



DIVISION OF  
CORPORATION FINANCE

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

June 28, 2013

Via E-mail

Elias Vamvakas  
Chief Executive Officer  
TearLab Corporation  
7360 Carroll Rd., Suite 200  
San Diego, CA 92121

**Re: TearLab Corporation  
Registration Statement on Form S-3  
Filed June 17, 2013  
File No. 333-189372**

Dear Mr. Vamvakas:

We have limited our review of your 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. Where 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. As written, clauses (B) and (C) of your footnote (2) appear to exceed the scope of Rule 416. Please revise footnote (2) to reflect the language of Rule 416. See also the Division of Corporation Finance's Securities Act Sections Compliance and Disclosure Interpretation 139.10 available on the Commission's website.

Signatures, page II-6

2. Below the second paragraph of text required on the Signatures page, please indicate who signed your document in the capacity of controller or principal accounting officer. Refer to Section 6(a) of the Securities Act and Instruction 1 to the Form S-3 Signatures page.

Exhibit 5.1

3. Please file an opinion of counsel that indicates whether the depositary shares will, when sold, be legally issued and will entitle holders to the rights specified in the deposit agreement and the depositary receipts.
4. From the first sentence of the penultimate paragraph of this exhibit, it is unclear whether the opinion covers the relevant laws of the jurisdictions governing the issues required to be addressed by Regulation S-K Item 601(b)(5) for the warrants, units and depositary shares. For example, does the Delaware General Corporation Law include all applicable contract laws that affect these issues? Please file an opinion that addresses all appropriate jurisdictions' laws.
5. Please file an opinion that does not contain the restrictions and limitations in the last sentence of the penultimate paragraph currently in this exhibit. For guidance, please see section II.B.3.b of Staff Legal Bulletin No. 19 (October 14, 2011).

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

Elias Vamvakas  
TearLab Corporation  
June 28, 2013  
Page 3

adequate time for us to review any amendment prior to the requested effective date of the registration statement.

Please contact Joseph McCann at (202) 551-6262 or me at (202) 551-3617 with any questions.

Sincerely,

/s/ Russell Mancuso

Russell Mancuso  
Branch Chief

cc (via email): Martin J. Waters, Esq. – Wilson Sonsini Goodrich & Rosati, P.C.