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November 18, 2009

Delivered via EDGAR

Securities and Exchange Commission
Division of Corporation Finance
100 First Street, N.E.
Mail Stop 4720
Washington, DC 20549

Attn: Jim B. Rosenberg, Senior Assistant Chief Accountant
Kei Ino, Staff Accountant
Mark Brunhofer, Senior Staff Accountant
Mike Rosenthall, Staff Attorney
Jennifer Riegel, Staff Attorney

Re: Vertex Pharmaceuticals Incorporated
Form 10-K for the Period Ended December 31, 2008
Form 10-Q for the Quarterly Period Ended March 31, 2009
Definitive Proxy Statement on Schedule 14A filed April 8, 2009
File No. 000-19319

Ladies and Gentlemen:

The purpose of this letter is to respond to the comments provided by the staff (the "Staff") of the Securities and Exchange Commission (the "SEC") to Vertex Pharmaceuticals Incorporated (the "Company") in a letter dated October 23, 2009 to Kenneth S. Boger, Senior Vice President and General Counsel of the Company. The comments from the Comment Letter are reproduced below together with the Company's responses to those comments.

Definitive Proxy Statement on Schedule 14A filed April 8, 2009

Compensation Discussion and Analysis
2008 Compensation Decisions for Performance-Based Elements, page 29

Comment 1:

We note your response to our prior comment 4. However, your response does not appear to address our concerns. To the extent that your four high-level goals are more specifically defined than the disclosure in your document, they should be more specifically described. For example, one of the goals is to "meet or exceed timelines in clinical, regulatory, quality, manufacturing and commercial operations toward a successful launch of telaprevir." If the goals, as communicated to your executives, are more specific as to these timelines, these timelines should be described. If you believe that a more specific

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disclosure of these goals would be competitively harmful, please provide us with an analysis supporting your belief. The analysis should identify the information that you believe would cause competitive harm, describe the competitive harm you are likely to experience if the information is disclosed and explain why this information is not material to investors. We will not be in a position to assess the likelihood of competitive harm if we do not know what the specific goals are. Please be advised that you may request confidential treatment for portions of your response pursuant to Rule 83. Please provide proposed disclosure for your 2010 proxy statement.

Additionally, comment 4 indicated that when information relating to targets and goals is not provided on the basis that disclosure is not material and is likely to cause competitive harm, you must discuss how difficult it will be for the executive or how likely it will be for the company to achieve the undisclosed goals or targets. Your response directs our attention to the disclosure relating to the level of achievement which is not the same as a discussion of the level of difficulty to achieve the stated goals and targets. If you continue to believe that your goals and targets quality for confidential treatment, please discuss the level of difficulty related to the undisclosed goal(s) or target(s).

Response:

The Company confirms that as set forth in the Company's letter to the Commission dated November 6, 2009, the Company will respond to Comment 1 via EDGAR on or before December 22, 2009 (shortly after the next meeting of the Company's Management Development and Compensation Committee).

Form 10-Q for the Quarterly Period Ended March 31, 2009

Preliminary Allocation of Assets and Liabilities, page 18

Comment 2:

We acknowledge your response to comment seven (a). Although the nature, timing and estimated costs of the efforts to complete the development of VX-222 and VX-759 are subject to risks and uncertainties, we do not understand why meaningful estimates are not available when it would appear that these costs are a significant component of the cash flow assumptions inherent in your fair value assessment of these projects. Please revise your disclosure to provide the nature, timing and estimated costs to complete these projects as utilized in your fair value assessment.

Response 2:

The Company acknowledges that it used estimates of the nature, timing and costs of efforts to develop VX-222 and VX-759 in order to generate cash flow assumptions inherent in the Company's fair value assessment of these projects. However, because VX-222 and VX-759 are novel compounds in early-stage testing the development path for these compounds is very uncertain. The number and size of clinical trials, and the costs and timelines for development, necessarily will be determined on the basis of experimental outcomes in clinical trials that will be conducted in the future and which are difficult to predict.

Accordingly, the Company used a range of cash-flow assumptions based on its experience with other development programs. These assumptions were informed by general industry standards for

development of antiviral drug candidates and included a number of alternative scenarios. The Company believes the disclosure of the specific aggregate estimated costs used in its model would therefore not be meaningful to investors as a reliable estimate of its future costs and could in fact imply unjustified certainty regarding how much it will actually cost to develop VX-222 or VX-759.

