

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

POST-EFFECTIVE AMENDMENT NO. 1 TO
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Biocept, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

8071
(Primary Standard Industrial
Classification Code Number)

80-0943522
(I.R.S. Employer
Identification Number)

5810 Nancy Ridge Drive
San Diego, CA 92121
(858) 320-8200
(Address, including zip code, and telephone number, including
area code, of registrant's principal executive offices)

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(858) 320-8200

(Name, address, including zip code, and telephone number, including area code, of agent for service)

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Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☒

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 under the Securities Exchange Act of 1934. (Check one):

Large Accelerated Filer ☐

Accelerated Filer ☐

Non-accelerated Filer ☐

Smaller Reporting Company ☒

The Registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment that specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

EXPLANATORY NOTE

Biocept, Inc. (the “Company”) previously filed a Registration Statement on Form S-1/A (File No. 333-208683) with the U.S. Securities and Exchange Commission (the “SEC”) on January 21, 2016 which was declared effective by the SEC on February 1, 2016 (the “Existing Registration Statement”). The Existing Registration Statement registered for resale up to 3,774,122 shares of common stock of the Company by Aspire Capital Fund, LLC. The common stock being offered by Aspire Capital Fund, LLC are issuable pursuant to a Purchase Agreement between the Company and Aspire Capital Fund, LLC.

As of the date of this prospectus, the Company has issued 1,090,000 shares to Aspire Capital Fund, LLC under the Purchase Agreement. A maximum of 2,684,122 shares of common stock remain available for issuance under the Purchase Agreement.

This Registration Statement constitutes Post-Effective Amendment No. 1 to the Existing Registration Statement and is being filed to update the Existing Registration Statement by including, among other things, the Company’s audited financial statements for the fiscal year ended December 31, 2015 pursuant to Section 10(a)(3) of the Securities Act of 1933, as amended.

The information in this prospectus is not complete and may be changed. The selling stockholder may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities, and the selling stockholder is not soliciting offers to buy these securities, in any state where the offer or sale of these securities is not permitted.

PROSPECTUS, SUBJECT TO COMPLETION, DATED APRIL 29, 2016



3,774,122 Shares

Common Stock

This prospectus relates to the sale of up to 3,774,122 shares of our common stock by Aspire Capital Fund, LLC. Aspire Capital is also referred to in this prospectus as the selling stockholder. The prices at which the selling stockholder may sell the shares will be determined by the prevailing market price for the shares or in negotiated transactions. We will not receive proceeds from the sale of the shares by the selling stockholder. However, we may receive proceeds of up to \$15 million from the sale of our common stock to the selling stockholder, pursuant to a common stock purchase agreement entered into with the selling stockholder on December 21, 2015, including proceeds that we have already received thereunder.

The selling stockholder is an “underwriter” within the meaning of the Securities Act of 1933, as amended. We will pay the expenses of registering these shares, but all selling and other expenses incurred by the selling stockholder will be paid by the selling stockholder.

Our common stock is listed on The NASDAQ Capital Market under the ticker symbol “BIOC.” On April 28, 2016, the last reported sale price per share of our common stock was \$1.26 per share.

You should read this prospectus, together with additional information described under the headings “Incorporation of Certain Information by Reference” and “Where You Can Find More Information,” carefully before you invest in any of our securities.

Investing in our securities involves a high degree of risk. See “Risk Factors” on page 5 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is _____.



Biocept
Completing the Answer™

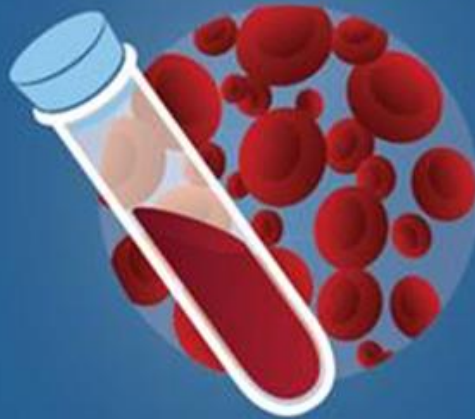


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We incorporate by reference important information into this prospectus. You may obtain the information incorporated by reference without charge by following the instructions under “Where You Can Find More Information.” You should carefully read this prospectus as well as additional information described under “Incorporation of Certain Information by Reference,” before deciding to invest in our common stock. All references in this prospectus to “Biocept,” “the Company,” “we,” “us” or “our” mean Biocept, Inc., unless we state otherwise or the context otherwise requires.

We are responsible for the information contained in this prospectus. We have not authorized anyone to provide you with different information, and we take no responsibility for any other information others may give you. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and the underwriters are not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should not assume that the information contained in this prospectus is accurate as of any date other than the date on the front of this prospectus.

We use in this prospectus our BIOCEPT logo, for which a United States trademark application has been filed, our mark CEE, which is a registered United States trademark, and our marks OncoCEE-BR, OncoCEE-LU, CEE-Selector, CEE-Cap, CEE-Enhanced, CEE-Sure, OncoCEE-GA, OncoCEE-PR, OncoCEE-ME, OncoCEE-CR and OncoCEE, which in the United States are unregistered trademarks. This prospectus also includes trademarks, tradenames and service marks that are the property of other organizations. Solely for convenience, trademarks and tradenames referred to in this prospectus appear (after the first usage) without the ® and ™ symbols, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or that the applicable owner will not assert its rights, to these trademarks and tradenames.

SUMMARY

This summary highlights information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. You should read this entire prospectus carefully, especially the “Risk Factors” section of this prospectus before making an investment decision.

Our Company

We are an early commercial-stage molecular oncology diagnostics company that develops and commercializes proprietary circulating tumor cell, or CTC, and circulating tumor DNA, or ctDNA, assays utilizing a standard blood sample, or “liquid biopsy.” Our current breast, lung and gastric cancer assays provide, and our planned future assays would provide, information to oncologists and other physicians that enable them to select appropriate personalized treatment for their patients based on better, timelier and more-detailed data on the characteristics of their patients’ tumors.

Our current assays focus on all the key solid tumor indications and our planned future assays utilize our Target-Selector™ offering for the biomarker analysis of CTCs and ctDNA from a standard blood sample. The Target-Selector offering is based on an internally developed and patented, microfluidics-based CTC capture and analysis platform, with enabling features that change how CTC testing can be used by clinicians by providing real-time biomarker detection and monitoring requiring only a standard blood sample. The ctDNA technology enables mutation detection with enhanced sensitivity and specificity and is applicable to nucleic acid from CTCs or other sample types, such as blood plasma. We believe the Target-Selector technology can be used as a stand-alone test for molecular biomarker screening and monitoring.

At our corporate headquarters facility located in San Diego, California, we operate a clinical laboratory that is certified under the Clinical Laboratory Improvement Amendments of 1988, or CLIA, and accredited by the College of American Pathologists. We manufacture our microfluidic channels, related equipment and certain reagents to perform our current assays and our planned future assays at this facility. CLIA certification is required before any clinical laboratory, including ours, may perform testing on human specimens for the purpose of obtaining information for the diagnosis, prevention, or treatment of disease or the assessment of health. The assays we offer and intend to offer are classified as laboratory developed tests, or LDTs, under CLIA regulations.

Risks That We Face

An investment in our common stock involves a high degree of risk. You should carefully consider the risks summarized below. The risks are discussed more fully in the “Risk Factors” section of this prospectus immediately following this prospectus summary. These risks include, but are not limited to, the following:

- we are an early-stage company with a history of substantial net losses. We have never been profitable and we have an accumulated deficit of approximately \$155.2 million (as of December 31, 2015);
- we expect to incur net losses in the future, and we may never achieve sustained profitability;
- our business depends upon our ability to introduce additional tests and increase sales of our cancer diagnostic test;
- our business depends on executing on our sales and marketing strategy for our cancer diagnostic tests and gaining acceptance of our current tests and future tests in the market;
- our business depends on our ability to continually develop new cancer diagnostic tests and enhance our current tests and future tests;
- our business depends on being able to obtain coverage and adequate reimbursement from governmental and other third-party payors for tests and services;

- our business depends on satisfying any applicable United States (including FDA) and international regulatory requirements with respect to tests and services; and many of these requirements are new and still evolving;
- our business depends on our ability to effectively compete with other diagnostic tests, methods and services that now exist or may hereafter be developed;
- we depend on our senior management and in August 2013 we hired a new chief executive officer;
- we depend on our ability to attract and retain scientists, clinicians and sales personnel with extensive experience in oncology, who are in short supply; and
- we need to obtain or maintain patents or other appropriate protection for the intellectual property utilized in our current and planned tests and services, and we must avoid infringement of third-party intellectual property.

Company Information

We maintain our principal executive offices at 5810 Nancy Ridge Drive, San Diego, California 92121. Our telephone number is (858) 320-8200 and our website address is www.biocept.com. The information contained in, or that can be accessed through, our website is not incorporated into and is not part of this prospectus. We were incorporated in California on May 12, 1997 and reincorporated as a Delaware corporation on July 30, 2013.

Implications of Being an Emerging Growth Company

As a company with less than \$1.0 billion in revenue during our last fiscal year, we qualify as an “emerging growth company” as defined in the Jumpstart Our Business Startups Act, or JOBS Act, enacted in April 2012. An “emerging growth company” may take advantage of reduced reporting requirements that are otherwise applicable to public companies. These provisions include, but are not limited to:

- being permitted to present only two years of audited financial statements and only two years of related Management’s Discussion and Analysis of Financial Condition and Results of Operations in this prospectus;
- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We may take advantage of these provisions until December 31, 2019. However, if certain events occur prior to December 31, 2019, including if we become a “large accelerated filer,” our annual gross revenues exceed \$1.0 billion or we issue more than \$1.0 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company before such date.

