



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

DIVISION OF
CORPORATION FINANCE

April 29, 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 December 31, 2014
Filed February 6, 2015
File No. 0-27756**

Dear Mr. Sinha:

We have reviewed your April 9, 2015 response to our March 26, 2015 letter and have the following comment.

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 the 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 comment.

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

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

1. Please refer to your response to comment 2 and provide proposed disclosure to be included in future periodic reports to address the following:
 - Expected trends such as lower taxes that may result from the centralization of your operations in Ireland.
 - How much of the increase in non-U.S. Income before taxes from December 31, 2013 to December 31, 2014 related to the partnership income derived in the foreign jurisdictions.

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- That your election to capitalize research and development in 2014 under the Internal Revenue Code resulted in the significant increase in the deferred tax asset.

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 our comment. 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