



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 3030

May 3, 2016

Via E-mail

Marc H. Hedrick, MD
President and Chief Executive Officer
Cytori Therapeutics, Inc.
3020 Callan Road
San Diego, CA 92121

**Re: Cytori Therapeutics, Inc.
Registration Statement on Form S-1
Filed April 6, 2016
File No. 333-210628**

Dear Dr. Hedrick:

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. 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 the registration statement and the information you provide in response to these comments, we may have additional comments.

Registration Statement

1. Please amend your filing to include all information other than that which can be omitted per Rule 430A. For example, we note the blanks currently on the prospectus cover and throughout your document regarding the number of securities you are offering. As further examples, we note that you have not disclosed the record date and the expiration date of the rights. Also note that information like what you currently omit on page 23 must be disclosed based on a bona fide estimate of the public offering price.

Use of Proceeds, page 23

2. Please disclose the amount of net proceeds that you currently intend to use for each purpose identified in the first two sentences in the second paragraph of this section. You

may also reserve the right to change the use of proceeds as indicated in instruction 7 to Regulation S-K Item 504. If you do not have a specific plan for a significant portion of the proceeds, please say so clearly and discuss the principal reasons for the offering.

3. Please quantify how you will allocate the proceeds for each disclosed purpose assuming that you sell less than the maximum amount of securities that you are offering. Include a reasonable range of potential outcomes regarding the number of securities that you might sell; for example, if reasonable, you could disclose your use of proceeds assuming that you sell 25%, 50%, 75% and 100% of the securities offered.

Material U.S. Federal Income Tax Consequences, page 33

4. Please file the opinion that Regulation S-K Item 601(b)(8) requires regarding the tax consequences that you describe in your prospectus. See Section III.A.2 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 registered securities. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

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Please contact Tom Jones at (202) 551-3602 or Tim Buchmiller, Senior Attorney, at (202) 551-3635 with any questions.

Sincerely,

/s/ Tim Buchmiller for

Amanda Ravitz
Assistant Director
Office of Electronics and Machinery

cc: Jeffrey T. Baglio, Esq.