

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

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)

Michael W. Nall
Chief Executive Officer and President
Biocept, Inc.
5810 Nancy Ridge Drive
San Diego, CA 92121
(858) 320-8200

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

Copies to:
Charles J. Bair
Cooley LLP
4401 Eastgate Mall
San Diego, CA 92121
(858) 550-6142

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

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 statement 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, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act:

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☒

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price Per Share (2)	Proposed Maximum Aggregate Offering Price (2)	Amount of Registration Fee
Shares of common stock, \$0.0001 par value per share	762,438 (3)	\$2.56	\$1,951,841.28	\$236.56

- (1) Pursuant to Rule 416(a) of the Securities Act of 1933, as amended (the “Securities Act”), this Registration Statement also covers any additional shares of common stock which may become issuable to prevent dilution from stock splits, stock dividends and similar events.
- (2) This estimate is made pursuant to Rule 457(c) of the Securities Act solely for purposes of calculating the registration fee. The price per share and aggregate offering price are based upon the average of the high and low prices of the Registrant’s common stock on October 18, 2018, as reported on the Nasdaq Capital Market.
- (3) Represents shares of common stock issuable upon the exercise of Series A Common Stock Purchase Warrants issued by the Registrant on September 24, 2018.

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 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.

The information in this prospectus is not complete and may be changed. The selling stockholders 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 stockholders are 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 OCTOBER 19, 2018



762,438 Shares

Common Stock

This prospectus relates to the disposition from time to time of up to 762,438 shares of our common stock by the selling stockholders named in this prospectus. Throughout this prospectus, when we refer to the shares of our common stock being registered on behalf of the selling stockholders for offer and sale, we are referring to the shares of common stock issuable upon exercise of the warrants sold to the selling stockholders, as described below under the section entitled "Selling Stockholders".

We are not selling any common stock under this prospectus and will not receive any of the proceeds from the sale of shares by the selling stockholders.

The selling stockholders identified in this prospectus, or their permitted transferees or other successors-in-interest that may be identified in a supplement to this prospectus or, if required, a post-effective amendment to the registration statement of which this prospectus is a part, may offer the shares from time to time through public or private transactions at fixed prices, at prevailing market prices, at varying prices determined at the time of sale, or at privately negotiated prices. We provide more information about how the selling stockholders may sell their shares of common stock in the section entitled "Plan of Distribution" beginning on page 9 of this prospectus. We will not be paying any underwriting discounts or commissions in connection with any offering of common stock under this prospectus.

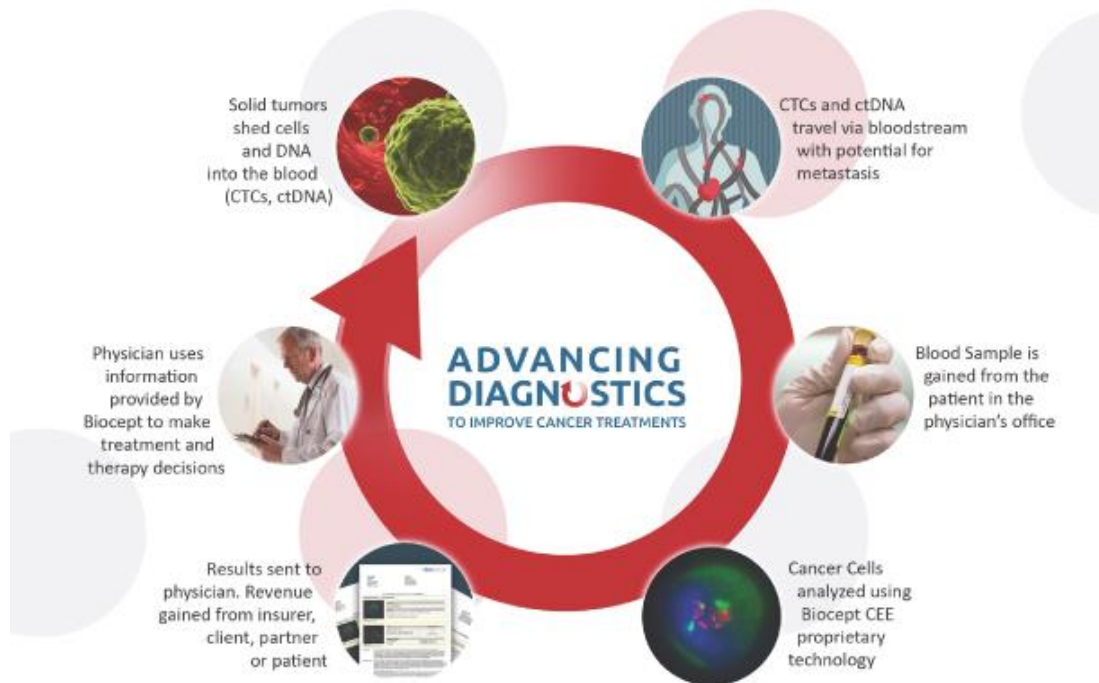
Our common stock is listed on The Nasdaq Capital Market under the ticker symbol "BIOC." On October 18, 2018, the last reported sale price per share of our common stock was \$2.35 per share.

