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April 13, 2011

Delivered via EDGAR

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

Attn: Jeffrey Riedler
Johnny Gharib

Re: Vertex Pharmaceuticals Incorporated
Form 10-K
Filed February 17, 2011
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 March 31, 2011. The comments are reproduced below together with the Company's responses to those comments.

Form 10-K, filed February 17, 2011

Corporate Collaborations, page 13

Comment 1:

In view of the current developmental status of your pipeline products, we believe that additional information regarding some of your collaboration agreements is material. Please provide draft disclosure to be included in future filings providing the following information:

- The material terms related to both the duration and potential earlier termination of the agreements with Janssen Pharmaceutical, Mitsubishi Tanabe and Cystic Fibrosis Foundation Therapeutics Inc. including information regarding the duration of any patents to the extent the duration of the agreements are conditioned upon the duration of patents; and

- A range of royalties payable on the agreement with Cystic Fibrosis Foundation Therapeutics Inc. expressed within ten percentage points (i.e. single digits, teens, twenties, etc.).

Response 1:

Cystic Fibrosis Foundation Therapeutics Incorporated

On April 7, 2011, the Company filed a Current Report on Form 8-K disclosing an amendment to its collaboration agreement with the Cystic Fibrosis Foundation Therapeutics Incorporated ("CFFT"). The Company included in this Form 8-K the information requested by the Staff regarding the collaboration agreement with CFFT. The text of the Current Report on Form 8-K is included as Exhibit A attached hereto (with responsive language emphasized).

Janssen Pharmaceutica, N.V.

The Company proposes to expand its disclosure regarding its collaboration agreement with Janssen Pharmaceutica, N.V. in future periodic filings (commencing with its Quarterly Report on Form 10-Q for the quarter ended March 31, 2011) to provide additional information regarding the duration and potential earlier termination of the collaboration agreement as follows (with supplemental language emphasized):

"Janssen may terminate the agreement (A) prior to the receipt of marketing approval for telaprevir, without cause at any time upon six months' notice to the Company or (B) if marketing approval has been obtained, upon the later of (i) one year's advance notice and (ii) such period as may be required to assign and transfer to the Company specified filings and approvals. **The agreement also may be terminated by either party for a material breach by the other, subject to notice and cure provisions. Unless earlier terminated, the agreement will continue in effect until the expiration of Janssen's royalty obligations, which expire on a country-by-country basis with the last-to-expire patent covering telaprevir. In the European Union, the Company has a patent covering the composition-of-matter of telaprevir through 2021 and expects to obtain extensions to the term of this patent through 2026."**

Mitsubishi Tanabe Pharma Corporation

The Company proposes to expand its disclosure regarding its collaboration agreement with Mitsubishi Tanabe Pharma Corporation in future periodic filings (commencing with its Quarterly Report on Form 10-Q for the quarter ended March 31, 2011) to provide additional information regarding the duration and potential earlier termination of the collaboration agreement as follows (with supplemental language emphasized):

"Mitsubishi Tanabe may terminate the agreement at any time without cause upon 60 days' prior written notice to the Company. **The agreement also may be terminated by either party for a material breach by the other, subject to notice and cure provisions. Unless earlier terminated, the agreement will continue in effect until the expiration of the last-to-expire patent covering telaprevir. In Japan, the Company has a patent covering the composition-of-matter of telaprevir through 2021.**"

Comment 2:

On page 2 of your filing, we note that telaprevir was discovered in your collaboration with Eli Lilly, which has now ended. However, we also note that you expect to pay Eli Lilly certain royalties on future sales of telaprevir if the product is commercialized. Please file the agreement with Eli Lilly as an exhibit pursuant to Item 601(b)(10)(ii)(B) of Regulation S-K and provide draft disclosure to be included in future filings describing the terms of the agreement that will still be applicable if telaprevir is commercialized including the range of royalty payments within ten percentage points. Alternatively, tell us the basis for your believe that the agreement is no longer material.

