

Mail Stop 6010

October 30, 2006

Jane Kober, Esq.  
Biopure Corporation  
11 Hurley Street  
Cambridge, Massachusetts 02141

**Re: Biopure Corporation  
Registration Statement on Form S-1  
Filed on October 17, 2006  
File Number 333-138049**

Dear Ms. Kober:

This is to advise you that we have limited our review of the above referenced registration statement to only the issues identified below. We will make no further review of this filing.

Form S-1  
Underwriting, page 8

1. We refer you to your underwriting section where you disclose that the underwriters will offer your securities on a firm commitment basis. We also note your disclosure that the underwriting agreement provides that the obligations of the underwriters to purchase your securities are "conditional and may be terminated at their discretion based on their assessment of the state of the financial markets." Please describe under what specific conditions the underwriters may terminate the agreement with you. Please also provide us with an analysis as to why you believe the offering is appropriately characterized as a firm commitment offering in light of the disclosure that the underwriters may terminate the agreement based on their assessment of the state of the financial markets. Please also file a copy of the underwriting agreement or provide us with a supplemental copy.

\* \* \*

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 filings reviewed by the staff to be certain that they have provided all information investors require for an informed 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 this action 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 a 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.

Please contact Song P. Brandon at (202) 551-3621 or me at (202) 551-3710 with any questions.

Sincerely,

Jeffrey P. Riedler  
Assistant Director

cc: Paul Kinsella  
Ropes and Gray  
One International Place  
Boston, MA 02110-2624