, General Counsel and Secretary Neurocrine Biosciences, Inc. 12780 El Camino Real San Diego, CA 92130 (858) 617-7600

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 \Box (Do not check if a smaller reporting company)

CALCULATION OF REGISTRATION FEE

		Proposed	Proposed	
	Amount	Maximum	Maximum	
Title of Each Class of Securities to be Registered	to be Registered (1)	Offering Price per Share (2)	Aggregate Offering Price (2)	Amount of Registration Fee
Common Stock (par value \$0.001 per share)	5,500,000 shares (3)	\$7.86	\$43,230,000	\$5,019
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(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 Neurocrine Biosciences, Inc.'s (the Registrant) 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 July 27, 2011, as reported on the Nasdaq Global Select Market.

(3) Represents shares reserved for issuance under the 2011 Plan. The 2011 Plan was approved by the Registrant's stockholders on May 25, 2011.

Jason L. Kent, Esq. Nathan J. Nouskajian, Esq. Cooley LLP 4401 Eastgate Mall San Diego, CA 92121 (858) 550-6000

Accelerated filer

Smaller reporting company \Box

PART I INFORMATION REQUIRED IN THE SECTION 10(A) PROSPECTUS

The documents containing the information specified in this Part I of Form S-8 (plan information and Registrant information and employee plan annual information) will be sent or given to employees as specified by Securities and Exchange Commission Rule 428(b)(1). Such documents need not be filed with the Securities and Exchange Commission (the Commission) either as part of this Registration Statement or as prospectuses or prospectus supplements pursuant to Rule 424. These documents and the documents incorporated by reference in this Registration Statement pursuant to Item 3 of Part II of this Form S-8, taken together, constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents filed by the Registrant with the Commission are incorporated by reference herein:

- 1. The Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 (including audited financial statements for the Registrant's latest fiscal year), filed with the Commission on February 10, 2011.
- 2. The Registrant's Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2011 (filed with the Commission on May 3, 2011) and June 30, 2011 (filed with the Commission on July 29, 2011).
- 3. The Registrant's Current Reports on Form 8-K filed with the Commission on January 20, 2011 and May 26, 2011.
- 4. The Registrant's Definitive Proxy Statement for its 2011 annual meeting of stockholders, filed with the Commission on April 21, 2011.

All documents filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after the date of this Registration Statement, and prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which de-registers all securities then remaining unsold, shall be deemed to be incorporated by reference in this Registration Statement and to be a part hereof from the date of filing of such documents, except as to any portion of any future annual, quarterly or current report of the Registrant or document that is not deemed filed under such provisions. Unless expressly incorporated into this Registration Statement, a report (or portion thereof) "furnished" on Form 8-K shall not be incorporated by reference into this Registration Statement. Any statement contained in a document incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law (DGCL) generally allows the Registrant to indemnify directors and officers for all expenses, judgments, fines and amounts in settlement actually paid and reasonably incurred in connection with any proceedings so long as such party acted in good faith and in a manner reasonably believed to be in or not opposed to the Registrant's best interests and, with respect to any criminal proceedings, if such party had no reasonable cause to believe his or her conduct to be unlawful. Indemnification may only be made by the Registrant if the applicable standard of conduct set forth in Section 145 has been met by the indemnified party upon a determination made (i) by the Registrant's board of directors by a majority vote of the directors who are not parties to such proceedings, even though less than a quorum, (ii) if there are no such directors, or if such directors so direct, by independent legal counsel in a written opinion or (iii) by the stockholders.

The Registrant's bylaws, as amended, provide for indemnification of its directors and officers to the fullest extent permitted by law.

Section 102(b)(7) of the DGCL provides that a certificate of incorporation may include a provision which eliminates or limits the personal liability of a director to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the company or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the DGCL, relating to prohibited dividends or distributions or the repurchase or redemption of stock or (iv) for any transaction from which the director derives an improper personal benefit. The Registrant's restated certificate of incorporation, as amended, includes such a provision. As a result of this provision, the Registrant and its stockholders may be unable to obtain monetary damages from a director for breach of his or her duty of care.

Insofar as indemnification for liabilities under the Securities Act may be permitted to our directors, officers or controlling persons pursuant to the foregoing provisions, the Registrant has been informed that in the opinion of the Commission such indemnification is against public policy as expressed in such Act and is therefore unenforceable.

Item 7. Exemption From Registration Claimed.

Not applicable.

