



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

DIVISION OF
CORPORATION FINANCE

Mail Stop 4546

September 30, 2016

VIA E-mail

Dr. Jeffrey M. Leiden, M.D., Ph.D.
Chairman of the Board, President and Chief Executive Officer
Vertex Pharmaceuticals Incorporated
50 Northern Avenue,
Boston, Massachusetts 02210

**Re: Vertex Pharmaceuticals Incorporated
Form 10-K for Fiscal Year Ended December 31, 2015
Filed February 16, 2016
File No. 000-19319**

Dear Dr. Leiden:

We have considered your August 12, 2016 response to our comment letter and related conference call on September 26, 2016 and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe a comment applies to your facts and circumstances, please tell us why in your response.

After reviewing your response to these comments, we may have additional comments. Unless we note otherwise, our references to prior comments are to comments in our June 30, 2016 letter.

Notes to Consolidated Financial Statements

B. Collaborative Arrangements

Variable Interest Entities (VIE)

Parion Sciences, Inc., page F-19

1. ASC 810-10-25-22 states that the variability to be considered in the consolidation analysis is based on an analysis of the design of the entity and provides a two-step test. Please describe for us your analysis of:
 - Parion's design, including the nature of the risks in the entity, and
 - The purpose for which Parion is created and the variability that Parion is designed to create and pass along to interest holders.

2. Please describe for us how the contractual arrangement between Vertex and Parion absorbs the variability that Parion was designed to create and pass along to interest holders.
3. As noted in your response to comment 4 within your August 12 letter, you have determined that Parion's other research and development programs (i.e. the Non-Licensed Asset Programs) had minimal value and therefore any limitations over your power with respect to these activities is not significant. ASC 810-10-25-38B requires a reporting entity to identify which activities most significantly impact the VIE's economic performance and determine whether it has the power to direct those activities. Notwithstanding the value of Parion's assets as of the reporting date, please describe how you determined that (i) substantially all the activities of Parion are on the behalf of Vertex and (ii) the research, development, and commercialization of the licensed assets represent the activities of Parion expected to most significantly impact its economic performance. Please address the following in your response:
 - The overall operational and financial decisions of Parion, as well as decisions over the \$80M initial payment under the Agreement (and any contingent milestone payments) retained within Parion are directed by Parion Management or its Board of Directors.
 - The Collaboration Agreement expires at the later of 1) the patent period of the Licensed Assets, or 2) 10 years after the first commercial sale per country, while Parion the entity appears to have an indefinite life.
 - As stated on its website, Parion is a development stage company dedicated to research, development, and commercialization of treatments to restore innate mucosal surface defenses. Further describing the entity's technologies as targeting both respiratory **and ocular** diseases.
 - Parion's website refers to press releases dated January 19, 2016 and May 2, 2016 which refer to further development and collaboration efforts over Parion Selected Assets.
4. We note from your response to comment 4 within your August 12 letter that the key development and commercialization decision with respect to the Licensed Assets are controlled by the Company. Please clarify which activities of Parion you believe most significantly impact Parion's economic performance.
5. We note ASC paragraph 805-30-30-1 states that goodwill in a business combination not achieved in stages is initially measured as the excess the consideration transferred (generally measured at acquisition date fair value) plus the fair value of any noncontrolling interest in the acquire over the net of the acquisition-date amounts of the identifiable assets acquired and liabilities assumed measured in accordance with Topic 805. Please clarify for us your calculation of goodwill (including the fair value of any noncontrolling interest) for the acquisition of Parion, and revise your disclosures as appropriate.

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You may contact Bonnie Baynes, Staff Accountant, at (202) 551-4924 if you have any questions regarding the comments. In this regard, do not hesitate to contact me at (202) 551-3474.

Sincerely,

/s/ Sharon M. Blume

Sharon M. Blume
Accounting Branch Chief
Office of Healthcare and Insurance