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 4 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 .



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Personalized Medicine from a Liquid Biopsy

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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 shares.

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. 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.

Unless the context otherwise requires, references in this prospectus to “Biocept,” “the Company,” “we,” “us” and “our” refer to Biocept, Inc. and our subsidiaries. Solely for convenience, trademarks and tradenames referred to in this prospectus may appear without the ® or ™ symbols, but such 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.

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 in this prospectus and the documents that we incorporate by reference herein and have been filed as exhibits to the registration statement of which this prospectus is a part. 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 of 1933, as amended, or 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.

SUMMARY

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 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 and planned assays are intended to provide information to aid healthcare providers to identify specific oncogenic alterations that may qualify a subset of cancer patients for targeted therapy at diagnosis, progression or for monitoring in order to identify specific resistance mechanisms. Sometimes traditional procedures, such as surgical tissue biopsies, result in tumor tissue that is insufficient and/or unable to provide the molecular subtype information necessary for clinical decisions. Our assays, performed on blood, have the potential to provide more contemporaneous information on the characteristics of a patient’s disease when compared with tissue biopsy and radiographic imaging.

Our current assays and our planned future assays focus on key solid tumor indications utilizing our Target-Selector™ liquid biopsy technology platform for the biomarker analysis of CTCs and ctDNA from a standard blood sample. Our patented Target-Selector CTC offering is based on an internally developed microfluidics-based cell capture and analysis platform, with enabling features that change how information provided by CTC testing is used by clinicians. Our CTC technology could also be validated on cerebral spinal fluid in order to provide information for patients with leptomeningeal disease. Our patented Target-Selector ctDNA technology enables detection of mutations and genome alterations with enhanced sensitivity and specificity, and is applicable to nucleic acid from ctDNA, and could potentially be validated for other sample types such as bone marrow, tissue or cerebrospinal fluid. Our Target-Selector CTC and ctDNA platforms provide both biomarker detection as well as monitoring capabilities and require only a patient blood sample. We believe that our Target-Selector platform technology has the potential to be developed and commercialized as in vitro diagnostic (IVD) test kits, and we are currently pursuing this strategy.

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, or CAP. We also performed research and development that led to our current assays, and continue to perform research and development for our planned assays, at this same facility. In addition, we manufacture our microfluidic channels, related equipment and certain reagents. The assays we offer and intend to offer are classified as laboratory developed tests, or LDTs, under CLIA regulations. 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. In addition, we participate in and have received CAP accreditation, which includes rigorous bi-annual laboratory inspections and adherence to specific quality standards.

