



DIVISION OF  
CORPORATION FINANCE

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

September 13, 2010

Avi Barak  
Chief Executive Officer and Director  
BioCancell Therapeutics Inc.  
Beck Science Center  
8 Hartom St, Har Hotzvim  
Jerusalem 97775  
Israel 972-2-548-6555

**Re: BioCancell Therapeutics Inc.  
Registration Statement on Form S-1, Amendment No. 5  
Filed August 24, 2010  
File No. 333-162088**

Dear Mr. Barak:

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.

General

1. Please revise your cover page to disclose that the funds will be held in escrow and discuss the circumstances under which they can be released from escrow. Please file the escrow agreement as an exhibit to the registration statement.
2. Please note we may have further comments based on your price range. Please provide your range as soon as practicable. We are willing to review this information supplementally.

Plan of Distribution, page 73

3. We note your response to comment 5 states that potential investors can withdraw or amend their bids during the period in which the authorized entities collect bids. This response contradicts your statements on page 73:
  - Each bidder may submit up to three cumulative and irrevocable bids; and
  - By submitting a bid, an investor irrevocable undertakes to purchase and pay for the units.
4. Please revise to clarify that the bids are revocable while the authorized entities are collecting the bids and clarify at what point they become irrevocable.
5. We note that you have stated that the warrants will be listed on the TASE and disclosed the proposed TASE symbols. Have the warrants already been approved for listing? If not, please let us know the status of your application for listing? If the listing is conditioned on the issuance of the warrants, please clarify.

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

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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.

Please contact Mike Rosenthal at (202) 551-3674 or myself at (202) 551-3715 with any other questions.

Sincerely,

Jeffrey P. Riedler  
Assistant Director

cc: Dr. Shachar Hadar, Adv.  
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