The Company estimates that the development of drug candidates from Phase 1 to launch typically takes between 4-10 years. These estimates along with a description of the various stages of drug development are set forth on page 20 of the Company's Annual Report on Form 10-K (2 to 4 years to complete Phase 2 development, 2 to 4 years to complete Phase 3 clinical development and a further 6 months to 2 years to obtain approval). In addition, in the text of the critical accounting policy discussion regarding the valuation models used to estimate the values of VX-222 and X-759, the Company states "a market participant would assume that it would take several years to complete each phase of clinical trials for a drug candidate for the treatment of patients with HCV." The Company believes that these disclosures provide investors with the meaningful information needed to determine that it will take at least four or more years before any potential launch of VX-222 or VX-759. The Company believes that more specific disclosure regarding the estimated timing for completion of the development of VX-222 and/or VX-759 could be inappropriately interpreted as a projection of when the Company expects to launch VX-222 or VX-759 as a new treatment for HCV, when in fact the timing will depend significantly on data from future clinical trials which has not been collected and will not be collected for some time. The Company believes any such projection would be premature and misleading to investors and patients infected with HCV (and could subject the Company to scrutiny from the FDA).

Comment 3

We acknowledge your response to comment seven (c). Please address the following additional comments:

- You indicate that you did not ascribe value to ViroChem's other preclinical programs and other technologies because market participants would be unlikely to ascribe value to them. Please tell us how many other preclinical programs and other technologies you acquired from ViroChem and the associated treatment indications.

- It appears that you based the $7.2 million fair value assigned to the VCH-286 intangible asset based on the development costs incurred through the acquisition date. Please demonstrate to us how the value assigned is consistent with that derived by a market participant and how it complies with the guidance in paragraph 33 of SFAS 141R. Please revise your disclosure accordingly.

Response 3

a) ViroChem had limited resources, including less than 75 employees and limited funding, and as a result focused most of its efforts on its lead programs, including VX-222, VX-759 and VCH-286. At the time of the acquisition, ViroChem had two preclinical programs (one targeted at drug candidates for the treatment of HCV and the other targeted at drug candidates for the treatment of HIV). Neither program had progressed sufficiently to permit the identification of specific compounds for potential clinical development. The Company determined that because of the uncertainties related to the safety, efficacy and commercial viability of any potential drug candidate that might be identified through these programs,

and the significant additional investments that would be required to even identify compounds for clinical development through these programs, market participants would not ascribe value to either of these programs as of the acquisition date. Because ViroChem was using industry-accepted methods to identify promising drug candidates, there were no "other technologies" that the Company identified that the Company believed would have value to a market participant.

b) The Company evaluated whether to account for VCH-286 as an asset held for sale under paragraph 33 of SFAS 141(R) "*Business Combinations*" and SFAS 144 "*Accounting for the Impairment or Disposal of Long-Lived Assets*." In estimating the fair value of VCH-286 at an amount equal to $7.2 million (based on development costs through the acquisition date), the Company considered the three potential valuation techniques (the cost approach, the market approach and the income approach) set forth in paragraph 18 of SFAS 157 "Fair Value Measurements." Furthermore, the Company considered the AICPA Audit and Accounting Practice Aid Series, "*Assets Acquired in a Business Combination to Be Used in Research and Development Activities: A Focus on Software, Electronic Devices and Pharmaceutical Industries*" (the AICPA Guide). The Company determined that for VCH-286, the cost approach, which provides a systematic framework for estimating the value of intangible asset based on the cost to a market participant to acquire a substitute asset of comparable utility, was appropriate to estimate the fair value of the asset. Given the uncertainties regarding whether any market participant would continue the development of VCH-286 based on the clinical data obtained through the acquisition date and the numerous drugs that are already being marketed for the treatment of HIV, the Company (i) does not believe that reliable forecasts of future benefits of VCH-286 exist and (ii) believes that there may be no market for the sale or transfer of assets comparable to VCH-286. Thus the cost approach is the most appropriate method to value this compound. The Company

believes that this conclusion is consistent with the AICPA Guide, paragraph 2.1.04. Overall, the Company believes that this valuation is reasonable in light of the limited resources ViroChem was allocating to this asset at the time of acquisition, the limited interest that third parties had expressed in acquiring this asset at the time of acquisition and the Company's internal evaluation of this program.

While the Company has disclosed that it may seek to "license rights" to ViroChem's non-HCV assets, the Company has not committed to any specific sale of VCH-286, and does not know what form any potential license might take. As a result, the Company determined that it has not met criteria set forth in paragraph 30 of SFAS 144 for an "asset held for sale" with respect to VCH-286. For example, the Company has not committed "to a plan to sell the asset" as required by clause (a) of paragraph 30 of SFAS 144 and the Company has not met the requirement pursuant to paragraph (d) of SFAS 144 that the sale of the asset be probable. As a result, the Company does not believe that paragraph 33 of SFAS 141(R) is applicable to VCH-286, and is accounting for VCH-286 as an identified intangible indefinite-lived asset.

The Company acknowledges that:

1) the Company is responsible for the adequacy and accuracy of the disclosure in its filings;

2) Staff comments or changes to disclosure in response to Staff comments do not foreclose the Commission from taking any action with respect to the filing; and

3) 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.

Please contact me at 617-444-6417 in the event that you have any questions or concerns with respect to this matter. In the event that I am not available, please contact my colleague, Valerie Andrews, at 617-444-6227.

Very truly yours,

/s/ Kenneth S. Boger

Kenneth S. Boger
Senior Vice President and General Counsel