

The information in this preliminary prospectus supplement is not complete and may be changed. A registration statement relating to these securities has been declared effective by the Securities and Exchange Commission. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell these securities, and we are not soliciting offers to buy these securities in any state where the offer or sale is not permitted.

Filed Pursuant to Rule 424(b)(5)
Registration No. 333-147118

SUBJECT TO COMPLETION, DATED MARCH 4, 2010

Prospectus Supplement

(to Prospectus dated December 3, 2007)

Shares



Common Stock

We are offering _____ shares of our common stock. Our common stock is quoted on The NASDAQ Global Select Market under the symbol "NBIX." On March 3, 2010, the last reported sale price of our common stock on The NASDAQ Global Select Market was \$2.63 per share.

Investing in our common stock involves a high degree of risk. Please read "[Risk Factors](#)" beginning on page S-4 of this prospectus supplement and in the documents incorporated by reference into this prospectus supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	PER SHARE	TOTAL
Public Offering Price	\$	\$
Underwriting Discounts and Commissions.	\$	\$
Proceeds to Neurocrine (Before Expenses)	\$	\$

Delivery of the shares of common stock is expected to be made on or about March _____, 2010. We have granted the underwriter an option for a period of 30 days to purchase up to an additional _____ shares of our common stock solely to cover over allotments. If the underwriter exercises the option in full, the total underwriting discounts and commissions payable by us will be \$ _____, and the total proceeds to us, before expenses, will be \$ _____.

Sole Book-Running Manager

Jefferies & Company

Prospectus Supplement dated March _____, 2010

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You should rely only on the information contained in or incorporated by reference in this prospectus supplement, the accompanying prospectus and in any free writing prospectus that we have authorized for use in connection with this offering. We have not, and the underwriter has not, authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and the underwriter is not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and in any free writing prospectus that we have authorized for use in connection with this offering, is accurate only as of the date of those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and any free writing prospectus that we have authorized for use in connection with this offering, in their entirety before making an investment decision. You should also read and consider the information in the documents to which we have referred you in the sections of this prospectus supplement entitled “Where You Can Find More Information” and “Information Incorporated by Reference.”

About this Prospectus Supplement

This document is in two parts. The first part is this prospectus supplement, which describes the terms of this offering of common stock and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. The second part, the accompanying prospectus dated December 3, 2007, including the documents incorporated by reference therein, provides more general information. Generally, when we refer to this prospectus, we are referring to both parts of this document combined. To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in the accompanying prospectus or in any document incorporated by reference that was filed with the Securities and Exchange Commission, or SEC, before the date of this prospectus supplement, on the other hand, you should rely on the information in this prospectus supplement. If any statement in one of these documents is inconsistent with a statement in another document having a later date — for example, a document incorporated by reference in the accompanying prospectus — the statement in the document having the later date modifies or supersedes the earlier statement.

All references in this prospectus supplement and the accompanying prospectus to “Neurocrine,” the “Company,” “we,” “us,” “our,” or similar references refer to Neurocrine Biosciences, Inc. and its subsidiaries on a consolidated basis, except where the context otherwise requires or as otherwise indicated.

This prospectus supplement, the accompanying prospectus, and the information incorporated herein and therein by reference includes trademarks, service marks and trade names owned by us or other companies. All trademarks, service marks and trade names included or incorporated by reference into this prospectus supplement or the accompanying prospectus are the property of their respective owners.

Prospectus Supplement Summary

This summary highlights certain information about us, this offering and selected information contained elsewhere in or incorporated by reference into this prospectus supplement. This summary is not complete and does not contain all of the information that you should consider before deciding whether to invest in our common stock. For a more complete understanding of our company and this offering, we encourage you to read and consider carefully the more detailed information in this prospectus supplement and the accompanying prospectus, including the information incorporated by reference in this prospectus supplement and the accompanying prospectus, and the information included in any free writing prospectus that we have authorized for use in connection with this offering, including the information referred to under the heading “Risk Factors” in this prospectus supplement beginning on page S-4.

Company Overview

We discover, develop and intend to commercialize drugs for the treatment of neurological and endocrine-related diseases and disorders. Our product candidates address some of the largest pharmaceutical markets in the world, including endometriosis, anxiety, depression, pain, diabetes, irritable bowel syndrome, insomnia, and other neurological and endocrine-related diseases and disorders. We currently have eight programs in various stages of research and development, including six programs in clinical development. While we independently develop many of our product candidates, we have entered into a collaboration for two of our programs. Our lead clinical development program, *elagolix*, is a drug candidate for the treatment of endometriosis.

Our Product Pipeline

The following table summarizes our most advanced product candidates currently in clinical development, those currently in research, and those subject to regulatory review:

<u>Program</u>	<u>Target Indication(s)</u>	<u>Status</u>	<u>Commercial Rights</u>
Products in clinical development:			
<i>Elagolix</i>	Endometriosis	Phase II	Neurocrine
CRF ₁ Antagonist (561679)	Mood Disorders	Phase II	GlaxoSmithKline/ Neurocrine
CRF ₂ Peptide Agonist — urocortin 2	Cardiovascular	Phase II	Neurocrine
CRF ₁ Antagonist (586529)	Mood Disorders, Irritable Bowel Syndrome	Phase I	GlaxoSmithKline/ Neurocrine
Vesicular Monoamine Transporter 2 Inhibitor (VMAT2)	Movement Disorders, Schizophrenia	Phase I	Neurocrine
<i>Elagolix</i>	Uterine Fibroids Men’s and Women’s Health	Phase I	Neurocrine
Research programs:			
Glucose Dependent Insulin Secretagogues	Type II Diabetes	Research	Neurocrine
Antiepileptic Drugs	Epilepsy, Bipolar Disorder	Research	Neurocrine
GnRH Antagonists	Hormone Dependent Diseases, Oncology	Research	Neurocrine
Products subject to regulatory review:			
Indiplon 5mg and 10mg capsules	Insomnia	FDA has deemed approvable	Neurocrine/Dainippon Sumitomo Pharma Co.
Indiplon 15mg tablets	Insomnia	FDA has deemed not approvable	Neurocrine

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“Phase II” indicates that we or our collaborators are conducting clinical trials on groups of patients afflicted with a specific disease in order to determine preliminary efficacy, optimal dosages and expanded evidence of safety.

“Phase I” indicates that we or our collaborators are conducting clinical trials with a smaller number of subjects to determine early safety profile, maximally tolerated dose and pharmacological properties of the product in human volunteers.

“Research” indicates identification and evaluation of compound(s) in laboratory and preclinical models.

“CRF₁ and CRF₂” refer to two CRF receptor subtypes.

Corporate Information

We were originally incorporated in California in January 1992 and were reincorporated in Delaware in May 1996. Our principal executive offices are located at 12780 El Camino Real, San Diego, California 92130. Our telephone number is (858) 617-7600. Our website is www.neurocrine.com. The information contained in, or that can be accessed through, our website is not part of, and is not incorporated into, this prospectus supplement or the accompanying prospectus and should not be considered part of this prospectus supplement or the accompanying prospectus.

The Offering

Common stock offered by us shares

Common stock to be outstanding immediately after this offering shares

Use of Proceeds

We intend to use the net proceeds from this offering to fund our research and development efforts, and for general corporate purposes, including working capital. We may also use a portion of the net proceeds from this public offering to acquire or invest in complementary businesses, technologies, product candidates or other intellectual property, although we have no present commitments or agreements to do so. See “Use of Proceeds” on page S-6 of this prospectus supplement.

NASDAQ Global Select Market Listing

Our common stock is listed on The NASDAQ Global Select Market under the symbol “NBIX”.

