

Mail Stop 6010

August 6, 2008

Jane Kober, Esquire
Senior Vice President and Secretary
Biopure Corporation
11 Hurley Street
Cambridge, Massachusetts 02141

**Re: Biopure Corporation
Registration Statement on Form S-3
Filed July 29, 2008
File No. 333-152613**

Dear Ms. Kober:

We have limited our review of your filing to those issues we have addressed in the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

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.

Selling Stockholders
2008 Private Placement, page 11

1. Please expand the discussion to provide additional information pertaining to the private placement including, but not limited to, the installment nature of the “sale,” the period over which the sales are to occur, the number of installments made to date and the dollar and share amounts of such installments, and disclosure of the purchasers’ “financial right to terminate” the purchase agreement. With respect to the financial right to terminate the purchase agreement, please describe the circumstances under which such right may be exercised. If applicable, consider the inclusion of a risk factor which addresses the effects such action may have on the registrant.

2. Please expand the footnote disclosure to identify the natural person who has voting or investment control over the securities held by each of the selling shareholders.

3. In view of the filing date of the registration statement, we do not understand how you can state “the following table sets forth information with respect to our common stock known to us to be beneficially owned by the selling stockholders as of November 15, 2008...” Do you intend to request effectiveness of the registration statement subsequent to such date? Please advise or revise.

4. Please provide an analysis of the basis for the registration for resale of all of the shares covered by the purchase agreement. In this regard, we note the installment nature of the purchase obligation, the fact that all installments have not yet been paid, and the fact the purchasers have a “financial right to terminate” the purchase agreement if the registrant does not have a specified amount of cash on hand on September 10, 2008. We also note the losses experienced by the registrant during the past quarter and year to date. We may have additional comments.

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As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

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 Act of 1933 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.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness 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 connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

If you have any questions, please call John L. Krug, Senior Counsel, at (202) 551-3862, or me at (202) 551-3715.

Sincerely,

Jeffrey Riedler
Assistant Director