



DIVISION OF
CORPORATION FINANCE

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

October 6, 2011

Via E-mail

Gordon E. Nye
President and Chief Executive Officer
ZELTIQ Aesthetics, Inc.
4698 Willow Road, Suite 100
Pleasanton, CA 94588

**Re: ZELTIQ Aesthetics, Inc.
Registration Statement on Form S-1
Amended September 23, 2011
File No. 333-175514**

Dear Mr. Nye:

We have reviewed your registration statement and have the following 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.

Exhibit 5.1

1. Given that the amended and restated certificate of incorporation will be filed prior to effectiveness of the registration statement, please revise the fifth paragraph of the opinion to remove the contingency related to the amended and restated certificate.
2. We note your reference to the issuance of shares upon the exercise of options by selling stockholders prior to the completion of this offering. As we are unable to locate related disclosure in the registration statement, it is unclear why you have included these shares in the opinion. Please revise or advise.
3. We note the restrictions contained in the last paragraph of the opinion. Please remove the limitation contained in the first sentence of that paragraph as investors are entitled to rely upon the 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.

You may contact Tara Harkins at 202-551-3639 or Kevin Vaughn, Accounting Branch Chief, at 202-551-3643 if you have questions regarding comments on the financial statements and related matters. Please contact Jay Mumford at 202-551-3637 or Daniel Morris, Special Counsel, at 202-551-3314 with any other questions.

Sincerely,

/s/ Daniel Morris

Amanda Ravitz
Assistant Director

cc (via e-mail): Jeffery C. Thacker, Esq.