Risk Factors

Investing in our common stock involves a high degree of risk. See “Risk Factors” on page S-4 of this prospectus supplement.

Outstanding Shares

The number of shares of our common stock to be outstanding immediately after this offering is based on 44,061,902 shares outstanding as of February 1, 2010, and excludes:

- 2,808,197 shares of common stock reserved for issuance upon the exercise of options outstanding as of February 1, 2010, at a weighted average exercise price of \$21.50 per share;
- 610,136 shares of common stock reserved for the vesting of restricted stock units outstanding as of February 1, 2010;
- 3,940 shares of common stock reserved for issuance upon the exercise of warrants outstanding as of February 1, 2010, at an exercise price of \$52.05 per share; and
- 2,154,554 shares of common stock reserved for future issuance under our stock incentive programs as of February 1, 2010.

Except as otherwise indicated, all information in the prospectus supplement assumes no exercise by the underwriter of its over allotment option.

Risk Factors

An investment in our common stock involves a high degree of risk. Before deciding whether to invest in our common stock, you should consider carefully the risks described below and discussed under the section captioned "Risk Factors" contained in our Annual Report on Form 10-K for the year ended December 31, 2009, which are incorporated by reference in this prospectus supplement and the accompanying prospectus in their entirety, together with other information in this prospectus supplement, the accompanying prospectus, the information and documents incorporated by reference, and in any free writing prospectus that we have authorized for use in connection with this offering. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment.

Risks Related to This Offering

Management will have broad discretion as to the use of the proceeds from this offering, and we may not use the proceeds effectively.

Our management will have broad discretion in the application of the net proceeds from this offering and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our common stock. Our failure to apply these funds effectively could have a material adverse effect on our business, delay the development of our product candidates and cause the price of our common stock to decline.

You will experience immediate and substantial dilution in the net tangible book value per share of the common stock you purchase.

Since the price per share of our common stock being offered is substantially higher than the net tangible book value per share of our common stock, you will suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. Based on the public offering price of \$ _____ per share, if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of \$ _____ per share in the net tangible book value of the common stock. See the section entitled "Dilution" below for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering.

You may experience future dilution as a result of future equity offerings.

In order to raise additional capital, we may in the future offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock at prices that may not be the same as the price per share in this offering. We cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock or securities convertible into common stock in future transactions may be higher or lower than the price per share in this offering.

Forward-Looking Statements

This prospectus supplement, the accompanying prospectus, the documents we have filed with the SEC that are incorporated by reference and any free writing prospectus that we have authorized for use in connection with this offering contain “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, or Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or Exchange Act. These statements relate to future events or to our future operating or financial performance and involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. Forward-looking statements may include, but are not limited to, statements about:

- the progress, timing and results of clinical trials involving our drug candidates;
- the progress of our research and development programs;
- our plans or others’ plans to conduct future clinical trials or research and development efforts;
- our plans and expectations regarding partnering our drug candidates;
- the benefits to be derived from relationships with our collaborators;
- the receipt of regulatory clearances and approvals;
- estimates of the potential markets for our drug candidates;
- the use of proceeds from this offering; and
- our estimates regarding our capital requirements and our need for additional financing.

In some cases, you can identify forward-looking statements by terms such as “may”, “will”, “should”, “could”, “would”, “expects”, “plans”, “anticipates”, “believes”, “estimates”, “projects”, “predicts”, “potential” and similar expressions intended to identify forward-looking statements. These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. Given these uncertainties, you should not place undue reliance on these forward-looking statements. We discuss many of these risks in greater detail under the heading “Risk Factors” beginning on page S-4 of this prospectus supplement and in our SEC filings. Also, these forward-looking statements represent our estimates and assumptions only as of the date of the document containing the applicable statement.

You should read this prospectus supplement, the accompanying prospectus, the documents we have filed with the SEC that are incorporated by reference and any free writing prospectus that we have authorized for use in connection with this offering completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in the foregoing documents by these cautionary statements.

You should rely only on the information contained, or incorporated by reference, in this prospectus supplement, the accompanying prospectus and any free writing prospectus that we have authorized for use in connection with this offering. We and the underwriter for this offering have not authorized anyone to provide you with different information. The common stock offered under this prospectus is not being offered in any state where the offer is not permitted. You should not assume that the information contained in this prospectus supplement or the accompanying prospectus is accurate as of any date other than the date on the front of this prospectus supplement or the accompanying prospectus, as applicable, or that any information incorporated by reference in this prospectus supplement or the accompanying prospectus is accurate as of any date other than the date of the document so incorporated by reference. Unless required by law, we undertake no obligation to update or revise any forward-looking statements to reflect new information or future events or developments. Thus, you should not assume that our silence over time means that actual events are bearing out as expressed or implied in such forward-looking statements.

Use of Proceeds

We estimate that the net proceeds from the sale of the _____ shares of common stock that we are offering will be approximately \$ _____ million, or approximately \$ _____ million if the underwriter exercises in full its option to purchase _____ additional shares of common stock, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use the net proceeds from this public offering to fund our research and development efforts, and for general corporate purposes, including working capital. We may also use a portion of the net proceeds from this public offering to acquire or invest in complementary businesses, technologies, product candidates or other intellectual property, although we have no present commitments or agreements to do so.

The amounts and timing of these expenditures will depend on a number of factors, such as the timing and progress of our research and development efforts, the timing and progress of any partnering efforts, technological advances and the competitive environment for our product candidates. As of the date of this prospectus supplement, we cannot specify with certainty all of the particular uses for the net proceeds to us from this offering. Accordingly, our management will have broad discretion in the application of these proceeds. Pending application of the net proceeds as described above, we intend to temporarily invest the proceeds in short and long-term interest bearing instruments.

Dilution

Our net tangible book value as of December 31, 2009 was approximately \$4.0 million, or \$0.09 per share. Net tangible book value per share is determined by dividing our total tangible assets, less total liabilities, by the number of shares of our common stock outstanding as of December 31, 2009. Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers of shares of common stock in this public offering and the net tangible book value per share of our common stock immediately after this public offering.

After giving effect to the sale of _____ shares of our common stock in this offering at the public offering price of \$ _____ per share and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of December 31, 2009 would have been approximately \$ _____ million, or \$ _____ per share. This represents an immediate increase in net tangible book value of \$ _____ per share to existing stockholders and immediate dilution in net tangible book value of \$ _____ per share to investors purchasing our common stock in this offering at the public offering price. The following table illustrates this dilution on a per share basis:

Public offering price per share	\$
Net tangible book value per share as of December 31, 2009	\$0.09
Increase per share attributable to investors purchasing our common stock in this offering	
As adjusted net tangible book value per share after this offering	
Dilution per share to investors purchasing our common stock in this offering	<u>\$</u>

If the underwriter exercises in full its option to purchase _____ additional shares of common stock at the public offering price of \$ _____ per share, the as adjusted net tangible book value after this offering would be \$ _____ per share, representing an increase in net tangible book value of \$ _____ per share to existing stockholders and immediate dilution in net tangible book value of \$ _____ per share to investors purchasing our common stock in this offering at the public offering price.

The above discussion and table are based on 43,991,565 shares outstanding as of December 31, 2009, and exclude:

- 2,808,354 shares of common stock reserved for issuance upon the exercise of options outstanding as of December 31, 2009, at a weighted average exercise price of \$21.50 per share;
- 680,873 shares of common stock reserved for the vesting of restricted stock units outstanding as of December 31, 2009;
- 3,940 shares of common stock reserved for issuance upon the exercise of warrants outstanding as of December 31, 2009, at an exercise price of \$52.05 per share; and
- 2,154,154 shares of common stock reserved for future issuance under our stock incentive programs as of December 31, 2009.

