



DIVISION OF
CORPORATION FINANCE

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

April 3, 2012

Via E-mail

Vikas Sinha, M.B.A., C.A.
Senior Vice President and Chief Financial Officer
Alexion Pharmaceuticals, Inc.
352 Knotter Drive
Cheshire, CT 06410

**Re: Alexion Pharmaceuticals, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2011
Filed February 17, 2012
File No. 000-27756**

Dear Mr. Sinha:

We have reviewed your March 20, 2012 response to our March 7, 2012 letter and have the following comments.

Please respond to this letter within 10 business days by providing the requested information or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response. Please furnish us a letter on EDGAR under the form type label CORRESP that keys your responses to our comments.

After reviewing the information you provide in response to these comments, we may have additional comments and/or request that you amend your filing.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Critical Accounting Policies and Use of Estimates

Revenue Recognition

Net Product Sales, page 42

1. Please refer to your response to comment one. Please provide proposed additional disclosure to be included in future filings that includes an aging of your sovereign and non-sovereign receivables related to Italy, Spain and Greece along with the allowance recorded by category. We believe that the information should be broken down by any country which is experiencing significant economic, fiscal and/or political strains such that the likelihood of default would be higher than would be anticipated when such factors do not exist. In this respect, separately disclose your receivable balance for Italy, Spain, and Greece. Also, please consider CF Disclosure guidance Topic 4 in your proposed disclosure which can be found at <http://sec.gov/divisions/corpfin/guidance/cfguidance-topic4.htm>.

Cash Flows

Financing Activities, page 55

2. Please refer to your response to comment two. You state in your proposed disclosure “At December 31, 2011, our foreign subsidiaries had liabilities due to entities in the U.S. in excess of the amount of cash and cash equivalents held outside the United States, and therefore, entities in the U.S. can access the substantial portion of foreign cash and investment balances without negative tax consequences.” Please revise your proposed disclosure to clarify the intent of this statement, to describe the nature of these entities and their relationship to the Company’s foreign subsidiaries and to specify the amount of cash and investment balances accessible at December 31, 2011. Additionally, your proposed disclosure indicates that the cash can be accessed without negative tax consequences, while the disclosure on page F-29 indicates that you have not provided US income taxes on undistributed earnings of your non-US subsidiaries as these earnings are intended to be permanently reinvested. As these statements appear to contradict each other, please further revise your proposed disclosure to clarify these statements and to disclose the amount of cash and cash equivalents at December 31, 2011 held in foreign entities for which there would be tax implications upon repatriation.

Notes to Consolidated Financial Statements

Inventories, page F-9

3. Please refer to your response to comment four. FASB Concept Statement No. 5 does not establish generally accepted accounting standards. Please consider removing your reference to this guidance from your proposed disclosure, and confirm to us that you are capitalizing costs related to validation activities which are directly attributable to preparing the facility for its intended use under ASC 360-10-30-1.

12. Income Taxes, page F-25

4. Please disclose the amount of undistributed earnings of foreign subsidiaries. Refer to ASC 740-30-50-2b.

You may contact Tabatha Akins, Staff Accountant, at (202) 551-3658 or Mary Mast, Senior Staff Accountant, at (202) 551-3613 if you have any questions regarding the comments. In this regard, do not hesitate to contact me at (202) 551-3679.

Sincerely,

/s/ Jim B. Rosenberg

Jim B. Rosenberg
Senior Assistant Chief Accountant