



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 3030

September 21, 2016

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

**Re: Cytori Therapeutics, Inc.
Form 10-K for Fiscal Year Ended December 31, 2015
Filed March 11, 2016
File No. 001-34375**

Dear Dr. Hedrick:

We have reviewed your filing 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 these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing your response to these comments, we may have additional comments.

Form 10-K/A for Fiscal Year Ended December 31, 2015 filed March 24, 2016

1. We note that you filed this amendment to your Form 10-K to include a corrected exhibit 32 because the certifications as originally filed identified the wrong periodic report. Please file an amended Form 10-K that contains the corrected certifications and that is accompanied by the entire periodic report, or advise. For guidance, please see the Division of Corporation Finance's Regulation S-K Compliance and Disclosure Interpretation Question 246.14, available on the Commission's website. We also note that you should file the appropriate certifications required by Regulation S-K Item 601(b)(31) along with such amendment.

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 Exchange Act of 1934 and all applicable Exchange 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.

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In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

You may contact Kristin Lochhead at (202) 551-3664 or Gary Todd, Senior Accountant, at (202) 551-3605 if you have questions regarding comments on the financial statements and related matters. Please contact Caleb French at (202) 551-6947 or Tim Buchmiller, Senior Attorney, at (202) 551-3635 with any other questions.

Sincerely,

/s/ Tim Buchmiller for

Amanda Ravitz
Assistant Director
Office of Electronics and Machinery

cc: Jeremy Hayden, Esq.
General Counsel