To the extent that outstanding options or warrants are exercised, investors purchasing our common stock in this offering will experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

Material U.S. Federal Income and Estate Tax Consequences for Certain Non-U.S. Holders

The following summary describes the material U.S. federal income and estate tax consequences of the acquisition, ownership and disposition of common stock acquired in this offering by certain Non-U.S. Holders (as defined below). This discussion does not address all aspects of U.S. federal income and estate taxes and does not deal with foreign, state and local consequences that may be relevant to Non-U.S. Holders in light of their particular circumstances, nor U.S. federal tax consequences other than income and estate taxes. Special rules different from those described below may apply to certain Non-U.S. Holders that are subject to special treatment under the Internal Revenue Code of 1986, as amended, or the Code, such as financial institutions, insurance companies, tax-exempt organizations, broker-dealers and traders in securities, U.S. expatriates, regulated investment companies, real estate investment trusts, “controlled foreign corporations,” “passive foreign investment companies,” corporations that accumulate earnings to avoid U.S. federal income tax, persons that hold our common stock as part of a “straddle,” “hedge,” “conversion transaction,” “synthetic security” or integrated investment or other risk reduction strategy, partnerships and other pass-through entities, and investors in such pass-through entities. Such Non-U.S. Holders are urged to consult their own tax advisors to determine the U.S. federal, state, local and other tax consequences that may be relevant to them. Furthermore, the discussion below is based upon the provisions of the Code, and Treasury regulations, rulings and judicial decisions thereunder as of the date hereof, and such authorities may be repealed, revoked or modified, perhaps retroactively, so as to result in U.S. federal income and estate tax consequences different from those discussed below. We have not requested any ruling from the U.S. Internal Revenue Service, or IRS, with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS will agree with such statements and conclusions. This discussion assumes that the Non-U.S. Holder holds our common stock as a capital asset.

The following discussion is for general information only and is not tax advice. **Persons considering the purchase of common stock pursuant to this offering should consult their own tax advisors concerning the U.S. federal income and estate tax consequences in light of their particular situations as well as any consequences arising under the laws of any other taxing jurisdiction, including any state, local or foreign tax consequences.**

For the purposes of this discussion, a “Non-U.S. Holder” is, for U.S. federal income tax purposes, a beneficial owner of common stock that is not a U.S. Holder. A “U.S. Holder” means a beneficial owner of common stock that is for U.S. federal income tax purposes (i) an individual who is a citizen or resident of the United States, (ii) a corporation or other entity treated as a corporation created or organized in or under the laws of the United States or any political subdivision thereof, (iii) an estate the income of which is subject to U.S. federal income taxation regardless of its source or (iv) a trust if it (x) is subject to the primary supervision of a court within the United States and one or more U.S. persons have the authority to control all substantial decisions of the trust or (y) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

Distributions

Subject to the discussion below, distributions, if any, made on our common stock to a Non-U.S. Holder of our common stock to the extent made out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles) generally will constitute dividends for U.S. tax purposes and will be subject to withholding tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. To obtain a reduced rate of withholding under a treaty, a Non-U.S. Holder generally will be required to provide us with a properly-executed IRS Form W-8BEN, or other appropriate form, certifying the Non-U.S. Holder’s entitlement to benefits under that treaty. In the case of a Non-U.S. Holder that is an entity, Treasury Regulations and the relevant tax treaty provide rules to determine whether, for purposes of determining the applicability of a tax treaty, dividends will be treated as paid to the entity or to those holding an interest in that entity. If a Non-U.S. Holder holds stock through a financial institution or other agent acting on the holder’s behalf, the holder will be required to provide appropriate documentation to such agent. The holder’s agent will then be required to provide certification to us or our paying agent, either directly or through other intermediaries. If you are eligible for a reduced rate of U.S. federal

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withholding tax under an income tax treaty, you may obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim for a refund with the IRS.

We generally are not required to withhold tax on dividends paid to a Non-U.S. Holder that are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, are attributable to a permanent establishment that you maintain in the United States) if a properly-executed IRS Form W-8ECI, stating that the dividends are so connected, is filed with us (or, if stock is held through a financial institution or other agent, with such agent). In general, such effectively connected dividends will be subject to U.S. federal income tax, on a net income basis at the regular graduated rates, unless a specific treaty exemption applies. A corporate Non-U.S. Holder receiving effectively connected dividends may also be subject to an additional "branch profits tax," which is imposed, under certain circumstances, at a rate of 30% (or such lower rate as may be specified by an applicable treaty) on the corporate Non-U.S. Holder's effectively connected earnings and profits, subject to certain adjustments.

To the extent distributions on our common stock, if any, exceed our current and accumulated earnings and profits, they will constitute a non-taxable return of capital and will first reduce your basis in our common stock, but not below zero, and then will be treated as gain and taxed in the same manner as gain realized from a sale or other disposition of common stock as described in the next section.

Gain on Disposition of Common Stock

A Non-U.S. Holder generally will not be subject to U.S. federal income tax with respect to gain realized on a sale or other disposition of our common stock unless (i) the gain is effectively connected with a trade or business of such holder in the United States, (ii) in the case of a Non-U.S. Holder who is a nonresident alien individual and is present in the United States for 183 or more days in the taxable year of the disposition and certain other conditions are met, or (iii) we are or have been a "United States real property holding corporation" within the meaning of Code Section 897(c)(2) at any time within the shorter of the five-year period preceding such disposition or such holder's holding period. In general, we would be a United States real property holding corporation if interests in U.S. real estate comprised at least half of our business assets. We believe that we are not, and do not anticipate becoming, a United States real property holding corporation. Even if we are treated as a United States real property holding corporation, gain realized by a Non-U.S. Holder on a disposition of our common stock will not be subject to U.S. federal income tax so long as (1) the Non-U.S. Holder owned directly, indirectly and constructively, no more than five percent of our common stock at all times within the shorter of (a) the five year period preceding the disposition or (b) the holder's holding period and (2) our common stock is regularly traded on an established securities market. There can be no assurance that our common stock will continue to qualify as regularly traded on an established securities market.

If you are a Non-U.S. Holder described in (i) above, you will be required to pay tax on the net gain derived from the sale at regular graduated U.S. federal income tax rates, unless a specific treaty exemption applies, and corporate Non-U.S. Holders described in (i) above may be subject to the additional branch profits tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. If you are an individual Non-U.S. Holder described in (ii) above, you will be required to pay a flat 30% tax on the gain derived from the sale, which gain may be offset by U.S. source capital losses (even though you are not considered a resident of the United States).

Information Reporting Requirements and Backup Withholding

Generally, we must report information to the IRS with respect to any dividends we pay on our stock including the amount of any such dividends, the name and address of the recipient, and the amount, if any, of tax withheld. A similar report is sent to the holder to whom any such dividends are paid. Pursuant to tax treaties or certain other agreements, the IRS may make its reports available to tax authorities in the recipient's country of residence.

Dividends paid by us (or our paying agents) to a Non-U.S. Holder may also be subject to U.S. backup withholding. U.S. backup withholding generally will not apply to a Non-U.S. Holder who provides a properly-executed IRS Form W-8BEN or otherwise establishes an exemption. The current backup withholding rate is 28%.

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Under current U.S. federal income tax law, U.S. information reporting and backup withholding generally will apply to the proceeds of a disposition of our common stock effected by or through a U.S. office of any broker, U.S. or foreign, except that backup withholding may be avoided if the holder provides a properly-executed IRS Form W-8BEN or otherwise meets documentary evidence requirement for establishing Non-U.S. Holder status or otherwise establishes an exemption. Generally, U.S. backup withholding will not apply to a payment of disposition proceeds to a Non-U.S. Holder where the transaction is effected outside the U.S. through a non-U.S. office of a non-U.S. broker. Backup withholding may, however, apply to a payment of disposition proceeds if the broker has actual knowledge, or reason to know, that the holder is, in fact, a U.S. person. For information reporting purposes, certain brokers with substantial U.S. ownership or operations will generally be treated in a manner similar to U.S. brokers.

