

December 30, 2013

Securities and Exchange Commission  
Division of Corporation Finance  
Washington, DC 20549

Attn: John Reynolds  
James Lopez  
Erin Wilson  
Myra Moosariparambil  
Tia Jenkins

**Re: Biocept, Inc.  
Registration Statement (Form S-1)  
Filed September 23, 2013; Amendment No. 5 filed December 17, 2013  
Registration No. 333-191323**

Ladies and Gentlemen:

We have received and reviewed, and we thank you for, the Staff's comment letter dated December 27, 2013. Our responses are set forth below. In each case, we precede our response by repeating the Staff's letter's comment. Our responses are numbered to correspond with the numbering of the comments in the Staff's letter.

Liquidity and Capital Resources, page 53

1. STAFF'S COMMENT: Please revise to clarify your current cash and cash equivalents as of the most recent practicable date. Additionally, please revise here and where appropriate to disclose the steps you have taken to manage your ongoing liquidity shortfall. For example, please revise to clarify the extent to which you have cut back operations or received additional funding or concessions such that you could avoid curtailing operations. We note, in this regard, that prior amendments stated that without the net proceeds from this offering you believed your current cash resources would be insufficient, and that if you did not consummate this offering by November 2013, you expected that you would need to raise additional financing later in the fourth quarter of 2013. Please revise accordingly.

REGISTRANT'S RESPONSE: If it is necessary for us to file an Amendment No. 6 to this registration statement, we would propose to add the following new sentences at the beginning of the fourth paragraph on page 56 (the second paragraph of "Capital Resources and Expenditure Requirements") and as a replacement of the first paragraph of the "We will need to raise additional capital" risk factor on page 13:

"As of December 31, 2013, our cash and cash equivalents totaled approximately \$150,000. To continue as a going concern through February 2014, it will be necessary for us to raise additional bridge financing in January 2014 from our major shareholder, members of our board of directors and their affiliates, other

accredited current investors and/or accredited new investors. We believe (although no assurance can be given) that we will be able to raise such additional bridge financing, when and as needed; during 2013 we continuously were seeking and successfully raising such bridge financing, when and as needed, and the prospect of the impending receipt of proceeds from this offering is expected to facilitate our efforts to raise additional bridge financing in January 2014.”

In addition, if it is necessary for us to file an Amendment No. 6 to this registration statement, we would propose to change the third sentence of the first paragraph on page 57 to read in full as follows:

“During 2012, 2013 and this year to date, we are experiencing net cash outflows at our current level of operations of approximately \$2 million per quarter.”

As a preferred alternative, we suggest to you that going to the expense of an Amendment No. 6 to make such language changes ought to be avoidable, because such language could be added to the Rule 424(b) final prospectus instead of including it now, without doing any disservice to the potential investors in this offering.

The current language of Amendment No. 5 plainly discloses on page 56 that: “Without the net proceeds from this offering, we believe our current cash resources are insufficient to satisfy our liquidity requirements at our current level of operations. If we do not consummate this offering by February 2014, we expect that we will need to raise additional financing at that time, which might not be available on favorable terms, if at all. We can provide no assurances that any sources of a sufficient amount of financing will be available to us on favorable terms, if at all.” A potential investor reading a preliminary prospectus in January 2014 and seeing that the issuer would be out of money in February 2014 has surely received disclosure that the issuer is almost out of money now. And, if the additional private financing is received in January 2014, the current text of Amendment No. 5 sufficiently protects investors; and if the additional private financing needed for the continuation of our operations is NOT received in January 2014, the IPO will not proceed (in which case no prospective investor could be harmed). Either way, it appears to us that it should be viable to keep the current text of Amendment No. 5 and that use of a preliminary prospectus with such text unchanged would comport with the requirements of the Securities Act.

Description of the Business, page 57

Patents and Technology, page 79

2. STAFF’S COMMENT: We note that you have removed your disclosure relating to “30 pending U.S. and foreign patent applications.” With a view to clarifying disclosure in the prospectus, please advise us why you deleted the statement regarding 30 pending applications.

REGISTRANT’S RESPONSE: This statement was removed because many of the foreign patent applications were parallel applications for multiple jurisdictions, with the total number depending not on the number of inventions but rather on the number of

countries in which separate applications based on the same invention were pending. Therefore, we felt that continuing to include such a number had the potential to mislead investors by suggesting we have a larger number of inventions than we actually have. Also, as foreign applications are from time to time resolved, or augmented by new foreign applications, the actual total number has tended to fluctuate above and below 30. As of today it is below 30, but by the time we expect to request that the registration statement be declared effective, it is possible that the number will have climbed back above 30. Accordingly, we thought it was best to delete the reference altogether.

Billing and Billing Codes for Third-party Payor Reimbursement, page 83

3. STAFF'S COMMENT: We note you have removed your statement that there is no specific CPT code applicable to the specific CTC testing you perform. If true, please revise to add back this statement or advise.

REGISTRANT'S RESPONSE: Our current test comprises, and our planned CTC tests would comprise, various steps or components. As is common in the industry, the several steps or components of a test can be described by several respective CPT codes; and, as also is common in the industry, we bill under each of the several respective CPT codes when seeking reimbursement for a complete test. For example, the CPT code for FISH analysis, which is one of the steps or components of our current test, is 88368. The fact that there is not yet a unique CPT code which describes a complete Biocept test was therefore deemed to be immaterial and we deemed the removed statement to be possibly misleading.

If you have any questions or if we can be assistance in your review, please contact me, or Hayden Trubitt (htrubitt@sycr.com; (858) 926-3006) or Michael Brown (mbrown@sycr.com; (858) 926-3007), who are both with our counsel Stradling Yocca Carlson & Rauth.

Sincerely,

/s/ William G. Kachioff

William G. Kachioff  
Chief Financial Officer

cc: Michael W. Nall, Chief Executive Officer, Biocept, Inc.  
Hayden Trubitt, Esq.  
Michael J. Brown, Esq.