We have elected to take advantage of certain of the reduced disclosure obligations and may elect to take advantage of other reduced reporting requirements in future filings. As a result, the information that we provide to our stockholders may be different than the information you might receive from other public reporting companies in which you hold equity interests.

The Offering

Common stock being offered by the selling stockholder 3,774,122 shares

Common stock outstanding 19,983,402 (as of April 22, 2016)

Use of proceeds The selling stockholder will receive all of the proceeds from the sale of the shares offered for sale by it under this prospectus. We will not receive proceeds from the sale of the shares by the selling stockholder. However, we may receive up to \$15 million in proceeds from the sale of our common stock to the selling stockholder under the common stock purchase agreement described below. Any proceeds from the selling stockholder that we receive under the purchase agreement are expected to be used for working capital and general corporate purposes.

NASDAQ Capital Market Symbol BIOC

Risk Factors Investing in our securities involves a high degree of risk. You should carefully review and consider the “Risk Factors” section of this prospectus for a discussion of factors to consider before deciding to invest in shares of our common stock.

On December 21, 2015, we entered into a common stock purchase agreement (referred to in this prospectus as the “Purchase Agreement”), with Aspire Capital Fund, LLC, an Illinois limited liability company (referred to in this prospectus as “Aspire Capital” or the “selling stockholder”), which provides that, upon the terms and subject to the conditions and limitations set forth therein, Aspire Capital is committed to purchase up to an aggregate of \$15 million of our shares of common stock over the approximately 30-month term of the Purchase Agreement. In consideration for entering into the Purchase Agreement, concurrently with the execution of the Purchase Agreement, we issued to Aspire Capital 165,000 shares of our common stock as a commitment fee (referred to in this prospectus as the “Commitment Shares”). Upon execution of the Purchase Agreement, the Company sold to Aspire Capital 625,000 shares of common stock at \$1.60 per share for proceeds of \$1,000,000 (referred to in this prospectus as the “Initial Purchase Shares”). Concurrently with entering into the Purchase Agreement, we also entered into a registration rights agreement with Aspire Capital (referred to in this prospectus as the “Registration Rights Agreement”), in which we agreed to file one or more registration statements, including the registration statement of which this prospectus is a part, as permissible and necessary to register under the Securities Act of 1933, as amended, or the Securities Act, the sale of the shares of our common stock that have been and may be issued to Aspire Capital under the Purchase Agreement.

As of December 17, 2015, there were 18,880,054 shares of our common stock outstanding (16,480,183 shares held by non-affiliates) excluding the 3,774,122 shares offered that have been issued or may be issuable to Aspire Capital pursuant to the Purchase Agreement. If all of such 3,774,122 shares of our common stock offered hereby were issued and outstanding as of the date hereof, such shares would represent 19.99% of the total common stock outstanding or 22.90% of the non-affiliate shares of common stock outstanding as of the date hereof. The number of shares of our common stock ultimately offered for sale by Aspire Capital is dependent upon the number of shares purchased by Aspire Capital under the Purchase Agreement.

Pursuant to the Purchase Agreement and the Registration Rights Agreement, we are registering 3,774,122 shares of our common stock under the Securities Act, which includes the Commitment Shares, the Initial Purchase Shares, and an additional 300,000 shares of common stock that have already been issued to Aspire Capital and 2,684,122 shares of common stock which we may issue to Aspire Capital after this registration statement is declared effective under the Securities Act. All 3,774,122 shares of common stock are being offered pursuant to this prospectus.

After the Securities and Exchange Commission, or SEC, has declared effective the registration statement of which this prospectus is a part, on any trading day on which the closing sale price of our common stock exceeds \$0.50, we have the right, in our sole discretion, to present Aspire Capital with a purchase notice (each, a “Purchase Notice”), directing Aspire Capital (as principal) to purchase up to 100,000 shares of our common stock per trading day, up to \$15 million of our common stock in the aggregate at a per share price (the “Purchase Price”) calculated by reference to the prevailing market price of our common stock (as more specifically described below).

In addition, on any date on which we submit a Purchase Notice for 100,000 shares to Aspire Capital and the closing sale price of our stock is equal to or greater than \$0.50 per share of Common Stock, we also have the right, in our sole discretion, to present Aspire Capital with a volume-weighted average price purchase notice (each, a “VWAP Purchase Notice”) directing Aspire Capital to purchase an amount of stock equal to up to 30% of the aggregate shares of the Company’s common stock traded on the Nasdaq Capital Market on the next trading day (the “VWAP Purchase Date”), subject to a maximum number of shares we may determine (the “VWAP Purchase Share Volume Maximum”) and a minimum trading price (the “VWAP Minimum Price Threshold”) (as more specifically described below). The purchase price per Purchase Share pursuant to such VWAP Purchase Notice (the “VWAP Purchase Price”) is calculated by reference to the prevailing market price of our common stock (as more specifically described below).

The Purchase Agreement provides that the Company and Aspire Capital shall not effect any sales under the Purchase Agreement on any purchase date where the closing sale price of our common stock is less than \$0.50 per share (the “Floor Price”). This Floor Price and the respective prices and share numbers in the preceding paragraphs shall be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction. There are no trading volume requirements or restrictions under the Purchase Agreement, and we will control the timing and amount of any sales of our common stock to Aspire Capital. Aspire Capital has no right to require any sales by us, but is obligated to make purchases from us as we direct in accordance with the Purchase Agreement. There are no limitations on use of proceeds, financial or business covenants, restrictions on future fundings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement. Aspire Capital may not assign its rights or obligations under the Purchase Agreement. The Purchase Agreement may be terminated by us at any time, at our discretion, without any penalty or cost to us.

RISK FACTORS

Investing in our common stock involves a high degree of risk. Before making an investment decision, you should carefully consider the risk factors described in our Annual Report on Form 10-K, filed with the SEC on March 10, 2016, which is incorporated by reference in this prospectus, and the other information contained or incorporated by reference in this prospectus. The risks and uncertainties incorporated by reference are not the only risks we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may impair our future business operations. Our business, financial condition or results of operations could be materially adversely affected by any of these risks. In such case, the trading price of our common stock could decline and you could lose all or part of your investment.

Risks Related to This Offering

We will need to raise substantial additional capital in the future to fund our operations and we may be unable to raise such funds when needed and on acceptable terms.

We will need to raise substantial additional capital in the future to fund our operations. The extent to which we utilize the Purchase Agreement with Aspire Capital as a source of funding will depend on a number of factors, including the prevailing market price of our common stock, the volume of trading in our common stock and the extent to which we are able to secure funds from other sources. The number of shares that we may sell to Aspire Capital under the Purchase Agreement on any given day and during the term of the agreement is limited. See “The Aspire Capital Transaction” section of this prospectus for additional information. Additionally, we and Aspire Capital may not effect any sales of shares of our common stock under the Purchase Agreement during the continuance of an event of default or on any trading day that the closing sale price of our common stock is less than \$0.50 per share. Even if we are able to access the full \$15 million under the Purchase Agreement, we will still need additional capital to fully implement our business, operating and development plans.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. All statements other than statements of historical facts contained in this prospectus, including statements regarding our future results of operations and financial position, business strategy, prospective products, product approvals, timing and likelihood of success, plans and objectives of management for future operations, and future results of current and anticipated products are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

In some cases, you can identify forward-looking statements by terms such as “may,” “will,” “should,” “expect,” “plan,” “anticipate,” “could,” “intend,” “target,” “project,” “contemplates,” “believes,” “estimates,” “predicts,” “potential” or “continue” or the negative of these terms or other similar expressions. The forward-looking statements in this prospectus are only predictions. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. These forward-looking statements speak only as of the date of this prospectus and are subject to a number of risks, uncertainties and assumptions described under the section in this prospectus entitled “Risk Factors” and elsewhere in this prospectus. Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified and some of which are beyond our control, you should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Moreover, we operate in an evolving environment. New risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risk factors and uncertainties. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise. The forward-looking statements contained in this prospectus are excluded from the safe harbor protection provided by the Private Securities Litigation Reform Act of 1995 and Section 27A of the Securities Act.

This prospectus also contains estimates and other statistical data made by independent parties and by us relating to market size and growth and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. In addition, projections, assumptions and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk.

USE OF PROCEEDS

This prospectus relates to shares of our common stock that may be offered and sold from time to time by Aspire Capital. We will not receive any proceeds upon the sale of shares by Aspire Capital. However, we may receive proceeds up to \$15 million under the Purchase Agreement with Aspire Capital. The proceeds received from the sale of the shares under the Purchase Agreement will be used for working capital and general corporate purposes. This anticipated use of net proceeds from the sale of shares of our common stock to Aspire Capital under the Purchase Agreement represents our intentions based upon our current plans and business conditions.

DIVIDEND POLICY

We have never declared dividends on our equity securities, and currently do not plan to declare dividends on shares of our common stock in the foreseeable future. We expect to retain our future earnings, if any, for use in the operation and expansion of our business. Subject to the foregoing, the payment of cash dividends in the future, if any, will be at the discretion of our board of directors and will depend upon such factors as earnings levels, capital requirements, our overall financial condition and any other factors deemed relevant by our board of directors.

THE ASPIRE CAPITAL TRANSACTION

General

On December 21, 2015, we entered into the Purchase Agreement which provides that, upon the terms and subject to the conditions and limitations set forth therein, Aspire Capital is committed to purchase up to an aggregate of \$15 million of our shares of common stock over the term of the Purchase Agreement. Upon execution of the Purchase Agreement, the Company sold to Aspire Capital 625,000 Initial Purchase Shares for proceeds of \$1,000,000. In consideration for entering into the Purchase Agreement, concurrently with the execution of the Purchase Agreement, we issued to Aspire Capital 165,000 Commitment Shares. Concurrently with entering into the Purchase Agreement, we also entered into the Registration Rights Agreement, in which we agreed to file one or more registration statements as permissible and necessary to register under the Securities Act, the sale of the shares of our common stock that have been and may be issued to Aspire Capital under the Purchase Agreement.