Backup withholding is not an additional tax. Rather, the tax liability of persons subject to backup withholding will be reduced by the amount of tax withheld. If withholding results in an overpayment of taxes, a refund may generally be obtained, provided that the required information is timely furnished to the IRS.

Federal Estate Tax

An individual who is treated as the owner of, or has made certain lifetime transfers of, an interest in our common stock will be required to include the value thereof in his or her gross estate for U.S. federal estate tax purposes, and may be subject to U.S. federal estate tax unless an applicable estate tax treaty provides otherwise, even though such individual was not a citizen or resident of the United States at the time of his or her death.

THE PRECEDING DISCUSSION OF U.S. FEDERAL INCOME AND ESTATE TAX CONSIDERATIONS IS FOR GENERAL INFORMATION ONLY. IT IS NOT TAX ADVICE. EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR REGARDING THE TAX CONSEQUENCES OF PURCHASING, HOLDING AND DISPOSING OF OUR COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY PROPOSED CHANGE IN APPLICABLE LAW.

Underwriting

Under the terms and subject to the conditions contained in an underwriting agreement dated March , 2010, Jefferies & Company, Inc., the sole underwriter in this offering, has agreed to purchase, and we have agreed to sell to the underwriter the number of shares of common stock indicated in the table below:

<u>Name</u>	<u>Number of Shares</u>
Jefferies & Company, Inc.	

The underwriter is offering the common stock subject to its acceptance of the shares from us and subject to prior sale. The underwriting agreement provides that the obligations of the underwriter to pay for and accept delivery of the common stock offered by this prospectus supplement are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriting agreement provides that the underwriter is obligated to take and pay for all of the common stock if any such shares are purchased, other than those shares covered by the over allotment option described below.

Commissions and Expenses

The underwriter has advised us that it proposes to offer the shares to the public at the public offering price set forth on the cover page of this prospectus supplement and to certain dealers at that price less a concession not in excess of \$ per share. After the offering, the public offering price and concession to dealers may be reduced by the underwriter. No such reduction shall change the amount of proceeds to be received by us as set forth on the cover page of this prospectus supplement. The shares are offered by the underwriter as stated herein, subject to receipt and acceptance by it and subject to its right to reject any order in whole or in part.

The following table shows the public offering price, the underwriting discounts and commissions payable to the underwriter by us and the proceeds, before expenses, to us.

	<u>Per Share</u>	<u>Total</u>
Public offering price	\$	\$
Underwriting discounts and commissions payable by us	\$	\$
Proceeds to us, before expenses	\$	\$

We estimate expenses payable by us in connection with the offering of common stock, other than the underwriting discounts and commissions referred to above, will be approximately \$350,000.

Option to Purchase Additional Shares

We have granted to the underwriter an option, exercisable for 30 days from the date of this prospectus supplement, to purchase up to an aggregate of additional shares at the same price it is paying for the shares shown in the table above. The underwriter may exercise this option at any time and from time to time, in whole or in part, within 30 days after the date of this prospectus supplement. If the underwriter exercises the option in full, the total underwriting discounts and commissions payable by us will be \$, or \$ per share, and the total proceeds to us, before expenses, will be \$.

Indemnification

We have agreed to indemnify the underwriter against certain liabilities, including liabilities under the Securities Act of 1933, as amended. We have also agreed to contribute to payments that the underwriter may be required to make in respect of those liabilities.

Lock-up Agreements

Our executive officers and directors have agreed, subject to specified exceptions, not to directly or indirectly sell, offer, contract or grant any option to sell (including without limitation any short sale), pledge, transfer, establish an open "put equivalent position" within the meaning of Rule 16a-1(h) under the Securities Exchange Act of 1934, as

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amended, or otherwise dispose of any shares, options or warrants to acquire shares of our common stock, or securities exchangeable or exercisable for or convertible into shares of our common stock currently or hereafter owned either of record or beneficially (as defined in Rule 13d-3 under the Securities Exchange Act of 1934, as amended) by such person, or publicly announce an intention to do any of the foregoing. We have also agreed, subject to specified exceptions, not to offer for sale, sell, contract to sell, pledge, grant any option for the sale of, enter into any transaction which is designed to, or might reasonably be expected to, result in the disposition (whether by actual disposition or effective economic disposition due to cash settlement or otherwise) by us or any affiliate of ours, or otherwise issue or dispose of, directly or indirectly (or publicly disclose the intention to make any such offer, sale, pledge, grant, issuance or other disposition), any of our common stock or any securities convertible into or exchangeable for, or any options or rights to purchase or acquire, our common stock.

These restrictions terminate after the close of trading of the shares on and including the 90th day after the date of this prospectus supplement. Jefferies & Company, Inc. may, in its sole discretion and at any time or from time to time before the termination of the 90-day period, without notice, release all or any portion of the securities subject to lock-up agreements. However, subject to specified exceptions, if (i) during the last 17 days of the 90-day period, the Company issues an earnings release or material news or a material event relating to the Company occurs or (ii) prior to the expiration of the 90-day period, the Company announces that it will release earnings results during the 16-day period beginning on the last day of the 90-day period, then in each case the 90-day period will be extended until the expiration of the 18-day period beginning on the date of the issuance of the earnings release or the occurrence of the material news or material event, as applicable, unless Jefferies & Company, Inc. waives, in writing, such extension.

Electronic Distribution

This prospectus supplement and the accompanying prospectus in electronic format may be made available on websites or through other online services maintained by the underwriter of the offering, or by its affiliates. Other than the prospectus in electronic format, the information on the underwriter's websites and any information contained in any other website maintained by the underwriter is not part of the prospectus or the registration statement of which this prospectus supplement forms a part, has not been approved and/or endorsed by us or the underwriter in its capacity as underwriter and should not be relied upon by investors.

Price Stabilization, Short Positions and Penalty Bids

Until the distribution of the shares of common stock is completed, SEC rules may limit the underwriter from bidding for and purchasing shares of our common stock.

In connection with this offering, the underwriter may engage in transactions that stabilize, maintain or make short sales of our common stock and may purchase our common stock on the open market to cover positions created by short sales. Short sales involve the sale by the underwriter of a greater number of shares than they are required to purchase in this offering. The underwriter may close out any short position by purchasing shares in the open market or by exercising its over allotment option.

A short position is more likely to be created if the underwriter is concerned that there may be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase in this offering. A "stabilizing bid" is a bid for or the purchase of common stock on behalf of the underwriter in the open market prior to the completion of this offering for the purpose of fixing or maintaining the price of the shares of common stock. A "syndicate covering transaction" is the bid for or purchase of common stock on behalf of the underwriter to reduce a short position incurred by the underwriter in connection with the offering.

Similar to other purchase transactions, the underwriter's purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our shares or preventing or retarding a decline in the market price of our shares. As a result, the price of our shares may be higher than the price that might otherwise exist in the open market.

In connection with this offering, the underwriter may also engage in passive market making transactions in our common stock on the Nasdaq Global Select Market in accordance with Rule 103 of Regulation M during a period

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before the commencement of offers or sales of shares of our common stock in this offering and extending through the completion of distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, that bid must then be lowered when specified purchase limits are exceeded.

Neither we nor the underwriter make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. In addition, neither we nor the underwriter make any representation that the underwriter will engage in these transactions or that any transaction, if commenced, will not be discontinued without notice.