Our primary sales strategy is to engage medical oncologists and other physicians in the United States at private and group practices, hospitals and cancer centers. In addition, we market our clinical trial and research services to pharmaceutical and biopharmaceutical companies and clinical research organizations. Additionally, commencing in October 2017, our pathology partnership program, branded as Empower TCTM, provides the unique ability for pathologists to participate in the interpretation of liquid biopsy results and is available to pathology practices and hospital systems throughout the United States. Further, sales to laboratory supply distributors of our proprietary blood collection tubes, or BCTs, commenced during the three months ending June 30, 2018, which allow for the intact transport of liquid biopsy samples for research use only, or RUO, from regions around the world.

Our revenue generating efforts are focused in three areas:

- medical oncologists, surgical oncologists, pulmonologists, pathologists and other physicians who use the biomarker information we provide in order to determine the best treatment plan for their patients;

- providing laboratory services utilizing both our CTC and ctDNA testing in order to help pharmaceutical and biopharmaceutical companies developing drug candidate therapies to treat cancer; and
- licensing and/or selling our proprietary testing and/or technologies, including our BCTs, to partners in the United States and abroad.

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.

We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act of 2012. We will remain an emerging growth company until the earlier of (a) December 31, 2019, (b) the last day of the fiscal year in which we have total annual gross revenue of at least \$1.07 billion, (c) the last day of the fiscal year in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds \$700.0 million as of the prior June 30th and (d) the date on which we have issued more than \$1.0 billion in non-convertible debt during the prior three-year period.

The Offering

The selling stockholders named in this prospectus may offer and sell up to 762,438 shares of our common stock. Our common stock is currently listed on The Nasdaq Capital Market under the symbol “BIOC.” Shares of common stock that may be offered under this prospectus will be fully paid and non-assessable. We will not receive any of the proceeds of sales by the selling stockholders of any of the common stock covered by this prospectus. Throughout this prospectus, when we refer to the shares of our common stock being registered on behalf of the selling stockholders for offer and sale, we are referring to the shares of common stock issuable upon exercise of the warrants sold to the selling stockholders, as described below under the section entitled “Selling Stockholders”. When we refer to the selling stockholders in this prospectus, we are referring to the selling stockholders identified in this prospectus and, as applicable, their permitted transferees or other successors-in-interest that may be identified in a supplement to this prospectus or, if required, a post-effective amendment to the registration statement of which this prospectus is a part.

RISK FACTORS

An investment in our common stock involves a high degree of risk. Before deciding whether to invest in our common stock, you should consider carefully the risks and uncertainties discussed under the heading “Risk Factors” contained in our in our Annual Report on Form 10-K for the year ended December 31, 2017, our Quarterly Report on Form 10-Q for the quarter ended March 31, 2018 and our Quarterly Report on Form 10-Q for the quarter ended June 30, 2018, which are incorporated by reference in this prospectus, as the same may be amended, supplemented or superseded by the risks and uncertainties described under similar headings in the other documents that are filed by us after the date hereof and incorporated by reference into this prospectus. Additional risks not currently known to us or that we currently believe are immaterial may also significantly impair our business operations. Please also read carefully the section above entitled “Special Note Regarding Forward-Looking Statements.”

USE OF PROCEEDS

The selling stockholders will receive all of the net proceeds from sales of the common stock sold pursuant to this prospectus. We will receive no proceeds from sales of the common stock sold pursuant to this prospectus.

SELLING STOCKHOLDERS

Registered Direct and Private Placement Transaction

On September 20, 2018, we entered into a Securities Purchase Agreement, or the Purchase Agreement, with the selling stockholders, pursuant to which we offered pursuant to an effective shelf registration statement on Form S-3 an aggregate of 642,438 shares of common stock and pre-funded warrants to purchase 120,000 shares of common stock, for aggregate gross proceeds of approximately \$2.5 million, before deducting fees to the placement agents and other estimated offering expenses payable by us.

In a concurrent private placement, pursuant to the Purchase Agreement we offered to the selling stockholders Series A Common Stock Purchase Warrants, or the Warrants, to purchase an aggregate of 762,438 shares of our common stock. The Warrants have an exercise price per share equal to \$3.16, are exercisable six months following the date of issuance, and at any time thereafter up to the fifth anniversary of the initial exercise date.