As of December 17, 2015, there were 18,880,054 shares of our common stock outstanding (16,480,183 shares held by non-affiliates) excluding the 3,774,122 shares offered that may be issuable to Aspire Capital pursuant to the Purchase Agreement. If all of such 3,774,122 shares of our common stock offered hereby were issued and outstanding as of the date hereof, such shares would represent 19.99% of the total common stock outstanding or 22.90% of the non-affiliate shares of common stock outstanding as of the date hereof. The number of shares of our common stock ultimately offered for sale by Aspire Capital is dependent upon the number of shares purchased by Aspire Capital under the Purchase Agreement.

Pursuant to the Purchase Agreement and the Registration Rights Agreement, we are registering 3,774,122 shares of our common stock under the Securities Act, which includes the Commitment Shares, the Initial Purchase Shares, and an additional 300,000 shares of common stock that have already been issued to Aspire Capital and 2,684,122 shares of common stock which we may issue to Aspire Capital after this registration statement is declared effective under the Securities Act. All 3,774,122 shares of common stock are being offered pursuant to this prospectus. Under the Purchase Agreement, we have the right but not the obligation to issue more than the 3,774,122 shares of common stock included in this prospectus to Aspire Capital. As of the date hereof, we do not have any plans or intent to issue to Aspire Capital any shares of common stock in addition to the 3,774,122 shares of common stock offered hereby.

After the SEC has declared effective the registration statement of which this prospectus is a part, on any trading day on which the closing sale price of our common stock is not less than \$0.50 per share, we have the right, in our sole discretion, to present Aspire Capital with a Purchase Notice, directing Aspire Capital (as principal) to purchase up to 100,000 shares of our common stock per business day, up to \$15 million of our common stock in the aggregate over the term of the Purchase Agreement, at a Purchase Price calculated by reference to the prevailing market price of our common stock over the preceding 10-business day period (as more specifically described below).

In addition, on any date on which we submit a Purchase Notice to Aspire Capital for 100,000 Purchase Shares and the closing price of our common stock is not less than \$0.50 per share, we also have the right, in our sole discretion, to present Aspire Capital with a VWAP Purchase Notice directing Aspire Capital to purchase an amount of stock equal to up to 30% of the aggregate shares of the Company's common stock traded on the Nasdaq Capital Market on the next trading day, subject to the VWAP Purchase Share Volume Maximum and the VWAP Minimum Price Threshold. The VWAP Purchase Price is calculated by reference to the prevailing market price of our common stock (as more specifically described below).

The Purchase Agreement provides that the Company and Aspire Capital shall not effect any sales under the Purchase Agreement on any purchase date where the closing sale price of our common stock is less than the Floor Price. There are no trading volume requirements or restrictions under the Purchase Agreement, and we will control the timing and amount of any sales of our common stock to Aspire Capital. Aspire Capital has no right to require any sales by us, but is obligated to make purchases from us as we direct in accordance with the Purchase Agreement. There are no limitations on use of proceeds, financial or business covenants, restrictions on future financings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement.

Aspire Capital may not assign its rights or obligations under the Purchase Agreement. The Purchase Agreement may be terminated by us at any time, at our discretion, without any penalty or cost to us.

Purchase Of Shares Under The Common Stock Purchase Agreement

Under the common stock Purchase Agreement, on any trading day selected by us on which the closing sale price of our common stock exceeds \$0.50 per share, we may direct Aspire Capital to purchase up to 100,000 shares of our common stock per trading day. The Purchase Price of such shares is equal to the lesser of:

- the lowest sale price of our common stock on the purchase date; or
- the arithmetic average of the three lowest closing sale prices for our common stock during the ten consecutive trading days ending on the trading day immediately preceding the purchase date.

In addition, on any date on which we submit a Purchase Notice to Aspire Capital for purchase of 100,000 shares and on which the closing price of our common stock exceeds \$0.50 per share, we also have the right to direct Aspire Capital to purchase an amount of stock equal to up to 30% of the aggregate shares of the our common stock traded on the Nasdaq Capital Market on the next trading day, subject to the VWAP Purchase Share Volume Maximum and the VWAP Minimum Price Threshold, which is equal to the greater of (a) 80% of the closing price of the Company's common stock on the business day immediately preceding the VWAP Purchase Date or (b) such higher price as set forth by the Company in the VWAP Purchase Notice. The VWAP Purchase Price of such shares is the lower of:

- the Closing Sale Price on the VWAP Purchase Date; or
- 97% of the volume-weighted average price for our common stock traded on the Nasdaq Capital Market:
 - on the VWAP Purchase Date, if the aggregate shares to be purchased on that date have not exceeded the VWAP Purchase Share Volume Maximum; or
 - during that portion of the VWAP Purchase Date until such time as the sooner to occur of (i) the time at which the aggregate shares traded on the Nasdaq Capital Market exceed the VWAP Purchase Share Volume Maximum or (ii) the time at which the sale price of the Company's common stock falls below the VWAP Minimum Price Threshold.

The Purchase Price will be adjusted for any reorganization, recapitalization, non-cash dividend, stock split, or other similar transaction occurring during the trading day(s) used to compute the Purchase Price. We may deliver multiple Purchase Notices and VWAP Purchase Notices to Aspire Capital from time to time during the term of the Purchase Agreement, so long as the most recent purchase has been completed.

Minimum Share Price

Under the Purchase Agreement, we and Aspire Capital may not effect any sales of shares of our common stock under the Purchase Agreement on any trading day that the closing sale price of our common stock is less than \$0.50 per share.

Events of Default

Generally, Aspire Capital may terminate the Purchase Agreement upon the occurrence of any of the following, among other, events of default:

- the effectiveness of any registration statement that is required to be maintained effective pursuant to the terms of the Registration Rights Agreement between us and Aspire Capital lapses for any reason (including, without limitation, the issuance of a stop order) or is unavailable to Aspire Capital for sale of our shares of common stock, and such lapse or unavailability continues for a period of ten consecutive business days or for more than an aggregate of thirty business days in any 365-day period, which is not in connection with a post-effective amendment to any such registration statement; in connection with any post-effective amendment to such registration statement that is required to be declared effective by the SEC such lapse or unavailability may continue for a period of no more than 30 consecutive business days;
- the suspension from trading or failure of our common stock to be listed on our principal market for a period of three consecutive business days;
- the delisting of our common stock from our principal market, provided our common stock is not immediately thereafter trading on the New York Stock Exchange, the NYSE MKT, the Nasdaq Capital Market, the Nasdaq Global Select Market, the Nasdaq Global Market, the OTB Bulletin Board or the OTCQB marketplace or OTCQX marketplace of the OTC Markets Group;
- our transfer agent's failure to issue to Aspire Capital shares of our common stock which Aspire Capital is entitled to receive under the Purchase Agreement within five business days after an applicable purchase date;
- any breach by us of the representations or warranties or covenants contained in the Purchase Agreement or any related agreements which could have a material adverse effect on us, subject to a cure period of five business days;
- if we become insolvent or are generally unable to pay our debts as they become due; or
- any participation or threatened participation in insolvency or bankruptcy proceedings by or against us.

Our Termination Rights

The Purchase Agreement may be terminated by us at any time, at our discretion, without any penalty or cost to us.

No Short-Selling or Hedging by Aspire Capital

Aspire Capital has agreed that neither it nor any of its agents, representatives and affiliates shall engage in any direct or indirect short-selling or hedging of our common stock during any time prior to the termination of the Purchase Agreement.

Effect of Performance of the Purchase Agreement on Our Stockholders

The Purchase Agreement does not limit the ability of Aspire Capital to sell any or all of the 3,774,122 shares registered in this offering. It is anticipated that shares registered in this offering will be sold over a period of up to approximately 30 months from the date of this prospectus. The sale by Aspire Capital of a significant amount of shares registered in this offering at any given time could cause the market price of our common stock to decline and/or to be highly volatile. Aspire Capital may ultimately purchase all, some or none of the 2,684,122 shares of common stock not yet issued but registered in this offering. After it has acquired such shares, it may sell all, some or none of such shares. Therefore, sales to Aspire Capital by us pursuant to the Purchase Agreement also may result in substantial dilution to the interests of other holders of our common stock. However, we have the right to control the timing and amount of any sales of our shares to Aspire Capital and the Purchase Agreement may be terminated by us at any time at our discretion without any penalty or cost to us.

Percentage of Outstanding Shares After Giving Effect to the Purchased Shares Issued to Aspire Capital

In connection with entering into the Purchase Agreement, we authorized the sale to Aspire Capital of up to \$15 million of our shares of common stock. However, we estimate that we will sell no more than 2,684,122 shares to Aspire Capital under the Purchase Agreement (exclusive of the 165,000 Commitment Shares, the 625,000 Initial Purchase Shares, and the additional 300,000 shares of common stock that have already been issued to Aspire Capital), all of which are included in this offering. Subject to any required approval by our board of directors, we have the right but not the obligation to issue more than the 3,774,122 shares included in this prospectus to Aspire Capital under the Purchase Agreement. In the event we elect to issue more than 3,774,122 shares under the Purchase Agreement, we will be required to file a new registration statement and have it declared effective by the SEC. The number of shares ultimately offered for sale by Aspire Capital in this offering is dependent upon the number of shares purchased by Aspire Capital under the Purchase Agreement. The following table sets forth the number and percentage of outstanding shares to be held by Aspire Capital after giving effect to the sale of shares of common stock issued to Aspire Capital at varying purchase prices:

Assumed Average Purchase Price	Proceeds from the Sale of Shares to Aspire Capital Under the Purchase Agreement Registered in this Offering	Number of Shares to be Issued in this Offering at the Assumed Average Purchase Price (1)	Percentage of Outstanding Shares After Giving Effect to the Purchased Shares Issued to Aspire Capital (2)
\$ 0.50	\$ 2,492,061	3,609,122	15.9%
\$ 1.00	\$ 3,984,122	3,609,122	15.9%
\$ 1.50	\$ 5,476,183	3,609,122	15.9%
\$ 2.00	\$ 6,968,244	3,609,122	15.9%
\$ 5.00	\$ 15,000,000	3,425,000	15.2%
\$ 10.00	\$ 15,000,000	2,025,000	9.9%

(1) Excludes 165,000 Commitment Shares issued under the Purchase Agreement between the Company and Aspire Capital.