Affiliations

In the future, the underwriter and its affiliates may provide various investment banking, commercial banking, financial advisory and other services to us and our affiliates for which services they have received, and may in the future receive, customary fees. In the course of its businesses, the underwriter and its affiliates may actively trade our securities or loans for their own account or for the accounts of customers, and, accordingly, the underwriter and its affiliates may at any time hold long or short positions in such securities or loans.

Notice to Investors

European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (as defined below) (each, a Relevant Member State), with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State, or the Relevant Implementation Date, an offer of our common stock to the public may not be made in that Relevant Member State prior to the publication of a prospectus in relation to our common stock which has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, all in accordance with the Prospectus Directive, except that an offer to the public in that Relevant Member State of any shares of our common stock may be made at any time under the following exemptions under the Prospectus Directive if they have been implemented in the Relevant Member State:

- (a) to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;
- (b) to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year; (2) a total balance sheet of more than €43,000,000 and (3) an annual net turnover of more than €50,000,000, as shown in its last annual or consolidated accounts;
- (c) to fewer than 100 natural or legal persons per Relevant Member State (other than qualified investors as defined in the Prospectus Directive); or
- (d) in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no such offer of our common stock shall result in a requirement for the publication by us or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an “offer of our common stock to the public” in relation to any shares of our common stock in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and our common stock to be offered so as to enable an investor to decide to purchase or subscribe our common stock, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State and the expression “Prospectus Directive” means Directive 2003/71/EC and includes any relevant implementing measure in each Relevant Member State.

United Kingdom

Shares of our common stock may not be offered or sold and will not be offered or sold to any persons in the United Kingdom other than to persons whose ordinary activities involve them in acquiring, holding, managing or disposing of investments (as principal or as agent) for the purposes of their businesses or otherwise in circumstances which have not resulted or will not result in an offer to the public in the United Kingdom within the meaning of the Financial Services and Markets Act 2000, or the FSMA.

In addition, any invitation or inducement to engage in investment activity (within the meaning of section 21 of the FSMA) in connection with the issue or sale of shares of our common stock may only be communicated or caused to be communicated in circumstances in which Section 21(1) of the FSMA does not apply to us. Without limitation to the other restrictions referred to herein, this prospectus supplement is directed only at (1) persons outside the United Kingdom or (2) persons who:

- (a) are qualified investors as defined in section 86(7) of FSMA, being persons falling within the meaning of article 2.1(e)(i), (ii) or (iii) of the Prospectus Directive; and
- (b) are either persons who fall within article 19(1) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended, or Order, or are persons who fall within article 49(2)(a) to (d) (“high net worth companies, unincorporated associations, etc.”) of the Order; or

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(c) to whom it may otherwise lawfully be communicated in circumstances in which Section 21(1) of the FSMA does not apply.

Without limitation to the other restrictions referred to herein, any investment or investment activity to which this offering circular relates is available only to, and will be engaged in only with, such persons, and persons within the United Kingdom who receive this communication (other than persons who fall within (2) above) should not rely or act upon this communication.

Germany

Any offer or solicitation of securities within Germany must be in full compliance with the German Securities Prospectus Act (Wertpapierprospektgesetz—WpPG). The offer and solicitation of securities to the public in Germany requires the publication of a prospectus that has to be filed with and approved by the German Federal Financial Services Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht—BaFin). This prospectus supplement has not been and will not be submitted for filing and approval to the BaFin and, consequently, will not be published. Therefore, this prospectus supplement does not constitute a public offer under the German Securities Prospectus Act (Wertpapierprospektgesetz). This prospectus supplement and any other document relating to our common stock, as well as any information contained therein, must therefore not be supplied to the public in Germany or used in connection with any offer for subscription of our common stock to the public in Germany, any public marketing of our common stock or any public solicitation for offers to subscribe for or otherwise acquire our common stock. This prospectus supplement and other offering materials relating to the offer of our common stock are strictly confidential and may not be distributed to any person or entity other than the designated recipients hereof.

France

This prospectus has not been prepared in the context of a public offering of financial securities in France within the meaning of Article L.411-1 of the French Code Monétaire et Financier and Title I of Book II of the Règlement Général of the Autorité des marchés financiers (the “AMF”) and therefore has not been and will not be filed with the AMF for prior approval or submitted for clearance to the AMF. Consequently, the shares of our common stock may not be, directly or indirectly, offered or sold to the public in France and offers and sales of the shares of our common stock may only be made in France to qualified investors (investisseurs qualifiés) acting for their own, as defined in and in accordance with Articles L.411-2 and D.411-1 to D.411-4, D.734-1, D.744-1, D.754-1 and D.764-1 of the French Code Monétaire et Financier. Neither this prospectus nor any other offering material may be released, issued or distributed to the public in France or used in connection with any offer for subscription on sale of the shares of our common stock to the public in France. The subsequent direct or indirect retransfer of the shares of our common stock to the public in France may only be made in compliance with Articles L.411-1, L.411-2, L.412-1 and L.621-8 through L.621-8-3 of the French Code Monétaire et Financier.

Sweden

This is not a prospectus under, and has not been prepared in accordance with the prospectus requirements provided for in, the Swedish Financial Instruments Trading Act [lagen (1991:980) om handel med finansiella instrument] nor any other Swedish enactment. Neither the Swedish Financial Supervisory Authority nor any other Swedish public body has examined, approved, or registered this document.

Legal Matters

The validity of the common stock offered by this prospectus supplement and the accompanying prospectus will be passed upon for us by Cooley Godward Kronish LLP, San Diego, California. Latham & Watkins LLP, San Diego, California, is counsel for the underwriter in connection with this offering.

Experts

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2009, and the effectiveness of our internal control over financial reporting as of December 31, 2009, as set forth in their reports, which are incorporated by reference in this prospectus supplement and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's reports, given on their authority as experts in accounting and auditing.

Where You Can Find More Information

This prospectus supplement and the accompanying prospectus are part of the registration statement on Form S-3 we filed with the SEC under the Securities Act and do not contain all the information set forth in the registration statement. Whenever a reference is made in this prospectus supplement or the accompanying prospectus to any of our contracts, agreements or other documents, the reference may not be complete and you should refer to the exhibits that are a part of the registration statement or the exhibits to the reports or other documents incorporated by reference in this prospectus supplement and the accompanying prospectus for a copy of such contract, agreement or other document. Because we are subject to the information and reporting requirements of the Exchange Act we file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>. You may also read and copy any document we file at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room.

Information Incorporated by Reference

The SEC allows us to "incorporate by reference" information from other documents that we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus supplement and the accompanying prospectus. Information contained in this prospectus supplement and the accompanying prospectus and information that we file with the SEC in the future and incorporate by reference in this prospectus supplement and the accompanying prospectus will automatically update and supersede this information. We incorporate by reference the documents listed below and any future filings (other than Current Reports on Form 8-K furnished under Item 2.02 or Item 7.01 and exhibits filed on such form that are related to such items) we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the prospectus supplement and before the sale of all the securities covered by this prospectus supplement:

- our Annual Report on Form 10-K for the year ended December 31, 2009, filed with the SEC on February 8, 2010;
- our Current Report on Form 8-K, filed with the SEC on February 9, 2010;

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- the description of our common stock contained in our registration statement on Form S-1, filed with the SEC on May 17, 1996, including any amendment or reports filed for the purpose of updating such description (Registration No. 333-03172); and
- all filings we make with the SEC pursuant to the Exchange Act after the date of this prospectus supplement and before termination of this offering.

You can request a copy of these filings, at no cost, by writing or telephoning us at the following address or telephone number:

Neurocrine Biosciences, Inc.
12780 El Camino Real
San Diego, CA 92130
(858) 617-7600
Attn: Investor Relations

Dated December 3, 2007

PROSPECTUS

\$150,000,000



NEUROCRINE BIOSCIENCES, INC.

