September 19, 2007

United States Securities and Exchange Commission Division of Corporation Finance 100 F Street, N.E. Mail Stop 6010 Washington, D.C. 20549 Attention: Tim Buchmiller, Senior Attorney

RE: Neurocrine Biosciences, Inc. Definitive Proxy Statement Filed April 27, 2007 File No. 000-22705

Dear Mr. Buchmiller:

We are writing in response to comments received from the Securities and Exchange Commission (the "*Commission*") staff (the "*Staff*") by letter dated August 21, 2007 (the "*Comment Letter*") with respect to the Definitive Proxy Statement (the "*Proxy Statement*") of Neurocrine Biosciences, Inc. (the "*Company*") filed with the Commission on April 27, 2007. The numbering of the paragraphs below corresponds to the numbering in the Comment Letter, the text of which we have incorporated into this response letter for convenience.

The Company acknowledges that: it is responsible for the adequacy and accuracy of the disclosures in the Proxy Statement; Staff comments or changes to disclosure in response to Staff comments do not foreclose the Commission from taking any action with respect to the Proxy Statement; and the Company may not assert Staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Staff Comments and Company Responses

Compensation Discussion and Analysis, page 15

1. Please refer to Item 402(b) of Regulation S-K and Section II.B. of Release No. 33-8732A and revise your disclosure to provide appropriate information pursuant to the item requirement. For example, it is not clear how you determine the amount for each element to pay and how your decisions regarding each element fits into your overall compensation objectives and how the amounts paid under each element affect amounts paid under the other elements. Refer to Item 402(b)(1)(vi). We do note your disclosure regarding the corporate and personal goals used in determining cash bonus amounts, but, as a general matter, your disclosure does not appear to contain quantitative or qualitative analysis regarding the determination of actual amounts paid under each element, how each element fits into your overall compensation objectives and how the amounts paid under each element affect decisions regarding the amounts paid or awarded under the other elements of your compensation package.

Response: The Company acknowledges the Staff's comment and confirms that in future filings, it will provide additional discussion and analysis regarding how its Compensation Committee determines the amount of each element of compensation, the relationship of such elements of compensation to one another, and how decisions regarding such elements fit into the Company's overall compensation objectives.

Role of Peer Group, Compensation Surveys and Consultants, page 15

2. Given that you seek to offer a level of compensation to your executive officers that is competitive with the compensation paid by your selected peer group of companies, please specify how each element of compensation you provide to the named executive officers relates to the data you have analyzed from the comparator companies and include a discussion of where you target each element of compensation against the peer companies and where actual payments under each element of compensation actually fell within the targeted parameters. To the extent actual compensation was outside of a targeted range, please discuss why. Refer to Item 402(b)(2)(xiv) of Regulation S-K.

Response: The Company acknowledges the Staff's comment and confirms that in future filings, it will provide additional discussion and analysis regarding how the elements of compensation it provides to its named executive officers relate to the peer group data reviewed and analyzed by the Compensation Committee, on both a targeted and actual basis.

Cash bonuses, page 16; and Chief Executive Officer Compensation, page 18

3. You disclose that bonus payments are linked to the attainment of overall corporate goals and individual goals established for each executive officer and you disclose that your CEO compensation is linked to annual and long-term strategic and operational goals. While we note your disclosure that within research and development, the goal with the highest difficulty to achieve was obtaining FDA approval of indiplon, you do not indicate what specific goals were established within the business development, commercial and general administration goals. Please provide adequate discussion and analysis of the quantitative or qualitative aspects of the necessary goals to be achieved in order for your executive officers to earn their incentive compensation. You should disclose the specific quantitative and qualitative aspects of the performance objectives used to determine incentive amounts and how your incentive awards are specifically structured around such performance goals and individual objectives. To the extent you believe that disclosure of the information would result in competitive harm such that the information could be excluded under Instruction 4 to Item 402(b), please provide us with a detailed explanation supporting your conclusion. To the extent that it is appropriate to omit specific targets or performance objectives, you are required to provide appropriate disclosure pursuant to Instruction 4 to Item 402(b) of Regulation S-K. Refer also to Question 3.04 of the Item 402 of Regulation S-K Interpretations available on our website at www.sec.gov. In discussing how difficult or likely it will be for the registrant to achieve the target levels or other factors, you should provide as much detail as necessary without disclosing information that poses a reasonable risk of competitive harm.

Response: As the Staff has noted, Instruction 4 to Item 402(b) of Regulation S-K provides that the Company need not disclose the specific qualitative and quantitative aspects of its performance objectives and goals if such disclosure would result in competitive harm to the Company. Instruction 4 further provides that the standard used in determining whether disclosure would cause competitive harm is the same standard applicable to requests for

confidential treatment of confidential trade secrets or confidential commercial or financial information pursuant to Securities Act Rule 406 and Exchange Act Rule 24b-2 of the Securities Exchange Act of 1934, as amended, each of which incorporates the criteria for non-disclosure when relying upon "exemption 4" of the Freedom of Information Act (*"FOIA***"**) and Rule 80(b)(4) thereunder.

