



DIVISION OF
CORPORATION FINANCE

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

March 26, 2015

Via E-mail

Vikas Sinha

Executive Vice President and
Chief Financial Officer
Alexion Pharmaceuticals, Inc.
352 Knotter Driver
Cheshire, Connecticut 06410

**Re: Alexion Pharmaceuticals, Inc.
Form 10-K for the Fiscal Year Ended September 30, 2014
Filed February 6, 2015
File No. 0-27756**

Dear Mr. Sinha:

We have reviewed your filing and have the following comments. In our comments, we ask you to provide us with information so we may better understand your disclosure.

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 a comment applies 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 response to our comments.

After reviewing the information provided, we may raise additional comments and/or request that you amend your filings.

General

1. Please note that we intend to review the Part III information that you intend to incorporate by reference into your Form 10-K when filed. We may have further comments after reviewing that information and we will not be able to clear our review of your filing until we have the opportunity to resolve any resulting comments.

Management's Discussion and Analysis of Financial Condition and Results of Operations
Results of Operations
Income Taxes, page 65

2. Please tell us the following:
 - The nature of the centralization of your global supply chain and technical operations in Ireland and expected trends, if any, as a result of the centralization.

- Why the non-U.S. income before income taxes for the year ended December 31, 2014 increased significantly from the prior year.
- Why the income tax provision for your foreign operations for the year ended December 31, 2014 is disproportionate to the amount of Non-U.S. income before income taxes.
- Regarding your income tax rate reconciliation:
 - the reasons for the significant changes from year to year for the following line items:
 - foreign income tax rate differential,
 - foreign income tax credits,
 - foreign income subject to U.S. taxation, and
 - other nondeductible and permanent differences.
 - The extent to which the foreign income tax rate differential relates to any country with low tax rates such as Ireland.
 - The nature of the other nondeductible and permanent difference line item.
- Why the deferred tax asset for research and development expenses of \$129,995,000 at December 31, 2014 increased significantly from the deferred tax asset of \$3,418,000 at December 31, 2013.
- The amount of cash and investments that are currently held by your foreign subsidiaries that are considered reinvested indefinitely and its expected effect on your liquidity and capital resources. Refer to Item 303(a)(1) of Regulation S-K and Section IV of SEC Release 33-8350.

To the extent that your disclosure can be enhanced relating to the above, please provide us proposed revised disclosure to be included in future filings.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- 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
- 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.

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You may contact staff attorneys Preston Brewer at (202) 551- 3969 or John Krug at (202) 551-3862 if you have any questions regarding comment one. You may contact Mary Mast, Senior Staff Accountant, at (202) 551-3613 or Joel Parker, Accounting Branch Chief, at (202) 551-3651 if you have any questions regarding comment two. 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