(2) The denominator is based on 19,983,402 shares outstanding as of April 22, 2016, which includes the 1,090,000 shares previously issued to Aspire Capital and the number of shares set forth in the adjacent column which we would have sold to Aspire Capital. The numerator is based on the number of shares which we may issue to Aspire Capital under the Purchase Agreement (that are the subject of this offering) at the corresponding assumed purchase price set forth in the adjacent column.

**MANAGEMENT'S DISCUSSION AND ANALYSIS OF
FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

Please see Item 7 in our Annual Report on Form 10-K for the fiscal year ended December 31, 2015, filed with the Securities and Exchange Commission on March 10, 2016, which is incorporated herein by reference, for a discussion of our financial condition and results of operations.

BUSINESS

Please see Item 1 in our Annual Report on Form 10-K for the fiscal year ended December 31, 2015, filed with the Securities and Exchange Commission on March 10, 2016, which is incorporated herein by reference.

MANAGEMENT

Please see the sections entitled “Directors,” “Executive Officers,” “Corporate Governance” and “Section 16(a) Beneficial Ownership Reporting Compliance” in our Annual Report on Form 10-K/A filed with the Securities and Exchange Commission on April 25, 2016, which are incorporated herein by reference.

EXECUTIVE AND DIRECTOR COMPENSATION

Please see the sections entitled “Executive Compensation” and “Director Compensation” in our Annual Report on Form 10-K/A filed with the Securities and Exchange Commission on April 25, 2016, which is incorporated herein by reference.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Please see the section entitled “Certain Relationships and Related Party Transactions” in our Annual Report on Form 10-K/A filed with the Securities and Exchange Commission on April 25, 2016, which is incorporated herein by reference.

PRINCIPAL SHAREHOLDERS

Please see the section entitled “Security Ownership of Certain Beneficial Owners and Management” in our Annual Report on Form 10-K/A filed with the Securities and Exchange Commission on April 25, 2016, which is incorporated herein by reference.

DILUTION

The sale of our common stock to Aspire Capital pursuant to the Purchase Agreement will have a dilutive impact on our stockholders. As a result, our net income per share, if any, would decrease in future periods and the market price of our common stock could decline. In addition, the lower our stock price is at the time we exercise our right to sell shares to Aspire Capital, the more shares of our common stock we will have to issue to Aspire Capital pursuant to the Purchase Agreement and our existing stockholders would experience greater dilution.

After giving effect to the sale pursuant to the Purchase Agreement of 3,774,122 shares of common stock at an assumed average sale price of \$1.26 per share (the closing price of our common stock on April 28, 2016), our pro forma as adjusted net tangible book value as of December 31, 2015 would have been approximately \$8.3 million, or \$0.35 per share of common stock. This represents an immediate increase in pro forma as adjusted net tangible book value of \$0.16 per share to our existing stockholders and an immediate dilution of \$0.91 per share to our new stockholders.

SELLING STOCKHOLDER

The selling stockholder may from time to time offer and sell any or all of the shares of our common stock set forth below pursuant to this prospectus. When we refer to the “selling stockholder” in this prospectus, we mean the entity listed in the table below, and its respective pledgees, donees, permitted transferees, assignees, successors and others who later come to hold any of the selling stockholder’s interests in shares of our common stock other than through a public sale.

The following table sets forth, as of the date of this prospectus, the name of the selling stockholder for whom we are registering shares for sale to the public, the number of shares of common stock beneficially owned by the selling stockholder prior to this offering, the total number of shares of common stock that the selling stockholder may offer pursuant to this prospectus and the number of shares of common stock that the selling stockholder will beneficially own after this offering. Except as noted below, the selling stockholder does not have, or within the past three years has not had, any material relationship with us or any of our predecessors or affiliates and the selling stockholder is not or was not affiliated with registered broker-dealers.

Based on the information provided to us by the selling stockholder, assuming that the selling stockholder sells all of the shares of our common stock beneficially owned by it that have been registered by us and does not acquire any additional shares during the offering, the selling stockholder will not own any shares other than those appearing in the column entitled “Beneficial Ownership After This Offering.” We cannot advise you as to whether the selling stockholder will in fact sell any or all of such shares of common stock. In addition, the selling stockholder may have sold, transferred or otherwise disposed of, or may sell, transfer or otherwise dispose of, at any time and from time to time, the shares of our common stock in transactions exempt from the registration requirements of the Securities Act after the date on which it provided the information set forth in the table below.

Name	Shares of Common Stock Owned Prior to this Offering	Shares of Common Stock Being Offered	Beneficial Ownership After this Offering (1)	
			Number of Shares	% (2)
Aspire Capital Fund, LLC (3)	1,090,000(4)	2,684,122	—	—

* Represents less than 1% of outstanding shares.

- (1) Assumes the sale of all shares of common stock registered pursuant to this prospectus, although the selling stockholder is under no obligation known to us to sell any shares of common stock at this time.
- (2) Based on 19,983,402 shares of common stock outstanding on April 22, 2016.
- (3) Aspire Capital Partners LLC (“Aspire Partners”) is the Managing Member of Aspire Capital Fund LLC (“Aspire Fund”). SGM Holdings Corp (“SGM”) is the Managing Member of Aspire Partners. Mr. Steven G. Martin (“Mr. Martin”) is the president and sole shareholder of SGM, as well as a principal of Aspire Partners. Mr. Erik J. Brown (“Mr. Brown”) is the president and sole shareholder of Red Cedar Capital Corp (“Red Cedar”), which is a principal of Aspire Partners. Mr. Christos Komissopoulos (“Mr. Komissopoulos”) is president and sole shareholder of Chrisko Investors Inc (“Chrisko”), which is a principal of Aspire Partners. Each of Aspire Partners, SGM, Red Cedar, Chrisko, Mr. Martin, Mr. Brown, and Mr. Komissopoulos may be deemed to be a beneficial owner of common stock held by Aspire Fund. Each of Aspire Partners, SGM, Red Cedar, Chrisko, Mr. Martin, Mr. Brown, and Mr. Komissopoulos disclaims beneficial ownership of the common stock held by Aspire Fund.
- (4) As of the date hereof, 1,090,000 shares of our common stock have been acquired by Aspire Capital under the Purchase Agreement, consisting of shares we issued to Aspire Capital as a commitment fee, the Initial Purchase Shares sold to Aspire Capital, and an additional 300,000 shares of common stock that have already been issued to Aspire Capital. We may elect in our sole discretion to sell to Aspire Capital up to an additional 2,684,122 shares under the Purchase Agreement but Aspire Capital does not presently beneficially own those shares as determined in accordance with the rules of the SEC.

DESCRIPTION OF CAPITAL STOCK

General

Our amended certificate of incorporation authorizes us to issue up to 40,000,000 shares of common stock, par value \$0.0001 per share, and 5,000,000 shares of preferred stock, par value \$0.0001 per share.

As of April 22, 2016, there were 19,983,402 shares of common stock outstanding, held of record by 204 stockholders.

The following description of our capital stock is not complete and is subject to and qualified in its entirety by our amended certificate of incorporation and amended and restated bylaws, which are filed as exhibits to the registration statement of which this prospectus is a part, and by the relevant provisions of the Delaware General Corporation Law.

Common Stock

The holders of our common stock are entitled to the following rights:

Voting Rights

Holders of our common stock are entitled to one vote per share in the election of directors and on all other matters on which stockholders are entitled or permitted to vote. Holders of our common stock are not entitled to cumulative voting rights.

Dividend Rights

Subject to the terms of any then outstanding series of preferred stock, the holders of our common stock are entitled to dividends in the amounts and at times as may be declared by the board of directors out of funds legally available therefor.

Liquidation Rights

Upon liquidation or dissolution, holders of our common stock are entitled to share ratably in all net assets available for distribution to stockholders after we have paid, or provided for payment of, all of our debts and liabilities, and after payment of any liquidation preferences to holders of any then outstanding shares of preferred stock.

Other Matters

Holders of our common stock have no redemption, conversion or preemptive rights. There are no sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to the rights of the holders of shares of any series of preferred stock that we may issue in the future.

Preferred Stock

Our board of directors has the authority to issue preferred stock in one or more classes or series and to fix the designations, powers, preferences and rights, and the qualifications, limitations or restrictions thereof, including dividend rights, conversion right, voting rights, terms of redemption, liquidation preferences and the number of shares constituting any class or series, without further vote or action by the stockholders. Although we have no present plans to issue any shares of preferred stock, the issuance of shares of preferred stock, or the issuance of rights to purchase such shares, could decrease the amount of earnings and assets available for distribution to the holders of common stock, could adversely affect the rights and powers, including voting rights, of the common stock, and could have the effect of delaying, deterring or preventing a change of control of us or an unsolicited acquisition proposal.