Courts have construed exemption 4 and provided guidance regarding the scope of the exemption in several cases. One of the principal cases is *Gulf & Western Indus., Inc. v. United States*, 615 F.2d 527 (D.C. Cir. 1979), in which the Court of Appeals for the District of Columbia Circuit (the "*D.C. Circuit*") affirmed a district court ruling that the Government was entitled to withhold certain documents from the disclosure requirements of FOIA pursuant to exemption 4. In that case, the court held that for information to fall within exemption 4, "the information must be (1) commercial or financial, (2) obtained from a person outside the government, and (3) privileged or confidential." *Id.* at 529 (citing *National Parks and Ass'n v. Morton,* 498 F.2d 765 (D.C. Cir. 1974). The information being sought in that case met the first two requirements because it related to the business of Norris Industries, Inc., a third party defense contractor ("*Norris*"). *Id.* at 529. In determining whether the such information was entitled to confidential treatment, the court, citing *Morton*, held that "[i]nformation is privileged or confidential if it is not the type usually released to the public and is of the type that, if released to the public, would cause substantial harm to the competitive position of the person from whom the information was obtained." *Id.* at 530 (citing *Morton*, 498 F.2d at 770). The D.C. Circuit further held:

In order to show the likelihood of substantial competitive harm, it is not necessary to show actual competitive harm. Actual competition and the likelihood of substantial competitive injury is all that need be shown.

Id. at 530 (citing National Parks and Conservation Association v. Kleppe, 547 F.2d 673 (D.C. Cir. 1976)).

The court ultimately affirmed the district court's ruling that the Government was entitled to withhold the information being sought because it found that disclosure of such information would allow Norris's competitors to calculate accurately its future bids and its pricing structure from the withheld information. *Id.* According to the court, such information should remain confidential because it was not "of the type normally released to the public" and that "substantial competitive harm" would be caused if it were disclosed. *Id.*

In *Critical Mass Energy Project v. Nuclear Regulatory Comm'n*, 975 F.2d 871 (D.C. Cir. 1992), the D.C. Circuit, in an *en banc* decision, re-affirmed the longstanding two-part exemption 4 confidentiality test that was first articulated in *Morton, supra*, and on which the *Gulf & Western* court based its decision. *Id.* at 872. Under the *Morton* test, any financial or commercial information is confidential for the purposes of exemption 4 if "disclosure would be likely either '(1) to impair the Government's ability to obtain necessary information in the future; or (2) to cause substantial harm to the competitive position of the person from whom the information was obtained." *Critical Mass*, 975 F.2d at 878 (quoting *Morton*, 498 F.2d at 770). While government interest is unlikely to be implicated where the production of information is compelled, competitive interest remains a threat to the business of the person from whom the information is sought.

The Company believes that, as elaborated more fully below, the specific qualitative and quantitative aspects of the performance objectives and goals referred to in the Staff's comment

are exempted from disclosure under exemption 4 because they meet all three requirements referred to above: the information (1) is commercial or financial; (2) was obtained from a person outside of the government and (3) is "confidential," as defined by the D.C. Circuit in *Gulf & Western*. For all of the reasons set forth herein, such information is "not of the type normally released to the public," and "substantial competitive harm" to the Company would be caused were it to be disclosed.

The Company believes that disclosing the specific qualitative and quantitative aspects of its performance objectives and goals would cause competitive harm to the Company and would be of relatively little value to investors. Certain of such performance objectives and goals involve specific and detailed information regarding the research, development and commercialization plans and strategies for the Company's clinical-stage and research-stage product candidates. Disclosure of such sensitive and confidential information would provide the Company's competitors with valuable insight into the Company's research, development and commercialization objectives. These competitors could use such insight to, among other things, devote additional resources to certain of their own product candidates in an effort to bring them to market in advance of the Company's product candidates, or to structure their own research and development programs so as to maximize their chances of selection, relative to the Company, as a collaborator or partner in the development of drugs or therapies or as a licensor of technologies.

The Company's performance objectives and goals also contain specific details regarding the Company's administrative, operational and financial plans and strategies. Were this information to become available to interested third parties, they would undoubtedly use it to the detriment of the Company and its stockholders. For example, potential collaborators, partners, licensees or financing sources of the Company could use such information to negotiate more favorable terms, relative to the Company, than they would be able to negotiate in the absence of such sensitive and confidential information. If the Company was unable to negotiate favorable terms with potential collaborators, partners, licensees or financing sources, its stockholders would be adversely affected.

