VERTEX PHARMACEUTICALS INCORPORATED
130 WAVERLY STREET • CAMBRIDGE, MA 02139-4242
TEL. 617.341.6100 • FAX 857-263-4527
http://www.vrtx.com

April 26, 2013

Delivered via EDGAR

Securities and Exchange Commission
Division of Corporation Finance
Washington, DC 20549

Attn: Jim B. Rosenberg, Senior Assistant Chief Accountant
Joel Parker, Accounting Branch Chief
Tabatha Akins, Staff Accountant

Re: Vertex Pharmaceuticals Incorporated
Form 10-K for the Fiscal Year Ended December 31, 2012
Filed March 1, 2013
File No. 000-19319

Ladies and Gentlemen:

The purpose of this letter is to respond to the comments from the staff (the "Staff") of the Securities and Exchange Commission (the "Commission") to Vertex Pharmaceuticals Incorporated (the "Company") set forth in the Staff's letter dated April 12, 2013 to Jeffrey M. Leiden (the "Comment Letter") regarding the Company's filing with the Commission referenced above. The comments from the Comment Letter are reproduced below together with the Company's responses to those comments.

General

Comment 1:

We note that you incorporate by reference into Part III of your Form 10-K certain information from your definitive proxy statement for your 2013 annual meeting of shareholders. Please note that we may have further comments after reviewing this information and we will not be able to clear our review of your filing until we have the opportunity to resolve any resulting comments.

Response 1:

The Company recently filed its Definitive Proxy Statement on Schedule 14A for its 2013 Annual Meeting of Shareholders, which included the information required by Part III of Form 10-K.

Notes to Consolidated Financial Statements

I. Intangible Assets and Goodwill

Intangible Assets

Alios Collaboration, page F-27

Comment 2:

You state "there was no impairment to the program in the third quarter of 2012 because of the advancement of ALS-2200." Please tell us why ALS-2200 and ALS-2158 were not separately valued at the date of acquisition. Cite the accounting guidance used in your determination.

Response 2:

On June 13, 2011 (the "Acquisition Date"), the Company obtained rights to Alios BioPharma, Inc.'s ("Alios") HCV nucleotide analogue program pursuant to a license and collaboration agreement with Alios that contained an exclusive license to develop and commercialize ALS-2200 and ALS-2158 (the "Compounds"). The Compounds were both pre-clinical drug candidates (in a class of compounds referred to as hepatitis C virus ("HCV") nucleotide analogues) that the Company planned to develop for the treatment of patients with HCV infection. Alios also is conducting a research program pursuant to the license and collaboration agreement focused on the discovery of additional HCV nucleotide analogues that had not been identified as of the Acquisition Date. The license and collaboration agreement resulted in the consolidation of Alios, a variable interest entity, and the initial consolidation of Alios was treated as a business combination. As of the Acquisition Date, the Company valued the HCV nucleotide analogue program, which included both ALS-2200 and ALS-2158, at $250.6 million.

All treatment regimens for HCV infection (including approved treatment regimens and treatment regimens currently in development) involve the administration of multiple drugs in combination. As of the Acquisition Date, the Company planned to conduct a development program to evaluate treatment regimens for HCV infection that would include ALS-2200 and/or ALS-2158 in combination with other drugs and/or drug candidates, including potentially additional HCV nucleotide analogues discovered pursuant to the research program being conducted by Alios pursuant to the license and collaboration agreement. The goal of this development program was to develop an all-oral treatment regimen for HCV infection that would not require co-administration of pegylated-interferon, a drug that must be administered by weekly injection.

The early-stage clinical trials in the HCV nucleotide analogue development program were intended to identify a single treatment regimen containing ALS-2200 and/or ALS-2158 (the "Selected Regimen") that the Company would subsequently evaluate in later-stage clinical trials. Due to the significant development and commercialization risks associated with the Compounds, which were pre-clinical development candidates on the Acquisition Date, the Company was not able to predict which Compound(s) would be included in the Selected Regimen. If the later-stage clinical trials were successful, the Company would then seek approval to market the Selected Regimen as a treatment for HCV infection. As a result, the valuation model that was used to determine the fair value of the HCV nucleotide analogue program included a single discounted cash flow based on projected sales of the Selected Regimen.