Stock Options

As of April 22, 2016, we had outstanding options to purchase an aggregate of 2,261,899 shares of our common stock with exercise prices ranging from \$1.34 to \$9.11 per share, with an approximate weighted average exercise price of \$3.50 per share.

Warrants

As of April 22, 2016, we had outstanding warrants to purchase shares of our common stock as follows:

- Warrants exercisable for 258,249 shares of our common stock at an exercise price of \$10.00 per share, issued to investors pursuant to our June 2013 note and warrant purchase agreement. The warrants became exercisable for a five-year period beginning at the closing of our initial public offering.
- Warrants exercisable for 50,260 shares of our common stock at an exercise price of \$10.00 per share, issued to our landlord in connection with our September 2013 lease amendment which was effective as of August 1, 2013. The warrants became exercisable for a five-year period beginning at the closing of our initial public offering.
- Warrants exercisable for 1,587 shares of our common stock at an exercise price of \$25.20 per share, issued to our landlord in connection with our September 2012 lease amendment. These warrants are exercisable through September 2019.
- Warrant exercisable for 95,000 shares of our common stock at an exercise price of \$12.50 per share, issued to the representative of the underwriters in connection with our initial public offering in February 2014. This warrant is exercisable through February 2019.
- Warrant exercisable for 52,966 shares of our common stock at an exercise price of \$4.72 per share, issued to Oxford Finance LLC in connection with a loan and security agreement dated April 30, 2014. This warrant is exercisable through April 2024.
- Warrants exercisable for 1,743,551 shares of our common stock at an exercise price of \$1.56 per share, issued to participants in our public offering in February 2015. These warrants are exercisable through February 2020.

Registration Rights

Under the terms of the warrants issued to certain designees of the representative of the underwriters in connection with our initial public offering, the holders have demand and piggyback registration rights. The holder(s) of at least 51% of the registrable securities, as defined in the warrants, have the right, subject to specified exceptions, to make one demand that we file a registration statement to register all or a portion of their shares. These demand registration rights expire on February 4, 2019, and a demand pursuant to such rights must be made prior to February 4, 2018.

In addition, the holder of each warrant has the right to include its shares in any registration statement we file. If we register any securities for public sale, the holder will have the right to include its shares in the registration statement, provided that the underwriters of any such underwritten offering will have the right to limit the number of shares to be included in the registration statement. These piggyback registration rights expire on February 4, 2021.

Under our amended and restated investor rights agreement dated October 31, 2011, two trusts affiliated with our major stockholder Claire K. T. Reiss and our landlord, have the right to include their shares in any registration statement we file. If we register any securities for public sale, these stockholders with registration rights will have the right to include their shares in the registration statement, provided that the underwriters of any such underwritten offering will have the right to limit the number of shares to be included in the registration statement. We will pay all expenses, including for the fees and costs of one counsel to the stockholders exercising their registration rights (not to exceed \$25,000) relating to all piggyback registrations.

The registration rights described above will terminate, as to a given stockholder, upon the earlier of (i) at any time when such holder can sell all of such holder's shares pursuant to Rule 144 promulgated under the

Securities Act during any three-month period and (ii) the date three years following the closing of our initial public offering.

Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws

The provisions of Delaware law, our certificate of incorporation and our bylaws described below may have the effect of delaying, deferring or discouraging another party from acquiring control of us.

Section 203 of the Delaware General Corporation Law

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (i) by persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines business combination to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loss, advances, guarantees, pledges or other financial benefits by or through the corporation.

In general, Section 203 defines an “interested stockholder” as an entity or person who, together with the person’s affiliates and associates, beneficially owns, or within three years before the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

Certificate of Incorporation and Bylaws

Our certificate of incorporation and/or bylaws provide that:

- our board of directors is classified into three classes of equal (or roughly equal) size, with all directors serving for a three-year term and the directors of only one class being elected at each annual meeting of stockholders, so that the terms of the classes of directors are “staggered”;
- the authorized number of directors can be changed only by resolution of our board of directors;
- our bylaws may be amended or repealed by our board of directors or our stockholders;

- no action can be taken by stockholders except at an annual or special meeting of the stockholders called in accordance with our bylaws, and stockholders may not act by written consent, unless the stockholders amend the certificate of incorporation to provide otherwise;
- stockholders may not call special meetings of the stockholders or fill vacancies on the board;
- our board of directors will be authorized to issue, without stockholder approval, preferred stock, the rights of which will be determined at the discretion of the board of directors and that, if issued, could operate as a “poison pill” to dilute the stock ownership of a potential hostile acquirer to prevent an acquisition that our board of directors does not approve;
- our stockholders do not have cumulative voting rights, and therefore our stockholders holding a majority of the shares of common stock outstanding will be able to elect all of our directors; and
- our stockholders must comply with advance notice provisions to bring business before or nominate directors for election at a stockholder meeting.

Potential Effects of Authorized but Unissued Stock

We have shares of common stock and preferred stock available for future issuance without stockholder approval. We may utilize these additional shares for a variety of corporate purposes, including future public offerings to raise additional capital, to facilitate corporate acquisitions or payment as a dividend on the capital stock.

The existence of unissued and unreserved common stock and preferred stock may enable our board of directors to issue shares to persons friendly to current management or to issue preferred stock with terms that could render more difficult or discourage a third-party attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise, thereby protecting the continuity of our management. In addition, the board of directors has the discretion to determine designations, rights, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences of each series of preferred stock, all to the fullest extent permissible under the Delaware General Corporation Law and subject to any limitations set forth in our certificate of incorporation. The purpose of authorizing the board of directors to issue preferred stock and to determine the rights and preferences applicable to such preferred stock is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while providing desirable flexibility in connection with possible financings, acquisitions and other corporate purposes, could have the effect of making it more difficult for a third-party to acquire, or could discourage a third-party from acquiring, a majority of our outstanding voting stock.

Limitations of Director Liability and Indemnification of Directors, Officers and Employees

Our certificate of incorporation limits the liability of directors to the maximum extent permitted by Delaware law. Delaware law provides that directors of a corporation will not be personally liable for monetary damages for breach of their fiduciary duties as directors, except for liability for any:

- breach of their duty of loyalty to us or our stockholders;
- act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or
- transaction from which the directors derived an improper personal benefit.

These limitations of liability do not apply to liabilities arising under the federal or state securities laws and do not affect the availability of equitable remedies such as injunctive relief or rescission.

Our bylaws provide that we will indemnify our directors and officers to the fullest extent permitted by law, and may indemnify employees and other agents. Our bylaws also provide that we are obligated to advance expenses incurred by a director or officer in advance of the final disposition of any action or proceeding.

We have obtained a policy of directors' and officers' liability insurance.

We enter into separate indemnification agreements with our directors and officers. These agreements, among other things, require us to indemnify our directors and officers for any and all expenses (including reasonable attorneys' fees, retainers, court costs, transcript costs, fees of experts, witness fees, travel expenses, duplicating costs, printing and binding costs, telephone charges, postage, delivery service fees) judgments, fines and amounts paid in settlement actually and reasonably incurred by such directors or officers or on his or her behalf in connection with any action or proceeding arising out of their services as one of our directors or officers, or any of our subsidiaries or any other company or enterprise to which the person provides services at our request provided that such person follows the procedures for determining entitlement to indemnification and advancement of expenses set forth in the indemnification agreement. We believe that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

The limitation of liability and indemnification provisions in our certificate of incorporation and bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might provide a benefit to us and our stockholders. Our results of operations and financial condition may be harmed to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling us, we have been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

At present, there is no pending litigation or proceeding involving any of our directors or officers as to which indemnification is required or permitted, and we are not aware of any threatened litigation or proceeding that may result in a claim for indemnification.

Transfer Agent

The transfer agent and registrar for our common stock is Continental Stock Transfer & Trust Company. Its address is 17 Battery Place, 8th Floor, New York, New York 10004 and its telephone number is (212) 509-4000.

Listing

Our common stock is listed on The NASDAQ Capital Market under the symbol "BIOC."

PLAN OF DISTRIBUTION

The common stock offered by this prospectus is being offered by Aspire Capital, the selling stockholder. The common stock may be sold or distributed from time to time by the selling stockholder directly to one or more purchasers or through brokers, dealers, or underwriters who may act solely as agents at market prices prevailing at the time of sale, at prices related to the prevailing market prices, at negotiated prices, or at fixed prices, which may be changed. The sale of the common stock offered by this prospectus may be effected in one or more of the following methods:

- ordinary brokers' transactions;
- transactions involving cross or block trades;
- through brokers, dealers, or underwriters who may act solely as agents;
- "at the market" into an existing market for the common stock;
- in other ways not involving market makers or established business markets, including direct sales to purchasers or sales effected through agents;
- in privately negotiated transactions; or
- any combination of the foregoing.

In order to comply with the securities laws of certain states, if applicable, the shares may be sold only through registered or licensed brokers or dealers. In addition, in certain states, the shares may not be sold unless they have been registered or qualified for sale in the state or an exemption from the registration or qualification requirement is available and complied with.

The selling stockholder may also sell shares of common stock under Rule 144 promulgated under the Securities Act, if available, rather than under this prospectus. In addition, the selling stockholder may transfer the shares of common stock by other means not described in this prospectus.

Brokers, dealers, underwriters, or agents participating in the distribution of the shares as agents may receive compensation in the form of commissions, discounts, or concessions from the selling stockholder and/or purchasers of the common stock for whom the broker-dealers may act as agent. Aspire Capital has informed us that each such broker-dealer will receive commissions from Aspire Capital which will not exceed customary brokerage commissions.

Aspire Capital is an "underwriter" within the meaning of the Securities Act.