Common Stock

Our common stock is listed on the Nasdaq Global Select Market under the symbol "NBIX." On November 30, 2007, the last reported sale price of our common stock on the Nasdaq Global Select Market was \$13.02 per share.

This prospectus and the accompanying prospectus supplement will allow us to sell shares of our common stock over time in one or more offerings, with an aggregate offering price of up to \$150,000,000. Each time we offer shares of our common stock, we will provide you with a supplement to this prospectus. You should read this prospectus, the information incorporated by reference in this prospectus and any prospectus supplement carefully before you invest.

Investing in our common stock involves a high degree of risk. See "[Risk Factors](#)" on page 3 of this prospectus and as updated in our future filings made with the Securities and Exchange Commission, which are incorporated by reference in this prospectus.

This prospectus may not be used to offer or sell any common stock unless accompanied by a prospectus supplement.

The common stock may be sold by us to or through underwriters or dealers, directly to purchasers or through agents designated from time to time. For additional information on the methods of sale, you should refer to the section entitled "Plan of Distribution" in this prospectus. If any underwriters are involved in the sale of any common stock with respect to which this prospectus is being delivered, the names of such underwriters and any applicable discounts or commissions and over-allotment options will be set forth in a prospectus supplement. The price to the public of such common stock and the net proceeds we expect to receive from such sale will also be set forth in a prospectus supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is December 3, 2007.

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You should rely only on the information contained in or incorporated by reference into this prospectus or any applicable prospectus supplement. We have not authorized anyone to provide you with different information. We are not making an offer to sell or seeking an offer to buy shares of our common stock under this prospectus or any applicable prospectus supplement in any jurisdiction where the offer or sale is not permitted. The information contained in this prospectus, any applicable prospectus supplement and the documents incorporated by reference herein and therein are accurate only as of their respective dates, regardless of the time of delivery of this prospectus or any sale of a security.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (SEC) using a “shelf” registration process. Under this shelf registration statement, we may sell shares of our common stock in one or more offerings up to a total dollar amount of \$150,000,000. This prospectus provides you with a general description of the common stock we may offer. Each time we sell any of our common stock under this prospectus, we will provide a prospectus supplement that will contain more specific information about the terms of that offering. We may also add, update or change in a prospectus supplement any of the information contained in this prospectus or in documents we have incorporated by reference into this prospectus. This prospectus, together with any applicable prospectus supplement and the documents incorporated by reference into this prospectus, include all material information relating to this offering. You should carefully read both this prospectus and any applicable prospectus supplement together with the additional information described under “Where You Can Find More Information” before buying common stock in this offering.

SUMMARY

The following summary does not contain all the information that may be important to purchasers of our common stock. Prospective purchasers of our common stock should carefully review the entire prospectus, including the financial statements and other information incorporated by reference in this prospectus, before making an investment decision.

NEUROCRINE BIOSCIENCES, INC.

We discover, develop and intend to commercialize drugs for the treatment of neurological and endocrine-related diseases and disorders. Our product candidates address some of the largest pharmaceutical markets in the world, including insomnia, anxiety, depression, endometriosis, irritable bowel syndrome, pain, diabetes and other neurological and endocrine-related diseases and disorders. We currently have ten programs in various stages of research and development, including six programs in clinical development. While we independently develop many of our product candidates, we have entered into a collaboration for one of our programs. Our lead clinical development program, indiplon, is a drug candidate for the treatment of insomnia.

The following table summarizes our most advanced products currently in clinical development and those currently in research:

<u>Program</u>	<u>Target Indication</u>	<u>Status (1)</u>	<u>Commercial Rights</u>
Products under clinical development:			
Indiplon	Insomnia	Registration (2)	Neurocrine
GnRH Antagonist	Endometriosis	Phase II	Neurocrine
CRF R ₁ Antagonist (3)	Mood Disorders, Irritable Bowel Syndrome	Phase II	GlaxoSmithKline/ Neurocrine
CRF R ₂ Peptide Agonist — Urocortin 2 (3)	Cardiovascular	Phase II	Neurocrine
Selective norepinephrine reuptake inhibitor (sNRI)	Neuropathic Pain	Phase I	Neurocrine
GnRH Antagonist	Benign Prostatic Hyperplasia	Phase I	Neurocrine
Research:			
Glucose Dependent Insulin Secretagogues	Type II Diabetes	Research	Neurocrine
GnRH Antagonist	Endometriosis, Benign Prostatic Hyperplasia	Research	Neurocrine
Adenosine _{2A} Receptor Antagonists	Parkinson's Disease	Research	Neurocrine/Almirall
Ion Channel Blocker	Chronic Pain	Research	Neurocrine

(1) "Registration" indicates that we or our collaborators have submitted a New Drug Application (NDA) to the U.S. Food and Drug Administration (FDA) for regulatory approval of the drug candidate. "Phase II" indicates that we or our collaborators are conducting clinical trials on groups of patients afflicted with a

specific disease in order to determine preliminary efficacy, optimal dosages and expanded evidence of safety. “Phase I” indicates that we or our collaborators are conducting clinical trials with a smaller number of patients to determine early safety profile, maximally tolerated dose and pharmacological properties of the product in human volunteers. “Research” indicates identification and evaluation of compound(s) in laboratory and preclinical models.

- (2) On May 15, 2006, we received two complete responses from the FDA regarding the indiplon capsule and tablet NDAs. These responses indicated that indiplon 5 mg and 10 mg capsules were approvable (FDA Approvable Letter) and that the 15 mg tablets were not approvable (FDA Not Approvable Letter).

The FDA Not Approvable Letter requested that we reanalyze certain safety and efficacy data and questioned the sufficiency of the objective sleep maintenance clinical data with the 15 mg tablet in view of the fact that the majority of the indiplon tablet studies were conducted with doses higher than 15 mg. We held an end-of-review meeting with the FDA related to the FDA Not Approvable Letter in October 2006. This meeting was specifically focused on determining the actions needed to bring indiplon tablets from Not Approvable to Approval in the resubmission of the NDA for indiplon tablets. The FDA has requested additional long-term safety and efficacy data with the 15 mg dose for the adult population and the development of a separate dose for the elderly population. In discussions, we and the FDA noted positive efficacy data for sleep maintenance with both indiplon capsules and tablets. On the basis of these discussions, we are formulating a strategy to pursue a sleep maintenance claim for indiplon. The evaluation of indiplon for sleep maintenance is ongoing and includes both indiplon capsules and tablets.

The FDA Approvable Letter requested that we reanalyze data from certain preclinical and clinical studies to support approval of indiplon 5 mg and 10 mg capsules for sleep initiation and middle of the night dosing. The FDA Approvable Letter also requested reexamination of the safety analyses. We held an end-of-review meeting with the FDA related to the FDA Approvable Letter in August 2006. This meeting was specifically focused on determining the actions needed to bring indiplon capsules from Approvable to Approval in the resubmission of the NDA for indiplon capsules. At the meeting the FDA requested that the resubmission include further analyses and modifications of analyses previously submitted to address questions raised by the FDA in the initial review. This reanalysis has been completed. The FDA also requested, and we have completed, a supplemental pharmacokinetic/food effect profile of indiplon capsules including several meal types.

On June 12, 2007, we resubmitted our NDA for indiplon 5 mg and 10 mg capsules seeking clearance to market indiplon capsules for the treatment of insomnia. The FDA accepted the NDA resubmission and established a Prescription Drug User Fee Act (PDUFA) date of December 12, 2007. The PDUFA action date is the date by which the FDA is expected to have completed its review of the resubmission and to document its assessment through the issuance of an action letter.