Pursuant to the Purchase Agreement, we agreed to file the registration statement of which this prospectus is a part to cover the resale of the shares of common stock issuable upon exercise of the Warrants (collectively, the “Registrable Securities”), and to keep such registration statement effective until the date on which no selling stockholder owns any Warrants or common stock issuable upon exercise thereof.

We are registering the resale of the Registrable Securities to permit each of the selling stockholders identified below, or their permitted transferees or other successors-in-interest that may be identified in a supplement to this prospectus or, if required, a post-effective amendment to the registration statement of which this prospectus is a part, to resell or otherwise dispose of the Registrable Securities in the manner contemplated under “Plan of Distribution” in this prospectus (as may be supplemented and amended). Throughout this prospectus, when we refer to the shares of our common stock being registered on behalf of the selling stockholders, we are referring to the Registrable Securities, and when we refer to the selling stockholders in this prospectus, we are referring to the purchasers of the Warrants and, as applicable, their permitted transferees or other successors-in-interest that may be identified in a supplement to this prospectus or, if required, a post-effective amendment to the registration statement of which this prospectus is a part.

The selling stockholders may sell some, all or none of their Registrable Securities. We do not know how long the selling stockholders will hold the Registrable Securities before selling them, and we currently have no agreements, arrangements or understandings with the selling stockholders regarding the sale or other disposition of any of the Registrable Securities. The Registrable Securities covered hereby may be offered from time to time by the selling stockholders.

The following table sets forth the name of each selling stockholder, the number and percentage of our outstanding shares of common stock beneficially owned by the selling stockholders as of October 1, 2018, the number of Registrable Securities that may be offered under this prospectus, and the number and percentage of our outstanding shares of common stock beneficially owned by the selling stockholders assuming all of the Registrable Securities covered hereby are sold. Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission and includes voting or investment power with respect to our common stock. Generally, a person “beneficially owns” shares of our common stock if the person has or shares with others the right to vote those shares or to dispose of them, or if the person has the right to acquire voting or disposition rights within 60 days. The number of shares in the column “Shares of Common Stock being Offered” represents all of the Registrable Securities that a selling stockholder may offer and sell from time to time under this prospectus.

All information contained in the table below and the footnotes thereto is based upon information provided to us by the selling stockholders. The percentage of shares owned prior to and after the offering is based on 3,937,226 shares of common stock outstanding as of October 1, 2018.

<u>Name</u>	Beneficial Ownership After this Offering (1)			
	Shares of Common Stock Owned Prior to this Offering	Shares of Common Stock Being Offered	Number of Shares	%
Lincoln Park Capital Fund, LLC (2)	397,850 (3)	417,438	482,500	9.99%
Intracoastal Capital, LLC (4)	421,250 (5)	230,000	274,048	5.67%
Sabby Volatility Warrant Master Fund, LTD (6)	199,300 (7)	65,000	239,350	4.99%
CVI Investments, Inc. (8)	205,850 (9)	50,000	167,931	3.46%