Neither we nor Aspire Capital can presently estimate the amount of compensation that any agent will receive. We know of no existing arrangements between Aspire Capital, any other stockholder, broker, dealer, underwriter, or agent relating to the sale or distribution of the shares offered by this prospectus. At the time a particular offer of shares is made, a prospectus supplement, if required, will be distributed that will set forth the names of any agents, underwriters, or dealers and any compensation from the selling stockholder, and any other required information.

We will pay all of the expenses incident to the registration, offering, and sale of the shares to the public other than commissions or discounts of underwriters, broker-dealers, or agents. We have agreed to indemnify Aspire Capital and certain other persons against certain liabilities in connection with the offering of shares of common stock offered hereby, including liabilities arising under the Securities Act or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities. Aspire Capital has agreed to indemnify us against liabilities under the Securities Act that may arise from certain written information furnished to us by Aspire Capital specifically for use in this prospectus or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers, and controlling persons, we have been advised that in the opinion of the SEC this indemnification is against public policy as expressed in the Securities Act and is therefore, unenforceable.

Aspire Capital and its affiliates have agreed not to engage in any direct or indirect short selling or hedging of our common stock during the term of the Purchase Agreement.

We have advised Aspire Capital that while it is engaged in a distribution of the shares included in this prospectus it is required to comply with Regulation M promulgated under the Securities Exchange Act of 1934, as amended. With certain exceptions, Regulation M precludes the selling stockholder, any affiliated purchasers, and any broker-dealer or other person who participates in the distribution from bidding for or purchasing, or attempting to induce any person to bid for or purchase any security which is the subject of the distribution until the entire distribution is complete. Regulation M also prohibits any bids or purchases made in order to stabilize the price of a security in connection with the distribution of that security. All of the foregoing may affect the marketability of the shares offered hereby this prospectus.

We may suspend the sale of shares by Aspire Capital pursuant to this prospectus for certain periods of time for certain reasons, including if the prospectus is required to be supplemented or amended to include additional material information.

This offering will terminate on the date that all shares offered by this prospectus have been sold by Aspire Capital.

LEGAL MATTERS

The validity of the shares of common stock being offered by this prospectus has been passed upon for us by Cooley LLP, San Diego, California. Aspire Capital is being represented by Morrison & Foerster LLP, Washington, D.C.

EXPERTS

Mayer Hoffman McCann P.C., our independent registered public accounting firm, has audited our balance sheets as of December 31, 2014 and 2015, and the related statements of operations and comprehensive loss, changes in shareholders' deficit and cash flows for each of the two years in the period ended December 31, 2015, as set forth in their report. Our financial statements have been incorporated in this prospectus and in this registration statement by reference in reliance on the report of Mayer Hoffman McCann P.C. given on their authority as experts in accounting and auditing.

MARKET AND INDUSTRY DATA

Unless otherwise indicated, information contained in this prospectus concerning the pharmaceutical industry, including our market opportunity, is based on information from independent industry analysts, third-party sources and management estimates. Management estimates are derived from publicly-available information released by independent industry analysts and third-party sources, as well as data from our internal research, and are based on assumptions made by us based on such data and our knowledge of such industry and market, which we believe to be reasonable. In addition, while we believe the market opportunity information included in this prospectus is generally reliable and is based on reasonable assumptions, such data involves risks and uncertainties and are subject to change based on various factors, including those discussed under the heading "Risk Factors."

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of common stock being offered by this prospectus. This prospectus does not contain all of the information in the registration statement and its exhibits. For further information with respect to us and the common stock offered by this prospectus, we refer you to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

You can read our SEC filings, including the registration statement, over the Internet at the SEC's website at www.sec.gov. You may also read and copy any document we file with the SEC at its public reference facilities at 100 F Street NE, Washington, D.C. 20549. You may also obtain copies of these documents at prescribed rates by writing to the Public Reference Section of the SEC at 100 F Street N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities. You may also request a copy of these filings, at no cost, by writing us at 5810 Nancy Ridge Drive, San Diego, California 92121 or telephoning us at (858) 320-8200.

We are subject to the information and periodic reporting requirements of the Exchange Act, and we file periodic reports, proxy statements and other information with the SEC. These periodic reports, proxy statements and other information are available for inspection and copying at the public reference room and website of the SEC referred to above. We maintain a website at <http://www.biocept.com>. You may access our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not incorporated by reference in, and is not part of, this prospectus.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference the information and reports we file with it, which means that we can disclose important information to you by referring you to these documents. The information incorporated by reference is an important part of this prospectus. We are incorporating by reference the documents listed below, which we have already filed with the SEC:

- our Annual Report on Form 10-K for the year ended December 31, 2015 (other than information furnished rather than filed), filed with the SEC on March 10, 2016, and amended on April 25, 2016;
- our Current Report on Form 8-K filed with the SEC on February 26, 2016 and April 29, 2016 (except for information contained therein which is furnished rather than filed); and
- the description of our common stock, which is registered under Section 12 of the Exchange Act, in our registration statement on Form 8-A, filed with the SEC on January 28, 2014, including any amendments or reports filed for the purpose of updating such description.

Upon request, we will provide, without charge, to each person, including any beneficial owner, to whom a copy of this prospectus is delivered a copy of the documents incorporated by reference into this prospectus. You may request a copy of these filings, and any exhibits we have specifically incorporated by reference as an exhibit in this prospectus, at no cost by writing or telephoning us at the following address:

Biocept, Inc.
5810 Nancy Ridge Drive
San Diego, California 92121
Telephone: (858) 320-8200

You also may access these filings on our Internet site at <http://biocept.com>. Our web site and the information contained on that site, or connected to that site, are not incorporated into this prospectus or the registration statement.

This prospectus is part of a registration statement we filed with the SEC. We have incorporated exhibits into this registration statement. You should read the exhibits carefully for provisions that may be important to you.

You should rely only on the information incorporated by reference or provided in this prospectus or any prospectus supplement. We have not authorized anyone to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus or in the documents incorporated by reference is accurate as of any date other than the date on the front of this prospectus or those documents.

BIOCEPT, INC.

FINANCIAL STATEMENTS

Please see Exhibit 99.1 in our Annual Report on Form 10-K for the fiscal year ended December 31, 2015, filed with the Securities and Exchange Commission on March 10, 2016, which is incorporated herein by reference, for our financial statements.

3,774,122 Shares



Common Stock

PROSPECTUS

, 2016

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth the costs and expenses, other than underwriting discounts and commissions, paid or payable by Biocept, Inc., or the Registrant, in connection with the sale and distribution of the securities being registered. All amounts are estimated except the SEC registration fee and the NASDAQ listing fee.

Item	Amount
SEC registration fee	\$ 551
Legal fees and expenses	110,000
Accounting fees and expenses	10,000
Printing and engraving expenses	50,000
Transfer agent and registrar fees and expenses	2,000
Miscellaneous fees and expenses	2,449
Total	\$175,000

Item 14. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities, including reimbursement for expenses incurred, arising under the Securities Act.

The Registrant's amended certificate of incorporation provides for indemnification of its directors and executive officers to the maximum extent permitted by the Delaware General Corporation Law, and the Registrant's amended and restated bylaws provide for indemnification of its directors and executive officers to the maximum extent permitted by the Delaware General Corporation Law.

In addition, the Registrant has entered into indemnification agreements with each of its current directors and executive officers. These agreements will require the Registrant to indemnify these individuals to the fullest extent permitted under Delaware law against liabilities that may arise by reason of their service to the Registrant and to advance expenses incurred as a result of any proceeding against them as to which they could be indemnified. The Registrant also intends to enter into indemnification agreements with its future directors and executive officers.

Item 15. Recent Sales of Unregistered Securities.

Since January 1, 2011, the Registrant made sales of the unregistered securities discussed below. The offers, sales and issuances of the securities described below were exempt from registration under the Securities Act by virtue of Section 4(a)(2) of the Securities Act and/or, in the case of compensatory issuances, Securities Act Rule 701, and/or, in the case of conversions, Section 3(a)(9) of the Securities Act. No commissions were paid.

Aspire Transaction

On December 21, 2015, concurrently with the execution of the Purchase Agreement, the Registrant issued to Aspire Capital 165,000 shares of common stock as a commitment fee and sold to Aspire Capital 625,000 shares of common stock at \$1.60 per share for proceeds of \$1,000,000. Subsequently, the Registrant sold to Aspire Capital an aggregate of 300,000 shares of common stock for total proceeds of \$403,000.

Note and Warrant Financings

In 30 closings from February 2011 to November 2012, the Registrant sold secured convertible promissory notes with an aggregate principal amount of \$12,336,247, together with warrants that subsequently became exercisable for 108,786 shares of its common stock at an exercise price of \$10.00 per share, to 11 accredited investors, for aggregate gross proceeds of \$12,336,247.

In 21 closings from January 2012 to December 2012, the Registrant sold promissory notes with an aggregate principal amount of \$5,960,000, together with warrants that subsequently became exercisable for 52,557 shares of the Registrant's common stock to five accredited investors at an exercise price of \$10.00 per share, for aggregate gross proceeds of \$5,960,000. These promissory notes were converted into shares of the Registrant's common stock upon the closing of its initial public offering.

In 56 closings from December 2012 through January 2014, the Registrant sold promissory notes with an aggregate principal amount of \$5,165,000, together with warrants that subsequently became exercisable for 258,249 shares of the Registrant's common stock at an exercise price of \$10.00 per share, to 14 accredited investors, for aggregate gross proceeds of \$5,165,000.

Compensatory Issuances

In 2011, the Company issued 36,260 common stock options (at a \$4.62 weighted average exercise price per share) and 23,874 preferred stock restricted stock units (number of common stock equivalents) to service providers.

