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

DIVISION OF
CORPORATION FINANCE

August 13, 2010

Mr. Julian Heslop
Chief Financial Officer
GlaxoSmithKline plc
980 Great West Road
Brentford, TW8 9GS
England

Re: GlaxoSmithKline plc
Form 20-F for Fiscal Year Ended December 31, 2009
File No. 001-15170

Dear Mr. Heslop:

We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. In our comments, we ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by providing the requested information or by advising us when you will provide the requested response. 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 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 responses to our comments.

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

Products, intellectual property and competition
Patents, page 12

1. You disclose the near-term expiration of patents protecting leading products in your Pharmaceutical Division, particularly the USA expirations in 2010 for Seretide/Advair, which produced turnover of £5 billion in 2009. For several drug products, such as Valtrex, patents have already expired. You also assert that "following loss of patent protection, generic products rapidly capture a large share of the market, particularly in the USA." Please revise your disclosure in your "financial review" section to discuss in quantitative and qualitative terms, the impact that expirations of materially important patents have had on your results of operations and liquidity in the periods presented and the reasonably likely impact expected to occur in future periods.

Research and development, page 15

2. Disclose your criteria for deeming a late stage project listed on page 18 as "key." For each of these projects and those on pages 189 to 192 that you deem significant, disclose the following information.

   - The costs incurred by you during each period presented and to date on the project, including costs reimbursements to your collaboration partners;
   - The nature, timing and estimated costs to be incurred by you necessary to complete the project, particularly for those projects designated as "Filed" and "Phase 3;"
   - The period in which material net cash inflows from significant projects are expected to commence, particularly for those projects designated as "Approved"; and
   - The risks and uncertainties associated with completing development on schedule and the consequences to your operations, financial position and liquidity, if the project is not completed on a timely basis.

   Include a description of your criteria for deeming a project to be significant. For those pipeline projects that you do not consider significant, summarize the amounts charged to expense for each period by therapeutic category. Also, provide a general estimate of the nature, timing and costs necessary to complete these projects.

3. On page 3, you projected an 11% rate of return for R&D investments made in your late stage pipeline and a 14% expected long-term rate of return for R&D. Please explain to us how you computed the rate of return for R&D investments. Revise your disclosure to explain the relationship between the assumptions underlying this financial measure and the expected commercialization of your drug development pipeline.

4. On page 77, you describe a bonus measure for R&D employees that "fairly reflects R&D productivity and performance as well as performance against profit targets." Please explain to us how you computed this bonus measure for R&D employees. Revise your disclosure to explain the relationship between the assumptions underlying this bonus measure and the expected commercialization of your drug development pipeline.

5. On page 7, you indicate that you externalized 30% of your discovery research with 47 third party partners. Please quantify the magnitude of this external discovery research that is included in your research and development expenses for each period presented. Explain and quantify how you expect these programs to impact your future revenues for each therapeutic area. In addition, disclose the following information for your arrangements with each third party partner that are significant. Include a description of your criteria for deeming an arrangement to be significant.

- Disclose the contractual terms underlying each arrangement, including your obligations to make upfront license fee, milestone, cost reimbursements and other payments and the corresponding obligations of your partners.
- Quantify payments made and received under these contractual arrangements for each period presented.
- Quantify the development costs capitalized for each period presented.
- Describe your accounting treatment for these arrangements.
- For contractual arrangements with multiple deliverables, disclose your basis for concluding that the specific contractual payments reflect the fair value of the associated deliverables.
- Disclose how you determine whether an upfront or milestone payment to a third party relates to research, development or both activities. In particular, explain the factors determining when third party research activities stop and development activities commence and the resulting impact on your accounting for these activities.
- Disclose the degree of discovery research risk transfer to your 47 partners and the existence of buy-back options held by either party to the arrangement, if any.

For the remainder of the arrangements with your third party partners that you do not consider significant, summarize the number of arrangements and the amounts charged to expense for each period by therapeutic category. Also, provide a general estimate of the nature, timing and costs necessary to complete these discovery research programs.

6. You disclose £12.3 billion of commitments to make milestone payments under licenses and alliances at December 31, 2009 in Note 39. Please disclose the relationship between these commitments and your programs to externalize discovery research.

Notes to the financial statements
Note 2: Accounting principles and policies
Revenue, page 101

7. Your policy disclosure indicates that revenue may be recognized for product when it is made available to external customers against orders received. Although you mention the impact of the CDC's withdrawal of hepatitis vaccines for its stockpile on page four of your July 21, 2010 press release announcing your operating results for the second quarter of 2010, it is unclear whether you maintain that stockpile for the CDC. Please explain to us your revenue recognition policy for product ordered by customers but not shipped to them and reference for us the authoritative literature you rely upon to support your accounting. In your response, please differentiate between governmental stockpile transactions and any other customer transactions and, at a minimum, please provide the following information:

- Please explain to us the material terms of these arrangements, including when product is shipped to the customer;

- Please provide us your understanding of your customers' business purpose for accepting title to product that remains in your possession;
- Please explain to us how you transferred the significant risks and rewards of ownership of the goods and how you retain neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold as required by paragraphs 14(a) and 14(b) of IAS 18;
- Please explain how you meet the criteria for 'bill and hold' transactions identified in paragraph 1 of the Appendix to IAS 18; and
- To the extent you participate in government stockpile arrangements, please explain to us whether you undertake any obligation to rotate stock into the stockpile to maintain currently dated product. If so, please:
  - Explain whether you receive compensation for the service of rotating the stock and, if so, how you account for that compensation;
  - Explain whether you receive payment for the new inventory rotated into the stockpile and, if so, how you account for that payment;
  - Explain whether you can sell the inventory rotated out of the stockpile and your accounting for that inventory;
  - Considering the contingent nature of government stockpiles and that the government may never tap the stockpile, explain how you can assert that it is probable that delivery will be made as stipulated in paragraph 1(a) of the Appendix to IAS 18.

Note 14: Taxation, page 116

8. You disclose that unremitted profits at December 31, 2009 were £29 billion and that the estimated incremental liability from the repatriation of these profits was £500 million. Please revise your disclosure to clarify why the apparent effective incremental tax rate on these unremitted profits is only approximately 1.7%. In this regard, please clarify whether you would be entitled to a credit for income taxes paid in foreign jurisdictions.

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.

You may contact Frank Wyman, Staff Accountant at (202) 551-3660, or Mark Brunhofer, Accounting Reviewer, at (202) 551-3638 if you have questions regarding these comments. In this regard, do not hesitate to contact me, at (202) 551-3679.

Sincerely,

Jim B. Rosenberg
Senior Assistant Chief
Accountant