Via Facsimile and U.S. Mail
Mail Stop 6010

October 7, 2008

Mr. Jean-Jacques Bienaimé
Chief Executive Officer
BioMarin Pharmaceutical Inc.
105 Digital Drive
Novato, CA 94949

Re: BioMarin Pharmaceutical Inc.
Form 10-K for the Fiscal Year Ended December 31, 2007
Form 10-Q for the Quarterly Period Ended June 30, 2008
File No. 0-26727

Dear Mr. Bienaimé:

We have reviewed your filing and have the following comments. 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 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 annual or quarterly filing, as applicable, 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 any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the fiscal year ended December 31, 2007

Exhibits 31: Certifications

1. Please represent to us that you will revise your certifications in all future filings to provide the wording exactly as required by Item 601(b)(31) of Regulation S-K. In this regard, please remove the officer's title from your introductory sentence.

Form 10-Q for the quarterly period ended June 30, 2008

Financial Statements

Note 2(o): Reclassifications and Adjustments

2. You disclose the correction of an error recorded in the second quarter of 2008 related to sales taxes associated with inventory and property, plant and equipment purchased between April 2007 and March 2008. You indicate that you improperly expensed a total of $1.2 million of these sales taxes at the time of purchase and that the impact of the correcting adjustment to capitalize these taxes was not material to prior periods or to the expected results for the year ended December 31, 2008. Please provide us your analysis of the materiality of this adjustment by period. Please ensure that this analysis addresses both quantitative and qualitative factors, such as analyst consensus expectations as identified in SAB Topic 1:M1.

3. Although your adjustment to correct the sales tax error may not be material to your expected results for 2008, the adjustment appears to be material to your operating results for the interim periods of 2008. Please revise your MD&A to discuss the impact of this adjustment on your results of operations for the three- and six-month periods ended June 30, 2008. In addition, please confirm to us that if the recorded adjustment proves to be material to actual full-year 2008 results of operations that you will revise your 2007 and 2008 financial statements to record the errors in the correct interim/annual periods.

Note 4: Joint Venture

4. You disclose that you restructured your Aldurazyme joint venture with Genzyme effective January 1, 2008. You indicate that the operational responsibilities for you and Genzyme did not significantly change as a result of the revised joint venture structure; you manufacture Aldurazyme while Genzyme markets and distributes it. In your January 3, 2008 press release announcing the joint venture restructuring you indicated that the payments under the revised structure are projected to result in both you and Genzyme receiving approximately the same profit as under the original joint venture structure. In this note you disclose that instead of sharing all costs and profits equally with Genzyme through the 50/50 joint venture, Genzyme records sales of Aldurazyme to third party customers and pays you a tiered royalty. In addition, you recognize product transfer revenue when product is shipped to Genzyme and ultimately deduct this amount from royalties earned when product is sold by Genzyme. Please address the following:

   a. Please explain to us the business purpose for restructuring your joint venture with Genzyme when the operational responsibilities of both parties appears to have remained substantially unchanged and when you expect to receive approximately the same profit as under the original joint venture structure. In

addition, please explain to us whether and how the restructured arrangement with Genzyme impacts your liquidity. In this regard, please clarify whether the revised arrangement changes the timing and/or amount of cash flows related to inventory production and product sales.

b. Please explain to us your revenue recognition methodology for your Aldurazyme revenues and reference the authoritative literature you rely upon to support your accounting. In your response please ensure you address the following issues:
   i. Please explain the physical flow of Aldurazyme goods from your manufacturing facility to the ultimate consumer. Based on disclosure in Note A to the joint venture's financial statements filed as Exhibit 99.1 to your December 31, 2007 Form 10-K, you manufactured Aldurazyme, but either Genzyme or third-parties completed final packaging of the product. Please explain whether Genzyme still performs final packaging and how this impacts the transfer of title to the product. Please clarify whether Genzyme takes physical possession of Aldurazyme at any point in the process.
   ii. Although you now indicate that you recognize product transfer revenues when product is shipped to Genzyme, please explain to us whether and how you recognized revenue related to product shipments prior to the January 2008 restructuring.
   iii. Although you indicate that you recognize product transfer revenues when product is shipped to Genzyme, it appears from your MD&A disclosure on page 25 that you had no product transfer revenue in the second quarter of 2008 and $7.7 million for the first six months of 2008. Please explain why you had only $7.7 million in product transfer revenue for the first six months of 2008 when you had $9.5 million in the first quarter as reported on page 21 of your March 31, 2008 Form 10-Q.
   iv. In your revenue recognition policy note on page 8 you indicate that the $7.7 million in product transfer revenue for the first six months of 2008 is unbilled. Please explain to us whether and when you bill this revenue. If you do not bill this revenue as you will ultimately receive royalty payments from Genzyme, please explain how this amount was determined and why it is appropriate to recognize this revenue prior to ultimate sale by Genzyme. Please explain whether Genzyme is obligated to pay you for product shipments if it ultimately is unable to sell the product.
   v. Please explain whether, and if so, to what extent Genzyme and/or its customers may return product to you.
   vi. Please explain when Genzyme is obligated to pay the Aldurazyme royalty to you and the payment terms.

c. You indicate that in 2008 you classify your Aldurazyme revenues with your net product revenues of Naglazyme and Kuvan, products you appear to market using your own sales force and commercial organization. Please explain to us why you do not classify your Aldurazyme royalty revenues with your royalty and license revenues of your Orapred products or why you do not classify

your Aldurazyme product transfer revenues with product revenues and your Aldurazyme royalty revenues with your other royalty revenues.

Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please submit a letter that keys your responses to our comments and provides the requested information. Detailed letters greatly facilitate our review. Please furnish your letter to us via 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

- 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 comments on your filing.

If you have any questions, please contact Mark Brunhofer, Senior Staff Accountant, at (202) 551-3638. In this regard, do not hesitate to contact me, at (202) 551-3679.

Sincerely,

Jim B. Rosenberg
Senior Assistant Chief Accountant