In 2012, the Registrant issued 330 common stock options (at a \$4.62 weighted average exercise price per share) and 32,769 common stock restricted stock units to service providers.

In 2013, the Registrant issued 300,438 common stock options (at a \$5.18 weighted average exercise price per share) and 101,202 common stock restricted stock units to service providers.

In 2014, the Registrant issued 647,298 common stock options (at a \$6.71 weighted average exercise price per share) and 44,496 common stock restricted stock units to service providers. Upon the completion of the Registrant's initial public offering in February 2014, a total of 73,151 preferred stock restricted stock units (number of common stock equivalents) vested in accordance with underlying agreements, including the 23,874 preferred stock restricted stock units (number of common stock equivalents) issued in 2011.

In the year ended December 31, 2015, the Registrant issued 1,323,926 common stock options (at a \$2.00 weighted average exercise price per share) to service providers.

Inducement Warrants and Issuances

In September 2012, the Registrant issued 66,666 Series A preferred stock warrants, at an exercise price of \$0.60 per share, to its landlord in exchange for certain real estate lease accommodations. The Series A preferred stock warrants are exercisable until September 2019 for 1,587 shares of the Registrant's common stock at an exercise price of \$25.20 per share.

In June 2013, the Registrant issued 23,809 common stock warrants, at an exercise price to be determined in accordance with contract, to a lender (a 5% beneficial holder) in connection with a note conversion. Upon the completion of the Registrant's initial public offering in February 2014, the exercise price of these common stock warrants was fixed at \$10.00 per share, which are exercisable until February 2019.

In July 2013 through January 2014, the Registrant issued common stock warrants which became exercisable upon the completion of the Registrant's initial public offering in February 2014 for an aggregate 128,903 shares of the Registrant's common stock, at an exercise price of \$10.00 per share, to five guarantors in connection with their guaranties of its UBS Bank USA revolving line of credit. These common stock warrants were exercisable until February 10, 2016, and were not exercised.

In September 2013, the Registrant issued an indeterminate number of common stock warrants, at an exercise price to be determined in accordance with contract, to its landlord in connection with a lease amendment.

Upon the completion of the Registrant's initial public offering in February 2014, the exercise price of the common stock warrants issued to its landlord was fixed at \$10.00 per share for an aggregate 50,260 shares of the Registrant's common stock, which are exercisable until February 2019.

Upon the completion of the Registrant's initial public offering in February 2014, common stock options for an aggregate 285,000 shares of the Registrant's common stock were issued to the underwriters of the Registrant's initial public offering and were exercisable until March 21, 2014 at an exercise price of \$9.30 per share to cover overallocments, which was not exercised.

Upon the completion of the Registrant's initial public offering in February 2014, warrants for an aggregate 95,000 shares of the Registrant's common stock were issued to the underwriters of the Registrant's initial public offering and are exercisable until February 2020 at a price of \$12.50 per share.

In April 2014, the Registrant issued Oxford Finance LLC a warrant to purchase up to 52,966 shares of the Registrant's common stock, at an exercise price of \$4.72 per share. The warrant was issued in connection with a loan and security agreement between the Registrant and Oxford Finance LLC dated April 30, 2014, and is exercisable until April 2024.

Upon the completion of the Registrant's follow-on public offering in February 2015, common stock options for an aggregate 1,200,000 shares of the Registrant's common stock at an exercise price of \$1.25 per share and/or additional warrants for an aggregate 1,200,000 shares of the Registrant's common stock at an exercise price of \$0.0001 per warrant were issued to the underwriters of the Registrant's secondary public offering to cover overallocments, which were exercisable through March 30, 2015 and were not exercised.

Recapitalization

In November 2011, the Registrant effected a recapitalization in which all outstanding shares of, and warrants to purchase and restricted stock units to obtain, the Registrant's outstanding Series AA preferred stock and Series BB preferred stock were converted into the same number of shares of, warrants to purchase and restricted stock units to obtain, Series A preferred stock. At the same time, the Registrant effected the 1-for-3 reverse split of its common stock.

Conversions and Exercises

In November 2011, the Registrant's Executive Chairman exercised 10,204 common stock options, paying an aggregate exercise price of \$47,183.

In October 2011, a major stockholder converted 2,064,520 shares of Series AA preferred stock into 49,155 shares of common stock.

In March and April 2013, two employees exercised stock options for 85 shares of common stock, paying an aggregate exercise price of \$395.

In June 2013, the holders of promissory notes with an aggregate principal balance of approximately \$20,231,000 and accrued but unpaid interest of approximately \$2,581,000 voluntarily converted such principal and interest into 42,245,834 shares of the Registrant's Series A preferred stock. Such shares of Series A preferred stock were subsequently converted into 1,652,851 shares of the Registrant's common stock upon completion of the Registrant's initial public offering in February 2014.

In the fourth quarter of 2013, four employees exercised 3,936 common stock options, paying an aggregate exercise price of \$19,710.

In February 2014:

- The \$1,400,000 principal amount of and the \$233,982 accrued interest on the Registrant's 2008 convertible note held by a trust affiliated with the Registrant's majority stockholder, Claire K. T. Reiss, were converted at \$10.00 per share into a total of 163,399 shares of common stock.
- The \$5,165,000 principal amount of and the \$313,017 accrued interest on our "2013" convertible notes held by various persons, including several insiders, were converted at \$10.00 per share into a total of 547,801 shares of common stock. The following persons received the following numbers of such shares:
 - Affiliates of Claire K. T. Reiss, majority stockholder—270,484
 - Affiliate of David F. Hale, Chairman—47,181
 - Affiliate of Edward Neff, Director—108,140
 - Marsha Chandler, Director—5,078
 - M. Faye Wilson, Director—2,650
 - Bruce E. Gerhardt, Director—1,055

In February 2015, warrants for an aggregate 8,000,000 shares of the Registrant's common stock were issued to participants, including several insiders, of the Registrant's follow-on public offering and are exercisable until February 2020 at a price of \$1.56 per share, with total proceeds of \$9,760,060 received from the exercises of such warrants from February 13, 2015 through April 22, 2016. Each of the members of the Registrant's Board of Directors participated in the Registrant's secondary public offering, purchasing an aggregate 142,000 shares of the Registrant's common stock and warrants to purchase up to an aggregate of 142,000 shares of the Registrant's common stock for a total purchase price of \$177,500. The following persons received the following numbers of such warrants:

- Affiliate of David F. Hale, Chairman—40,000
- Affiliate of Edward Neff, Director —40,000
- Bruce A. Huebner, Director—12,000
- Bruce E. Gerhardt, Director—20,000
- Marsha A. Chandler, Director—2,000
- Michael W. Nall, President and CEO, Director—12,000
- M. Faye Wilson, Director—4,000
- Retirement account of Ivor Royston, M.D., Director—12,000

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits

See the Exhibit Index attached to this Registration Statement, which is incorporated by reference herein.

(b) Financial Statement Schedules

No financial statement schedules are provided because the information called for is not required or is shown either in the financial statements or the notes thereto.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser: each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness; provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b) (1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in San Diego, California, on the 29th day of April, 2016.

BIOCEPT, INC.

By: /s/ Michael W. Nall
Michael W. Nall
Chief Executive Officer and President

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ Michael W. Nall</u> Michael W. Nall	Chief Executive Officer, President and Director (Principal Executive Officer)	April 29, 2016
<u>/s/ Mark G. Foletta</u> Mark G. Foletta	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	April 29, 2016
<u>/s/ David F. Hale*</u> David F. Hale	Chairman and Director	April 29, 2016
<u>/s/ Marsha A. Chandler*</u> Marsha A. Chandler	Director	April 29, 2016
<u>/s/ Bruce E. Gerhardt*</u> Bruce E. Gerhardt	Director	April 29, 2016
<u>/s/ Bruce A. Huebner*</u> Bruce A. Huebner	Director	April 29, 2016
<u>/s/ Edward Neff*</u> Edward Neff	Director	April 29, 2016
<u>/s/ Ivor Royston*</u> Ivor Royston	Director	April 29, 2016
<u>/s/ M. Faye Wilson*</u> M. Faye Wilson	Director	April 29, 2016

* Pursuant to Power of Attorney

By:

/s/ Mark G. Foletta
Mark G. Foletta

EXHIBIT INDEX

Exhibit No.	Description of Exhibit
3.1	Certificate of Amendment of Certificate of Incorporation (incorporated by reference to Exhibit 3.1.4 of the Registrant's Current Report on Form 8-K, filed with the SEC on February 14, 2014).
3.2	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on February 14, 2014).
4.1	Reference is made to Exhibits 3.1 and 3.2.
4.2	Specimen Common Stock certificate of Biocept, Inc. (incorporated by reference to Exhibit 4.1 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), as amended, filed with the SEC on November 5, 2013).
4.3	Form of Representative's Warrant, dated February 10, 2014 (incorporated by reference to Exhibit 4.2 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), as amended, filed with the SEC on November 5, 2013).
4.4	Form of Warrant issued to the lenders under the Loan and Security Agreement, dated as of April 30, 2014, by and among Biocept, Inc., Oxford Finance LLC, as collateral agent, and the lenders party thereto from time to time, including Oxford Finance LLC (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on May 6, 2014).
4.5	Registration Rights Agreement, dated as of December 21, 2015 between the Registrant and Aspire Capital Fund, LLC (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on December 21, 2015).
5.1	Opinion of Cooley LLP (previously filed).
10.1+	2007 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.2+	Form of Stock Option Grant Notice and Option Agreement under 2007 Equity Incentive Plan (incorporated by reference to Exhibit 10.1.1 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.3+	Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Agreement under 2007 Equity Incentive Plan (incorporated by reference to Exhibit 10.1.2 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.4+	2013 Equity Incentive Plan (incorporated by reference to Exhibit 10.2 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), as amended, filed with the SEC on November 20, 2013).
10.5+	Form of Notice of Stock Option Grant under 2013 Equity Incentive Plan (incorporated by reference to Exhibit 10.2.1 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.6+	Form of Stock Option Agreement under 2013 Equity Incentive Plan (incorporated by reference to Exhibit 10.2.2 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.7+	Form of Restricted Stock Unit Agreement under 2013 Equity Incentive Plan (incorporated by reference to Exhibit 10.2.3 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.8+	Form of Restricted Stock Unit Agreement under 2013 Equity Incentive Plan (for senior officers: as used August 8, 2013) (incorporated by reference to Exhibit 10.2.4 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).