- (3) “R₁ and R₂” refer to two CRF receptor subtypes.

We were originally incorporated in California in January 1992 and were reincorporated in the state of Delaware in May 1996. Our corporate offices are located at 12790 El Camino Real, San Diego, California 92130. Our telephone number is (858) 617-7600. Our website address is www.neurocrine.com. Information contained in our website does not constitute part of this prospectus.

Unless otherwise specified or required by context, references in this prospectus to “we,” “us,” “our” and “Neurocrine” refer to Neurocrine Biosciences, Inc. and our subsidiaries on a consolidated basis.

RISK FACTORS

An investment in our common stock involves a high degree of risk. Before you make a decision to invest in our common stock, you should consider carefully the risks described in the section entitled “Risk Factors” contained in our Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2007, as filed with the SEC on November 2, 2007, which is incorporated herein by reference in its entirety, as well as any amendment or update thereto reflected in subsequent filings with the SEC. If any of these risks actually occur, our business, operating results, prospects or financial condition could be materially and adversely affected. This could cause the trading price of our common stock to decline and you may lose part or all of your investment.

FORWARD-LOOKING STATEMENTS

This prospectus, including the information incorporated by reference herein, and any applicable prospectus supplement including the documents we incorporate by reference therein, contain forward-looking statements that involve a number of risks and uncertainties. Although our forward-looking statements reflect the good faith judgment of our management, these statements can only be based on facts and factors currently known by us. Consequently, these forward-looking statements are inherently subject to risks and uncertainties, and actual results and outcomes may differ materially from results and outcomes discussed in the forward-looking statements.

Forward-looking statements can be identified by the use of forward-looking words such as “believes,” “expects,” “hopes,” “may,” “will,” “plan,” “intends,” “estimates,” “could,” “should,” “would,” “continue,” “seeks,” “pro forma,” or “anticipates,” or other similar words (including their use in the negative), or by discussions of future matters such as the development of new products, technology enhancements, possible changes in legislation and other statements that are not historical. These statements include but are not limited to statements under the captions “Business,” “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and in other sections incorporated by reference from our Annual Report on Form 10-K and Quarterly Reports on Form 10-Q, as applicable, as well as our other filings with the SEC. You should be aware that the occurrence of any of the events discussed under the heading “Risk Factors” above and in any applicable prospectus supplement and any documents incorporated by reference herein or therein could substantially harm our business, results of operations and financial condition and that if any of these events occurs, the trading price of our common stock could decline and you could lose all or a part of the value of your common stock.

The cautionary statements made in this prospectus are intended to be applicable to all related forward-looking statements wherever they may appear in this prospectus or in any prospectus supplement or any documents incorporated by reference herein or therein. We urge you not to place undue reliance on these forward-looking statements, which speak only as of the date they are made. Except as required by law, we assume no obligation to update our forward-looking statements, even if new information becomes available in the future.

USE OF PROCEEDS

Except as described in any prospectus supplement, we currently intend to use the net proceeds from the sale of our common stock under this prospectus for general corporate purposes, including the clinical and preclinical development of our drug candidates, research and development expenses, general and administrative expenses, manufacturing expenses, and potential acquisitions of companies and technologies that complement our business. When shares of our common stock are offered, the prospectus supplement relating thereto will set forth our intended use for the net proceeds we receive from the sale of such shares. Pending the application of the net proceeds, we expect to invest the proceeds in short-term, interest-bearing instruments or other investment-grade securities.

DESCRIPTION OF CAPITAL STOCK

As of the date of this prospectus, our restated certificate of incorporation, as amended, authorizes us to issue 110,000,000 shares of common stock, par value \$0.001 per share, and 5,000,000 shares of preferred stock, par value \$0.001 per share. As of November 28, 2007, 38,268,679 shares of common stock were outstanding and no shares of preferred stock were outstanding.

The following summary describes the material terms of our capital stock. The description of capital stock is qualified by reference to our restated certificate of incorporation, as amended and our bylaws, as amended, which are incorporated by reference as exhibits into the registration statement of which this prospectus is a part.

Common Stock

Voting. Common stockholders are entitled to one vote per share for the election of directors and on all other matters that require stockholder approval, and do not have cumulative voting rights.

Dividends and Other Distributions. Subject to any preferential rights of outstanding preferred stock, if any, holders of our common stock are entitled to share ratably in any dividends declared by our board of directors on the common stock and paid out of funds legally available for such dividends.

Distribution on Dissolution. Subject to any preferential rights of outstanding preferred stock, if any, in the event of our liquidation, dissolution or winding up, holders of our common stock are entitled to share ratably in any assets remaining after payment of liabilities and the liquidation preferences of any outstanding preferred stock.

Other Rights. Our common stock does not carry any preemptive rights enabling a holder to subscribe for, or receive shares of, any class of our common stock or any other securities convertible into shares of any class of our common stock. There are no redemption rights or sinking fund provisions applicable to our common stock.

Preferred Stock

We currently have no outstanding shares of preferred stock. Under our restated certificate of incorporation, as amended, our board of directors is authorized to issue shares of our preferred stock from time to time, in one or more classes or series, without stockholder approval. Prior to the issuance of shares of each series, the board of directors is required by the Delaware General Corporation Law (DGCL), and our restated certificate of incorporation, as amended, to adopt resolutions and file a certificate of designation with the Secretary of State of the State of Delaware. The certificate of designation would fix for each class or series the designations, powers, preferences, rights, qualifications, limitations and restrictions, including the following:

- the number of shares constituting each class or series;
- voting rights;
- rights and terms of redemption, including sinking fund provisions;
- dividend rights and rates;
- dissolution;
- terms concerning the distribution of assets;
- conversion or exchange terms;
- redemption prices; and
- liquidation preferences.

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Any future issuance of additional preferred stock could adversely affect the voting power of holders of common stock and reduce the likelihood that common stockholders will receive dividend payments and payments upon liquidation. Such an issuance could have the effect of decreasing the market price of the common stock. Such an issuance also could have the effect of delaying, deterring or preventing a change in control of us.

Anti-Takeover Provisions

Delaware Law. We are subject to the provisions of Section 203 of the DGCL. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years after the date of the transaction in which the person became an interested stockholder. Generally, a “business combination” includes a merger, asset sale or other transaction resulting in a financial benefit to the stockholder. An “interested stockholder” is a person who either owns 15% or more of our outstanding voting stock or, together with affiliates and associates, owns or, within three prior years, did own, 15% or more of our outstanding voting stock. These restrictions do not apply if:

- before the date that the person became an “interested stockholder,” our board of directors approved either the “business combination” or the transaction which makes the person an “interested stockholder”;
- the “interested stockholder” owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding (i) shares owned by persons who are directors and also officers and (ii) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or after the date that the person became an “interested stockholder,” the business combination is approved by (i) our board of directors and (ii) authorized at an annual or special meeting of our stockholders by the affirmative vote of at least 66^{2/3}% of our outstanding voting stock that is not owned by the “interested stockholder.”

The statute could have the effect of delaying, deferring, or preventing a change in control.

