



DIVISION OF  
CORPORATION FINANCE

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

December 15, 2011

Via E-mail

Gary H. Rabin  
Chief Executive Officer and Chairman of the Board  
Advanced Cell Technology, Inc.  
33 Locke Drive  
Marlborough, MA 01752

**Re: Advanced Cell Technology, Inc.  
Preliminary Proxy Statement on Schedule 14A  
Filed December 12, 2011  
File No. 000-50295**

Dear Mr. Rabin:

We have limited our review of your proxy statement to the issue we have addressed in our comment. Please respond to this letter by amending your proxy statement as requested. If you do not believe this comment applies to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in a response.

After reviewing any amendment to your proxy statement or your response to this comment, we may have additional comments.

Proposal 1

Amendment to Certificate of Incorporation to Increase Authorized Common Stock, page 1

1. We note that your proposal, if approved, will increase the amount of authorized but unissued common shares well in excess of the amount required to comply with your settlement agreement. Please amend your preliminary proxy statement to state whether you have any current plans, agreements, understandings, etc. with respect to those shares that will be authorized but not issued after you have satisfied your obligations with respect to the settlement. If you have any such plans, agreements, understandings, etc., please note this in your disclosure and describe them. If you have none, please include a statement to that effect.

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.

Gary H. Rabin  
Advanced Cell Technology, Inc.  
December 15, 2011  
Page 2

In responding to our comment, 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.

Please contact Scot Foley at (202) 551-3383 or me at (202) 551-3715 with any questions.

Sincerely,

/s/ Jeffrey Riedler

Jeffrey Riedler  
Assistant Director