ASC 805-20 “Identifiable Assets and Liabilities, and any Noncontrolling Interest” does not directly address the question of whether to (i) value the HCV nucleotide analogue program as a single unit of account or (ii) value the Compounds separately. The Company valued the HCV nucleotide analogue program as a single unit of account based primarily on its analysis of the factors listed below. These factors were being discussed by AICPA at the time that the Company completed its initial valuation of the HCV nucleotide analogue program in the third quarter of 2011 and were included in the Working Draft of the AICPA Accounting and Valuation Guide titled “Assets Acquired to be Used in Research and Development Activities” that was released on November 18, 2011 (the “Practice Aid”). While the Practice Aid has not been finalized, the Company believes it currently is the most relevant interpretive guidance with respect to this issue. The Practice Aid notes that separately identifiable in-process research and development (“IPR&D”) assets that share similar characteristics may be combined into a single unit of account if they are substantially the same, while less closely related IPR&D projects may be valued separately. The Practice Aid suggests considering the following factors in making this determination:

- Whether there was an intent to manage costs for the developed asset(s) separately or on a combined basis in areas such as strategy, manufacturing, advertising, selling, etc.;
- The phase of development of the related IPR&D projects;
- The nature of activities and costs necessary to further the related IPR&D projects;
- The risks associated with the further development of the related IPR&D projects;
- The amount and timing of the benefits expected to be derived from the developed assets; and
- The expected economic life of the development assets.

The Company believes that the factors identified in the Practice Aid support combining the Alios HCV nucleotide analogue program into a single unit of account, as follows:

- The business purpose of the license and collaboration agreement with Alios was to acquire rights to the HCV nucleotide analogue program and to develop and commercialize a Selected Regimen to treat patients with HCV infection. The Company’s intent was to manage all the activities and costs related to the development program on a combined basis. The Company planned that the resulting Selected Regimen, whether it contained one or both of the Compounds, would be manufactured, marketed and sold as a single product for the treatment of HCV infection.
- The Compounds were at an identical, pre-clinical stage of development.
- The expected clinical and non-clinical activities required to develop the Compounds, and the anticipated costs of such activities, were identical.
- The Company believed based on pre-clinical data and other information that the risks related to the Compounds were identical.
- The Company estimated that the amount and timing of the benefits derived from the developed assets would be identical because the Company intended to develop and commercialize a single Selected Regimen.
- The Company intended to develop a single Selected Regimen, which it would market for as long as the Selected Regimen remained competitive.

P. Income Taxes, page F-34

Comment 3:

With respect to the tax rate reconciliation, please clarify for us:

- The nature of the foreign rate differential that increases the provision each year presented and to what foreign operations the differential relates considering that you incurred foreign pre-tax losses each year; and
- The nature of the benefited operating losses, to what operations (United States versus foreign) it relates and why it decreases the tax provisions in 2012 and 2011.

Provide us proposed revised disclosure to be included in future filings addressing these items.

Response 3:

In future filings that include a tax rate reconciliation, the Company proposes to include the following disclosure to clarify the tax rate reconciliation table:

> "The foreign rate differential in the tax rate reconciliation table reflects the effect of operations in jurisdictions with tax rates that are different from the United States. As set forth in the components of income (loss) before provision for (benefit from) income taxes, the Company had losses in foreign jurisdictions in 2012 and 2011. Due to lower foreign tax rates, particularly in the Cayman Islands, Ireland and Switzerland, the Company's tax benefit in foreign loss jurisdictions is less than the "expected" tax benefit that would have resulted from losses in these jurisdictions at corporate tax rates in the United States. The difference between the tax benefit at foreign corporate tax rates and the "expected" benefit based on corporate tax rates in the United States is reflected in the tax reconciliation table under the caption "foreign rate differential."
>
> The unbenefitted operating losses in the tax rate reconciliation table primarily reflect a change in the valuation allowance on deferred tax assets related to the United States, Canada, Ireland and Switzerland. In 2012 and 2011, there was a favorable effect on the tax provision (benefit) in the tax rate reconciliation table due to a reduction of the valuation allowance in the United States resulting from the utilization of U.S. federal net operating losses. In Canada, Ireland and Switzerland losses have been incurred that cannot be benefitted due to uncertainty in the Company's ability to use them in future periods resulting in an unfavorable effect on the tax provision."

Comment 4:

You state it is not "practical" to determine the amount of unrecognized deferred U.S. federal income tax liability. Please provide us proposed disclosure to be included in future filings that complies with ASC 740-30-50-2.c. which requires disclosure of the amount of unrecognized deferred tax liability, if practicable, or a statement that determination is not *practicable*.

Response 4:

In future filings, beginning with its Quarterly Report on Form 10-Q for the quarter ended March 31, 2013, the Company proposes to include the following disclosure:

> "At [Date], foreign earnings, which were not significant, have been retained indefinitely by foreign subsidiary companies for reinvestment; therefore, no provision has been made for income taxes that would be payable upon the distribution of such earnings and it would not be practicable to determine the amount of the related unrecognized deferred income tax liability."

The Company hereby confirms that in future filings the Company will enhance its overall disclosures by complying with the comments provided by the Commission in the manner set forth in the responses above, subject in all cases to any changes with respect to the facts underlying the Company's disclosures.

In addition, the Company acknowledges that:

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

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 617-961-0878 in the event that you have any questions or concerns with respect to this matter.

Very truly yours,

/s/ Kenneth L. Horton

Kenneth L. Horton
Executive Vice President & Chief Legal Officer