Bylaw and Certificate of Incorporation Provisions. Our bylaws, as amended, provide that special meetings of our stockholders may be called by our board of directors, the chairman of our board of directors, our President or by one or more stockholders holding 10% of the votes entitled to be cast at that meeting. Our restated certificate of incorporation, as amended, (i) provides for a board comprised of three classes of directors with each class serving a staggered three-year term, (ii) authorizes our board of directors to issue preferred stock from time to time, in one or more classes or series, without stockholder approval, (iii) requires the approval of at least two-thirds of the outstanding voting stock to amend certain provisions of our restated certificate of incorporation, as amended, and our bylaws, as amended and (iv) does not include a provision for cumulative voting for directors. Under cumulative voting, a minority stockholder holding a sufficient percentage of a class of shares may be able to ensure the election of one or more directors. These and other provisions contained in our restated certificate of incorporation, as amended, and bylaws, as amended, could delay or discourage transactions involving an actual or potential change in control of us or our management, including transactions in which stockholders might otherwise receive a premium for their shares over then current prices. Such provisions could also limit the ability of stockholders to remove current management or approve transactions that stockholders may deem to be in their best interests and could adversely affect the price of our common stock.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company. The transfer agent and registrar’s address is 59 Maiden Lane, New York, New York 10038.

Listing on the Nasdaq Global Select Market

Our common stock is listed on the Nasdaq Global Select Market under the symbol “NBIX.”

PLAN OF DISTRIBUTION

We may sell our common stock covered by this prospectus in any of three ways (or in any combination):

- to or through underwriters or dealers;
- directly to one or more purchasers; or
- through agents.

We may distribute the common stock:

- from time to time in one or more transactions at a fixed price or prices, which may be changed from time to time;
- at market prices prevailing at the time of sale;
- at prices related to the prevailing market prices; or
- at negotiated prices.

Each time we offer and sell common stock, we will provide a prospectus supplement or supplements that will describe the method of distribution and set forth the terms of the offering of our common stock covered by this prospectus, including:

- the name or names of any underwriters, dealers or agents;
- the amounts of common stock underwritten or purchased by each of them;
- the purchase price of the common stock and the proceeds we will receive from the sale;
- any over-allotment options under which underwriters may purchase additional common stock from us;
- any underwriting discounts or commissions or agency fees and other items constituting underwriters’ or agents’ compensation;
- the public offering price of the common stock;
- any discounts, commissions or concessions allowed or reallowed or paid to dealers; and
- any securities exchange or market on which the common stock may be listed.

Any public offering price and any discounts or concessions allowed or reallowed or paid to dealers may be changed from time to time. We may determine the price or other terms of the common stock offered under this prospectus by use of an electronic auction. We will describe how any auction will determine the price or any other terms, how potential investors may participate in the auction and the nature of the obligations of the underwriter, dealer or agent in the applicable prospectus supplement.

Underwriters or dealers may offer and sell the offered common stock from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. If underwriters or dealers are used in the sale of any common stock, the common stock will be acquired by the underwriters or dealers for their own account and may be resold from time to time in one or more transactions described above. The common stock may be either offered to the public through underwriting syndicates represented by managing underwriters, or directly by underwriters or dealers. Generally, the underwriters’ or dealers’ obligations to purchase the common stock will be subject to certain conditions

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precedent. The underwriters or dealers will be obligated to purchase all of the common stock if they purchase any of the common stock, unless otherwise specified in the prospectus supplement. We may use underwriters with whom we have a material relationship. We will describe the nature of any such relationship in the prospectus supplement, naming the underwriter.

We may sell the common stock through agents from time to time. The prospectus supplement will name any agent involved in the offer or sale of the common stock and any commissions we pay to them. Generally, any agent will be acting on a best efforts basis for the period of its appointment. We may authorize underwriters, dealers or agents to solicit offers by certain purchasers to purchase the common stock from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. The contracts will be subject only to those conditions set forth in the prospectus supplement, and the prospectus supplement will set forth any commissions we pay for solicitation of these contracts.

Agents, dealers and underwriters may be entitled to indemnification by us against certain civil liabilities, including liabilities under the Securities Act of 1933, as amended, or to contribution with respect to payments which the agents, dealers or underwriters may be required to make in respect thereof. Agents, dealers and underwriters may be customers of, engage in transactions with, or perform services for us in the ordinary course of business.

Any underwriter may engage in overallotment, stabilizing transactions, short covering transactions and penalty bids in accordance with Regulation M under the Exchange Act of 1934. Overallotment involves sales in excess of the offering size, which create a short position. This short sales position may involve either “covered” short sales or “naked” short sales. Covered short sales are short sales made in an amount not greater than the underwriters’ over-allotment option to purchase additional shares in this offering described above. The underwriters may close out any covered short position either by exercising their over-allotment option or by purchasing shares in the open market, if possible. To determine how they will close the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market, as compared to the price at which they may purchase shares through the over-allotment option. Naked short sales are short sales in excess of the over-allotment option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that, in the open market after pricing, there may be downward pressure on the price of the shares that could adversely affect investors who purchase shares in this offering. Stabilizing transactions permit bids to purchase the underlying security for the purpose of fixing the price of the security so long as the stabilizing bids do not exceed a specified maximum. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a covering transaction to cover short positions.

Similar to other purchase transactions, an underwriter’s purchase to cover the syndicate short sales or to stabilize the market price of our common stock may have the effect of raising or maintaining the market price of our common stock or preventing or mitigating a decline in the market price of our common stock. As a result, the price of the shares of our common stock may be higher than the price that might otherwise exist in the open market. The imposition of a penalty bid might also have an effect on the price of the shares if it discourages resales of the shares.

Neither we nor the underwriters makes any representation or prediction as to the effect that the transactions described above may have on the price of the common stock. If such transactions are commenced, they may be discontinued without notice at any time.

LEGAL MATTERS

The validity of the common stock being offered hereby will be passed upon by Cooley Godward Kronish LLP, San Diego, California.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2006, and management's assessment of the effectiveness of our internal control over financial reporting as of December 31, 2006, as set forth in their reports, which are incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements and management's assessment are incorporated by reference in reliance on Ernst & Young LLP's reports, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and special reports, proxy statements and other information with the SEC. You may read and copy any document we file at the SEC's public reference room at 450 Fifth Street, N.W., Washington, D.C., 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference room. Our SEC filings are also available to the public at the SEC's website at <http://www.sec.gov>.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" the information we file with them, which means that we can disclose important information to you by referring you to those documents instead of having to repeat the information in this prospectus. The information incorporated by reference is considered to be part of this prospectus, and later information that we file with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and any future filings we will make with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act of 1934 after the date of this prospectus until the termination of the offering of common stock covered by this prospectus (other than information furnished under Item 2.02 or Item 7.01 of Form 8-K):

- our annual report on Form 10-K for the year ended December 31, 2006 (filed on February 9, 2007), including all information incorporated by reference therein;
- our quarterly reports on Form 10-Q for the quarterly periods ended March 31, 2007 (filed on May 7, 2007), June 30, 2007 (filed on August 3, 2007), and September 30, 2007 (filed on November 2, 2007);
- our current reports on Form 8-K filed on January 16, 2007, January 23, 2007, February 21, 2007, May 31, 2007, June 6, 2007, June 13, 2007, August 22, 2007, October 26, 2007 and November 1, 2007;
- the description of our common stock contained in our registration statement on Form 8-A, filed on April 3, 1996, including any amendment or reports filed for the purpose of updating such description; and
- all filings we make with the SEC pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act of 1934 after the date of this prospectus and before the termination of this offering.

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You can request a copy of these filings, at no cost, by writing or telephoning us at the following address or telephone number:

Neurocrine Biosciences, Inc.
12790 El Camino Real
San Diego, CA 92130
(858) 617-7600
Attn: Investor Relations

This prospectus is part of a registration statement we filed with the SEC. That registration statement and the exhibits filed along with the registration statement contain more information about us. Because information about documents referred to in this prospectus is not always complete, you should read the full documents which are filed as exhibits to the registration statement. You may read and copy the full registration statement and its exhibits at the SEC's public reference rooms or its website.

Shares

Common Stock



Prospectus Supplement

Jefferies & Company

, 2010