Item 8.	Exhibits.
Exhibits:	Description
3.1	Certificate of Incorporation. (1)
3.2	Certificate of Amendment to Certificate of Incorporation. (2)
3.3	Bylaws. (1)
3.4	Certificate of Amendment of Bylaws. (3)
3.5	Certificate of Amendment of Bylaws. (4)
3.6	Certificate of Amendment of Bylaws. (5)
4.1	Form of Common Stock Certificate. (1)
5.1	Opinion of Cooley LLP.
23.1	Consent of Cooley LLP (included in Exhibit 5.1).
23.2	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.
24.1	Power of Attorney (included on the signature page hereto).
99.1	Neurocrine Biosciences, Inc. 2011 Equity Incentive Plan, Form of Stock Option Grant Notice and Option Agreement for use thereunder, and Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Agreement for use thereunder. (6)
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(1) Incorporated by reference to the Registrant's Registration Statement on Form S-1 (Registration No. 333-03172).

(2) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q filed on August 9, 2006.

(3) Incorporated by reference to the Registrant's Annual Report on Form 10-K filed on April 10, 1998.

(4) Incorporated by reference to the Registrants' Quarterly Report on Form 10-Q filed on August 9, 2004.

(5) Incorporated by reference to the Registrant's Current Report on Form 8-K filed on February 9, 2010.

(6) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q filed on July 29, 2011.

Item 9. Undertakings.

The undersigned Registrant hereby undertakes:

- 1. to file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
 - a) to include any prospectus required by Section 10(a)(3) of the Securities Act;
 - b) to reflect in the prospectus any facts or events arising after the effective date of this Registration Statement (or the most recent posteffective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this Registration Statement; and
 - c) to include any material information with respect to the plan of distribution not previously disclosed in this Registration Statement or any material change to such information in this Registration Statement.

Provided, however, that clauses 1(a) and 1(b) shall not apply if the information required to be included in a post-effective amendment by those clauses is contained in reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in this Registration Statement.

- 2. That for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof;
- 3. To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering; and
- 4. For purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act that is incorporated by reference in this Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

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 July 29, 2011.

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 (<i>Principal Executive Officer</i>)	July 29, 2011
/s/ TIMOTHY P. COUGHLIN Timothy P. Coughlin	Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	July 29, 2011
/S/ WILLIAM H. RASTETTER, PH.D. William H. Rastetter, Ph.D.	Chairman of the Board of Directors	July 29, 2011
/S/ GARY A. LYONS Gary A. Lyons	Director	July 29, 2011
/S/ W. THOMAS MITCHELL W. Thomas Mitchell	Director	July 29, 2011
/S/ JOSEPH A. MOLLICA, PH.D. Joseph A. Mollica, Ph.D.	Director	July 29, 2011
/s/ Corinne H. Nevinny Corinne H. Nevinny	Director	July 29, 2011
/S/ RICHARD F. POPS Richard F. Pops	Director	July 29, 2011
/s/ STEPHEN A. SHERWIN, M.D. Stephen A. Sherwin, M.D.	Director	July 29, 2011
/S/ WYLIE W. VALE, PH.D. Wylie W. Vale, Ph.D.	Director	July 29, 2011

EXHIBIT INDEX

Description

- 3.1 Restated Certificate of Incorporation. (1)
- 3.2 Certificate of Amendment to Certificate of Incorporation. (2)
- 3.3 Bylaws. (1)

Exhibits:

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- 3.5 Certificate of Amendment of Bylaws. (4)
- 3.6 Certificate of Amendment of Bylaws. (5)
- 4.1 Form of Common Stock Certificate. (1)
- 5.1 Opinion of Cooley LLP.
- 23.1 Consent of Cooley LLP (included in Exhibit 5.1).
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- 24.1 Power of Attorney (included on the signature page hereto).
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July 29, 2011

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

Ladies and Gentlemen:

You have requested our opinion with respect to certain matters in connection with the filing by Neurocrine Biosciences, Inc. (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 an aggregate of 5,500,000 shares of the Company's Common Stock, \$0.001 par value per share (the "*Shares*") issuable pursuant to the Company's 2011 Equity Incentive Plan (the "*Plan*").

In connection with this opinion, we have examined the Registration Statement and related prospectus, the Company's Certificate of Incorporation and Bylaws, each as amended, and the Plan, and such other documents, records, certificates, memoranda and other instruments as we deem necessary as a basis for this opinion. We have assumed the genuineness and authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies thereof, and the due execution and delivery of all documents where due execution and delivery are a prerequisite to the effectiveness 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 sold and issued in accordance with the 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.

Very truly yours,

Cooley LLP

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

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 10, 2011, with respect to the consolidated financial statements of Neurocrine Biosciences, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2010, and the effectiveness of internal control over financial reporting of Neurocrine Biosciences, Inc. filed with the Securities and Exchange Commission.

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/s/ Ernst & Young LLP
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San Diego, California July 29, 2011