While the specific qualitative and quantitative aspects of the Company's performance objectives and goals would be useful to the Company's competitors, such goals would not be particularly valuable to investors. The Company believes that its competitors generally do not disclose the qualitative and quantitative aspects of their performance objectives and goals at an equivalent level of detail. Consequently, investors would be precluded from comparing the Company's information with equivalent information provided by other companies and therefore from drawing accurate and meaningful conclusions about the value of the Company's performance goals and objectives. Moreover, there is no guarantee that the Company or the individuals in question will meet the performance goals and objectives. Therefore, the Company believes that investors would be better served by retrospective disclosure of specific prior year compensation for the Company's named executive officers in its Form 10-K or proxy statement, rather than the speculative and forward-looking disclosure of the qualitative and quantitative aspects of the Company's corporate and individual goals.

The Company confirms that pursuant to instruction 4 to Item 402(b) of Regulation S-K, it will disclose in future filings how difficult it will be for the executive or how likely it will be for the Company to achieve any undisclosed target levels or other factors, and will endeavor to provide as much detail as necessary without disclosing information that poses a reasonable risk of competitive harm.

Equity Awards, page 17

4. Please expand your Compensation Discussion and Analysis to include a more detailed analysis of how the Compensation Committee determined the actual amounts of the stock option, restricted stock unit awards, and stock bonuses for each named executive officer. Although we note disclosure regarding general policies relating to these forms of compensation, please include disclosure that not only sets forth the actual amounts awarded under these forms of compensation but also provides substantive analysis and insight into how the Compensation Committee determined the actual award amounts. For example, please discuss and analyze how the Compensation Committee determined to award the actual number of shares underlying the stock option and restricted stock awards for your named executive officers, and the rationale for the variances in those awards among such officers.

Response: The Company acknowledges the Staff's comment and confirms that in future filings, it will provide more detailed disclosure and analysis of how the Compensation Committee determined the equity grants awarded to each named executive officer and the rationale for variances in such grants among such officers.

Summary Compensation Table, page 21

5. Your Compensation Discussion and Analysis should be sufficiently precise to identify material differences in compensation policies with respect to individual named executive officers. Refer to Section II.B.1 of Commission Release No. 33-8732A. For example, we note the disparity between your chief executive officer's compensation and that of the other named executive officers. Please provide a more detailed discussion of how and why your chief executive officer's compensation differs from that of the other named executive officers.

Response: The Company acknowledges the Staff's comment and confirms that in future filings, it will provide additional discussion and analysis with respect to variances in compensation among its named executive officers.

Outstanding Equity Awards Table, page 24

6. Please note that Instruction 2 to Item 402(f)(2) of Regulation S-K requires footnote disclosure of the vesting dates of options, shares of stock and equity incentive plan awards held at fiscal year-end. Please include the required disclosure.

Response: The Company respectfully directs the Staff to footnotes 2 - 5 and 7 - 10 of the Outstanding Equity Awards Table in the Proxy Statement, which describe the vesting schedules applicable to the option and stock awards set forth in such table. The Company confirms that in future filings, it will modify such table and/or footnotes to identify the dates on which such vesting schedules commence.

Related Person Transactions, page 31

7. Provide the information required by Item 404(b) of Regulation S-K. For example, describe your policies and procedures for the review, approval or ratification of any transaction required to be reported under Item 404(a), including, to the extent applicable, the material features described in Item 404(b)(1).

Response: The Company respectfully directs the Staff to the disclosure under the subheading "Review, approval or ratification of related person transactions" in the "Related Person Transactions" section of the Proxy Statement, which sets forth the responsibility of the Company's Audit Committee with respect to the review and approval of related person transactions as well as certain parameters for whether such transactions are subject to audit committee oversight prior to or following their execution. The Company confirms that in future filings, it will clarify that in connection with its review, approval or ratification of related person transactions, the audit committee takes into account all relevant available facts and circumstances in determining whether such transaction is in the best interests of the Company and its stockholders.

The Company respectfully requests the Staff's assistance in completing the review of the Company's responses as soon as possible. Please advise us if we can provide any further information or assistance to facilitate your review. Please direct any further comments or questions regarding this response letter to me at (858) 617-7817 or to Jason L. Kent, Esq. of Cooley Godward Kronish LLP, the Company's outside legal counsel, at (858) 550-6044.

Sincerely,

/s/ Timothy P. Coughlin

Timothy P. Coughlin Vice President and Chief Financial Officer Neurocrine Biosciences, Inc.

 Cc: Gary A. Lyons, Neurocrine Biosciences, Inc. Margaret Valeur-Jensen, J.D., Ph.D., Neurocrine Biosciences, Inc. Frederick T. Muto, Esq., Cooley Godward Kronish LLP Jason L. Kent, Esq., Cooley Godward Kronish LLP