



DIVISION OF  
CORPORATION FINANCE

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

August 9, 2011

Via E-mail

Federico Pignatelli  
Chairman and Chief Executive Officer  
Biolase Technology, Inc.  
4 Cromwell  
Irvine, CA 92618

**Re: Biolase Technology, Inc.  
Registration Statement on Form S-3  
Filed July 19, 2011  
File No. 333-175664**

Dear Mr. Pignatelli:

We have limited our review of the registration statement to those issues we have addressed in our comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

Fee table

1. Please revise footnote 1 to track the requirements of Rule 416, namely that you are registering an additional indeterminate number of securities as may become issuable pursuant to terms which provide for a change in the amount of securities being offered or issued to prevent dilution resulting from stock splits, stock dividends, or other similar transactions.

Our Company, page 1

2. Please prominently highlight in your prospectus summary the statement in your auditor's report regarding the substantial doubt about your ability to continue as a going concern.

Exhibit 5.1

3. We refer to counsel's assumption in the first sentence of the second paragraph that the "proceedings will be timely completed in the manner presently proposed." This assumption underlies counsel's ultimate opinion. Accordingly, please obtain a revised opinion of counsel that removes that assumption.
4. Given the date restriction in the penultimate paragraph of this exhibit, please file an opinion that is dated as of the date that this registration is declared effective.
5. We note the restrictions in the first sentence of the last paragraph. Please note the opinion filed to satisfy your obligations under Regulation S-K Item 601(b)(5) should not contain such restrictions. Please file a revised opinion.

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 Act of 1933 and all applicable Securities 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.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company 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.

Please refer to Rules 460 and 461 regarding requests for acceleration. 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. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

Federico Pignatelli  
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You may contact Joseph McCann at (202) 551-6262 or Timothy Buchmiller, reviewing attorney, at (202) 551-3635 with any questions.

Sincerely,

/s/ Timothy Buchmiller for

Amanda Ravitz  
Assistant Director

cc (via E-mail): Michael C. Carroll, Esq. – Carroll & Carroll, P.C.