Response 2:

In its Quarterly Report on Form 10-Q for the quarter ended March 31, 2011, the Company will incorporate by reference as an exhibit the Research and Development Agreement (the "Lilly Agreement") between Eli Lilly and Company ("Eli Lilly") and the Company, effective June 11, 1997, which was originally filed as Exhibit 10.1 to the Company's Quarterly Report for the period ended June 30, 1997. The Lilly Agreement was terminated in the first quarter of 2003, and pursuant to Section 19.1(c) of the Lilly Agreement, (A) Eli Lilly granted the Company an exclusive license to patents solely or jointly owned by Eli Lilly covering telaprevir, (B) the Company agreed to pay to Eli Lilly a low single digit royalty calculated as a percentage of net sales of telaprevir. The Company proposes to include in its future periodic filings the following disclosure:

"We have agreed to pay Eli Lilly a low single digit royalty calculated as a percentage of net sales of telaprevir. We expect to pay this royalty during the term of the patents covering the composition-of-matter of telaprevir, which are scheduled to expire in the United States in 2025 and in Japan in 2021. Janssen is responsible for this royalty payment in its territories."

General

Comment 3:

We note that you intend to provide your Part III information in your definitive proxy statement. We plan to review that information prior to clearing the filing and may have additional comments.

Response 3:

The Company filed its Definitive Proxy Statement on Schedule 14A on April 8, 2011, which included the information required by Part III of Form 10-K.

The Company hereby confirms that in future filings the Company will enhance its overall disclosures by complying with the comments provided by the SEC 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.

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 617-444-6227 in the event that you have any questions or concerns with respect to this matter.

Very truly yours,

/s/ Valerie L. Andrews

Valerie L. Andrews
Vice President and General Counsel - Corporate

Exhibit A

Disclosure in Current Report on Form 8-K (Filed April 7, 2011)

On April 4, 2011, we entered into an amendment, which we refer to as the April 2011 Amendment, to our existing collaboration agreement with Cystic Fibrosis Foundation Therapeutics Incorporated, or CFFT, pursuant to which CFFT will provide financial support for (i) development activities for VX-661, a corrector compound discovered under the collaboration, and (ii) additional research and development activities directed at discovering new corrector compounds.

We entered into the original collaboration agreement in 2004 and in 2006, entered into two amendments to provide partial funding for our cystic fibrosis drug discovery and development efforts through early 2008. Under the April 2011 Amendment, CFFT will provide us with up to $75.0 million in funding over approximately five years for corrector-compound research and development activities. Vertex retains the rights to develop and commercialize VX-770, VX-809, VX-661 and any other compounds discovered during the course of the research collaboration with CFFT.

In the original agreement, as amended prior to the April 2011 Amendment, we agreed to pay CFFT tiered royalties calculated as a percentage, ranging from the high single digits to the sub-teens, of annual net sales of any approved drugs discovered during the research term that ended in 2008. The April 2011 Amendment provides for a tiered royalty at the same levels on net sales of corrector compounds discovered during the research term that begins in 2011. We also are obligated to make two one-time commercial milestone payments upon achievement of certain sales levels for a potentiator compound such as VX-770 and two one-time commercial milestone payments upon achievement of certain sales levels for a corrector compound such as VX-809 or VX-661.

CFFT may terminate its funding obligations under the April 2011 Amendment in certain circumstances, in which case there will be a proportional adjustment to the royalty rates and commercial milestones for certain corrector compounds. **For each compound commercialized under the agreement, we will have royalty obligations to CFFT until the expiration of patents covering that compound. For VX-770, which we are evaluating in a registration program, we have patents in the United States and European Union covering the composition of matter of VX-770 that expire in 2025, subject to potential patent life extensions. The collaboration agreement also may be terminated by either party for a material breach by the other, subject to notice and cure provisions.**