

Via Facsimile and U.S. Mail
Mail Stop 4720

April 14, 2010

Mr. Angus Russell
Chief Executive Officer
Shire plc
5 Riverwalk, Citywest Business Campus
Dublin 24, Republic of Ireland

Re: Shire plc
Form 10-K for the Fiscal Year Ended December 31, 2009
File No. 000-29630

Dear Mr. Russell:

We have reviewed your filing and have the following comments. In our comments, we ask you to provide us with information to better understand your disclosure. Where a comment requests you to revise disclosure, the information you provide should show us what the revised disclosure will look like and identify the filing, in which you intend to first include it. If you do not believe that revised disclosure is necessary, explain the reason in your response. After reviewing the information provided, we may raise additional comments and/or request that you amend your filing.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Item 1. Business

Royalties received from other products, page 13

1. We note that you receive royalties on antiviral products based on certain of your patents licensed to GSK. We further note the risk factor on page 29 indicating that any factors that decrease sales of 3TC and ZEFIX by GSK could significantly reduce the Company's royalty revenue and results of operations. Please expand

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your disclosure in this section to disclose the material terms of your license arrangement with GSK, including the term, termination, the potential range of royalty payments (for example, “low-teens” or “high-teens”) and the length of time GSK would be required to continue making such royalty payments.

Management’s Discussion and Analysis

Patents and Market Exclusivity, page 44

2. You disclose on page 44 “the loss or expiration of patent protection or regulatory exclusivity with respect to any of the Company’s major products could have a material adverse effect on the Company’s revenues, financial condition and results of operations...”. You also disclose the respective expiration dates of your patents starting at page 20. Additionally, you disclose that generic formulations had a negative effect on the sales of one of your products in 2009. Please disclose in quantitative and qualitative terms, within Management’s Discussion and Analysis, the impact that expirations of each of the materially important patents have had and which you reasonably expect will have on your results of operations and liquidity in the periods presented and in future periods.

* * * *

Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your responses to our comments and provide the requested information. Detailed letters greatly facilitate our review. Please furnish your letter on EDGAR under the form type label CORRESP.

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 all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. 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 connection with responding to our comments, please provide, in your letter, a 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

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- 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.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comment on your filing.

Please contact Christine Allen, Staff Accountant, at (202) 551-3652 or Lisa Vanjoske, Assistant Chief Accountant, at (202) 551-3614 if you have any questions regarding the processing of your response as well as any questions regarding comments on the financial statements and related matters. You may contact Nandini Acharya, Staff Attorney, at (202) 551-3495 with questions on any of the other comments. In this regard, do not hesitate to contact me, at (202) 551-3679.

Sincerely,

Jim B. Rosenberg
Senior Assistant Chief Accountant