UNITED STATES



SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

DIVISION OF CORPORATION FINANCE

October 13, 2010

Jeffrey H. Cooper Senior Vice President, Chief Financial Officer BioMarin Pharmaceutical Inc. 105 Digital Drive Novato, CA 94949

Re: BioMarin Pharmaceutical Inc.

Form 10-K for the Fiscal Year Ended December 31, 2009

Filed February 26, 2010

Proxy Statement on Schedule 14A

Filed March 26, 2010 File Number: 000-26727

Dear Mr. Cooper:

We have completed our review of your filings and do not have any further comments at this time.

Sincerely,

Melissa Rocha Accounting Branch Chief