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

DIVISION OF
CORPORATION FINANCE

October 30, 2013

Via E-mail
Mr. William G. Kachioff
Chief Financial Officer
Biocept, Inc.
5810 Nancy Ridge Drive
San Diego, CA 92121

Re: Biocept, Inc.
Amendment No. 1 to Registration Statement on Form S-1
Filed October 16, 2013
File No. 333-191323

Dear Mr. Kachioff:

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. We note your revised disclosure and response to comment 2 in our letter dated October 11, 2013, and the statement in response to comment 30 in our September 13, 2013 letter that you "will also update and improve the statements made on [your] website." The "Billing FAQs" portion of your website states that "Biocept diagnostic services are covered under Medicare Part B, and Biocept will submit your Medicare claim on your behalf." Please revise your registration statement disclosure to clarify the extent to which your services are covered by Medicare or advise regarding the apparent inconsistency.

Summary, page 1

2. We note your response to comments 1, 3 and 5 in our letter dated October 11, 2013 and the statement that the historical Clarient revenues are immaterial compared to what you need "to be a self-sustaining company." We also note the statement on page 5 that you

are "in the process of commercializing [your] first proprietary test." Please revise the first paragraph on page 1 to clarify in quantitative and qualitative terms the extent to which your only commercialized test has generated meaningful revenues.

Our Proprietary Tests and Services, page 5

3. We note your response to comment 2 in our letter dated October 11, 2013 and, in particular, the added disclosure that you have not yet billed Medicare for any testing and that you "do not have data for Clarient's billing and collection experience with respect to [your] test." Please provide the basis for your belief that "as many as approximately 50% of the patients for whom [you] would expect to perform cancer diagnostic tests in the future will have Medicare coverage."

4. We note statements on pages 6 and 83 that you believe your "tests will be covered and that [you] will receive payment from Medicare." Please revise to clarify the expected timeframes for such actions and the assumptions underlying your estimates. Also, please disclose the date you submitted the "comprehensive dossier" and revise to update for any communications to or from the MACs or CMS regarding you.

Risks That We Face, page 7

5. Please revise the fourth bullet point on page 7 to state, if true, that you believe your current cash resources are insufficient to satisfy your liquidity requirements at your current level of operations beyond November 2013.

Our Proprietary Tests and Services, page 68

6. We reissue comment 12 in our letter dated October 11, 2012. Please revise the narrative disclosure surrounding the table to further clarify the principal milestones, assumptions and work that must be completed for the tests projected for 2014 and 2015. In that regard, please clarify your disclosure that "[a]n assay is ready for commercialization when [you] are ready to start selling the assay through [your] commercial sales channel and to provide patient results." We note that without further clarification it is unclear why some tests in the validation stage are not expected to reach commercialization until 2015 and other tests in the same stage are expected in 2014. We also note that one test still in the development stage is expected to reach commercialization in 2014.

7. Please also revise to clarify (1) whether "development" and "validation" status levels here are based on stages 1-4 described on page 73 and (2) the assumptions underlying "between 6 to 18 months" to market launch referenced on page 73 given that some tests already in the validation stage are not expected to reach commercialization for over a year. Also, in addition to the year, please revise the right-hand column to clarify the

approximate time, for example the NSCLC test is described elsewhere as being ready for launch "in the first half" of 2014.

Report of Independent Registered Public Accounting Firm, page F-2

8. Please advise the independent accountant to dual-date or re-date, as necessary, its audit report upon consummation of the reverse stock split and its retrospective presentation in the historical financial statements.

Notes to Financial Statements, page F-10

Note 5. Notes Payable, page F-18

9. We note your response to comment 21 in our letter dated October 11, 2013. We also note you have referenced the forms of the agreements in Exhibit 10.18.6.1 and Exhibit 10.19.2.1. Please file the executed versions of the note conversion agreements as exhibits to the Form S-1.

Financial Statement Updating

10. Please update your financial statements pursuant to Rule 8-08 of Regulation S-X, as necessary.

You may contact Myra Moosariparambil at (202) 551-3796 or Tia Jenkins at (202) 551-3871 if you have questions regarding comments on the financial statements and related matters. Please contact Tiffany Piland at (202) 551-3589 or James Lopez at (202) 551-3536 with any other questions.

Sincerely,

/s/ James Lopez (for)

John Reynolds
Assistant Director

cc: Hayden J. Trubitt, Esq.
Stradling, Yocca, Carlson & Rauth