Exhibit No.	Description of Exhibit
10.9+	Form of Restricted Stock Unit Agreement under 2013 Equity Incentive Plan (for non-employee directors: as used August 8, 2013) (incorporated by reference to Exhibit 10.2.5 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.10+	Restricted Stock Unit Grant Notice / Agreement with David F. Hale, dated as of March 10, 2011 ("Performance-Based") (incorporated by reference to Exhibit 99.3 of the Registrant's Registration Statement on Form S-8 (File No. 333-194930), filed with the SEC on March 31, 2014).
10.11+	Restricted Stock Unit Grant Notice / Agreement with David F. Hale, dated as of March 10, 2011 ("Time-Based") (incorporated by reference to Exhibit 99.4 of the Registrant's Registration Statement on Form S-8 (File No. 333-194930), filed with the SEC on March 31, 2014).
10.12+	Restricted Stock Unit Grant Notice / Agreement with Ivor Royston, dated as of November 8, 2010, as amended on February 15, 2012 (incorporated by reference to Exhibit 10.23 to the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the Commission on September 23, 2013).
10.13+	2014 Annual Incentive Plan (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q, filed with the SEC on August 8, 2014).
10.14+	Form of Indemnification Agreement between the Registrant and its officers and directors (incorporated by reference to Exhibit 10.3 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.15+	Form of Indemnity Agreement between Biocept, Inc., a California corporation, and its officers and directors (incorporated by reference to Exhibit 10.4 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.16+	Employment Agreement, between the Registrant and Lyle J. Arnold, dated April 30, 2011(incorporated by reference to Exhibit 10.7 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.17+	Employment Agreement, between the Registrant and Raaj Trivedi, dated March 1, 2014 (incorporated by reference to Exhibit 10.19 of the Registrant's Registration Statement on Form S-1 (File No. 333-201437), filed with the SEC on January 9, 2015).
10.18	Lease, between the Registrant and Nexus Equity VIII LLC, dated March 31, 2004 (incorporated by reference to Exhibit 10.1.1 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), as amended, filed with the SEC on November 5, 2013).
10.19	First Amendment to Lease, between the Registrant and ARE-SD Region No. 18, LLC, dated November 1, 2011(incorporated by reference to Exhibit 10.11.1 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.20	Second Amendment to Lease, between the Registrant and ARE-SD Region No. 18, LLC, dated September 10, 2012 (incorporated by reference to Exhibit 10.11.2 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.21	Third Amendment to Lease, between the Registrant and ARE-SD Region No. 18, LLC, dated as of January 31, 2013, and effective as of January 1, 2013 (incorporated by reference to Exhibit 10.11.4 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.22	Fourth Amendment to Lease, between the Registrant and ARE-SD Region No. 18, LLC, dated as of September 10, 2013, and effective as of August 1, 2013 (incorporated by reference to Exhibit 10.11.5 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).

Exhibit No.	Description of Exhibit
10.23	Warrant to Purchase Preferred Stock, dated September 10, 2012, issued by the Registrant in favor of ARE-SD Region No. 18, LLC (incorporated by reference to Exhibit 10.11.3 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.24	Warrant to Purchase Common Stock, dated September 10, 2013, issued by the Registrant in favor of ARE-SD Region No. 18, LLC (incorporated by reference to Exhibit 10.11.6 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.25	Amended and Restated Investor Rights Agreement, dated as of October 31, 2011, among the Registrant and certain investors named therein (incorporated by reference to Exhibit 10.12 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.26*	Collaboration Agreement dated as of November 2, 2012 between the Registrant and Life Technologies Corporation (incorporated by reference to Exhibit 10.13 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), as amended, filed with the SEC on January 30, 2014).
10.27	Collaboration Agreement dated as of August 17, 2011 between the Registrant and Clariant Diagnostic Services, Inc. (incorporated by reference to Exhibit 10.14 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), as amended, filed with the SEC on January 8, 2014).
10.28	Warrant to Purchase Preferred Stock dated as of January 21, 2009, issued by the Registrant in favor of Goodman Co. Ltd. (incorporated by reference to Exhibit 10.17.1 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.29	Warrant to Purchase Common Stock dated as of July 31, 2013, issued by the Registrant in favor of Goodman Co. Ltd. (incorporated by reference to Exhibit 10.17.3 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.30	Form of Warrant to Purchase Preferred Stock, issued by the Registrant in favor of various investors under the Note and Warrant Purchase Agreement dated as of January 13, 2012 (incorporated by reference to Exhibit 10.19.3 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.31	Form of Amendment of Warrant to Purchase Preferred Stock, dated as of September 13, 2013 (incorporated by reference to Exhibit 10.19.4 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.32	Form of Warrant to Purchase Common Stock, issued by the Registrant in favor of various investors under the Note and Warrant Purchase Agreement dated as of June 28, 2013 (incorporated by reference to Exhibit 10.20.2 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.33	Form of Warrant to Purchase Common Stock, issued by the Registrant in favor of various guarantors under the Reimbursement Agreement dated as of July 11, 2013 (incorporated by reference to Exhibit 10.21.1 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.34	Assignment and Exclusive Cross-License Agreement between the Registrant and Aegea Biotechnologies, Inc. dated June 2, 2012 (incorporated by reference to Exhibit 10.22 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), as amended, filed with the SEC on January 30, 2014).

Exhibit No.	Description of Exhibit
10.35*	Master Laboratory Research Support and Services Agreement dated as of July 9, 2012 between the Registrant and Dana Farber Partners Cancer Care, Inc. (incorporated by reference to Exhibit 10.15 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), as amended, filed with the SEC on November 5, 2013).
10.36	Laboratory Services Agreement dated July 29, 2013, effective as of May 1, 2013, between the Registrant and Clariant Diagnostic Services, Inc. (incorporated by reference to Exhibit 10.14.1 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
10.37	Loan and Security Agreement by and among Biocept, Inc., Oxford Finance LLC, as collateral agent, and the lenders party thereto from time to time, including Oxford Finance LLC, dated as of April 30, 2014 (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on May 6, 2014).
10.38	Separation Agreement between the Registrant and William G. Kachioff, dated August 17, 2015 (incorporated by reference to Exhibit 99.1 to the Registrant's Current Report on Form 8-K (File No. 001-36284), filed with the SEC on August 21, 2015).
10.39+	Employment Agreement between the Registrant and Mark G. Foletta, dated August 18, 2015 (incorporated by reference to Exhibit 99.3 to the Registrant's Current Report on Form 8-K (File No. 001-36284), filed with the SEC on August 21, 2015).
10.40+	Employment Agreement Amendment between the Registrant and Michael W. Nall, dated November 6, 2015 (incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-36284), filed with the SEC on November 9, 2015).
10.41	Biocept, Inc. 2013 Amended and Restated Equity Incentive Plan, Form of Stock Option Grant Notice, Option Agreement and Restricted Stock Unit Agreement for use thereunder (incorporated by reference to Exhibit 99.1 to the Registrant's Current Report on Form 8-K (File No. 001-36284), filed with the SEC on June 17, 2015).
10.42	Common Stock Purchase Agreement, dated as of December 21, 2015 between the Registrant and Aspire Capital Fund, LLC (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on December 21, 2015).
21.1	List of Subsidiaries (incorporated by reference to Exhibit 21.1 of the Registrant's Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013) .
23.1	Consent of Mayer Hoffman McCann P.C.
23.2	Consent of Cooley LLP (previously filed).
24.1	Power of Attorney (previously filed).
99.1	Financial Statements (incorporated by reference to the Registrant's Annual Report on Form 10-K filed on March 10, 2016).
101.INS	XBRL Instance Document (incorporated by reference to the Registrant's Annual Report on Form 10-K filed on March 10, 2016).
101.SCH	XBRL Taxonomy Extension Schema Document (incorporated by reference to the Registrant's Annual Report on Form 10-K filed on March 10, 2016).
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document (incorporated by reference to the Registrant's Annual Report on Form 10-K filed on March 10, 2016).
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document (incorporated by reference to the Registrant's Annual Report on Form 10-K filed on March 10, 2016).

Exhibit No.	Description of Exhibit
101.LAB	XBRL Taxonomy Extension Label Linkbase Document (incorporated by reference to the Registrant's Annual Report on Form 10-K filed on March 10, 2016).
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document (incorporated by reference to the Registrant's Annual Report on Form 10-K filed on March 10, 2016).
<hr/> + Indicates management contract or compensatory plan. * Portions of this exhibit (indicated by asterisks) have been omitted pursuant to Rule 406 under the Securities Act of 1933.	

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

As independent registered public accountants, we hereby consent to the incorporation by reference of our report dated March 10, 2016, relating to the financial statements of Biocept, Inc., as of and for the years ended December 31, 2015 and 2014, in this Post-Effective Amendment No. 1 on Registration Statement Form S-1. We also consent to the reference to our Firm under the caption “Experts” in the Prospectus, which is part of said Registration Statement.

/s/ Mayer Hoffman McCann P.C.

San Diego, California
April 29, 2016