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- (1) Assumes the sale of all shares of common stock registered pursuant to this prospectus, although the selling stockholders are under no obligation known to us to sell any shares of common stock at this time.
- (2) Joshua Scheinfeld and Jonathan Cope, the principals of Lincoln Park Capital Fund, LLC (“LPCF”) are deemed to be beneficial owners of all the shares of common stock held by LPCF. Messrs. Scheinfeld and Cope have shared voting and disposition power of the shares being offered.
- (3) The number of shares beneficially owned by LPCF is limited by beneficial ownership limitations applicable to the Series A Convertible Preferred Stock and warrants held by LPCF, which limit the number of shares LPCF can beneficially own. As a result of such limitations, the number of shares beneficially owned does not include up to an aggregate of 1,005,708 shares of common stock issuable upon the conversion of Series A Convertible Preferred Stock and upon the exercise of warrants beneficially owned by LPCF.
- (4) Mitchell P. Kopin and Daniel B. Asher, each of whom are managers of Intracoastal Capital, LLC (“Intracoastal”), have shared voting control and investment discretion over the securities reported herein that are held by Intracoastal. As a result, each of Mr. Kopin and Mr. Asher may be deemed to have beneficial ownership (as determined under Section 13(d) of the Securities Exchange Act of 1934, as amended) of the securities reported herein that are held by Intracoastal.
- (5) The number of shares beneficially owned by Intracoastal is limited by beneficial ownership limitations applicable to the warrants held by Intracoastal, which limit the number of shares Intracoastal can beneficially own. As a result of such limitations, the number of shares beneficially owned does not include up to an aggregate of 82,798 shares of common stock issuable upon the exercise of warrants beneficially owned by Intracoastal.
- (6) Hal Mintz has the voting and dispositive power over the securities held by Sabby Volatility Warrant Master Fund, LTD (“Sabby”).
- (7) The number of shares beneficially owned by Sabby is limited by beneficial ownership limitations applicable to the Series A Convertible Preferred Stock and warrants held by Sabby, which limit the number of shares Sabby can beneficially own. As a result of such limitations, the number of shares beneficially owned does not include up to an aggregate of 363,428 shares of common stock issuable upon the conversion of Series A Convertible Preferred Stock and upon the exercise of warrants beneficially owned by Sabby.
- (8) Heights Capital Management, Inc., the authorized agent of CVI Investments, Inc. (“CVI”), has discretionary authority to vote and dispose of the shares held by CVI and may be deemed to be the beneficial owner of these shares. Martin Kobinger, in his capacity as Investment Manager of Heights Capital Management, Inc., may also be deemed to have investment discretion and voting power over the shares held by CVI. Mr. Kobinger disclaims any such beneficial ownership of the shares. CVI is affiliated with one or more FINRA member, none of whom are currently expected to participate in the sale of the shares pursuant to the prospectus contained in this registration statement. CVI has represented to us that the shares were purchased in the ordinary course of business and that at the time of purchase of the shares, it did not have any agreements or understandings, directly or indirectly, with any person to distribute the shares.
- (9) The number of shares beneficially owned by CVI is limited by beneficial ownership limitations applicable to the warrants held by CVI, which limit the number of shares CVI can beneficially own. As a result of such limitations,

the number of shares beneficially owned does not include up to an aggregate of 12,081 shares of common stock issuable upon the exercise of warrants beneficially owned by CVI.

Other Relationships with the Selling Stockholders

Except with respect to the foregoing, none of the selling stockholders has, or within the past three years has had, any position, office or other material relationship with us.

PLAN OF DISTRIBUTION

We are registering the shares of common stock issued to the selling stockholders to permit the resale of these shares of common stock by the selling stockholders from time to time from after the date of this prospectus. We will not receive any of the proceeds from the sale by the selling stockholders of the shares of common stock. We will bear the fees and expenses incident to our obligation to register the shares of common stock, however the selling stockholders will bear legal and advisor fees, commissions and discounts, if any, attributable to their respective sales of shares.

Each selling stockholder may, from time to time, sell any or all of its shares of common stock covered hereby on The Nasdaq Capital Market or any other stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale, or privately negotiated prices. A selling stockholder may use any one or more of the following methods when selling shares:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- underwritten transactions;
- settlement of short sales, to the extent permitted by law;
- in transactions through broker-dealers that agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- through the distribution of the common stock by any selling stockholder to its partners, members or stockholders;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell the shares of common stock under Rule 144 under the Securities Act, if available, rather than under this prospectus.

If underwriters are used in the sale, the shares of common stock will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. In connection with any such underwritten sale of shares of common stock, underwriters may receive compensation from the selling stockholders, for whom they may act as agents, in the form of discounts, concessions or commissions. If the selling stockholders use an underwriter or underwriters to effectuate the sale of shares of common stock, we and/or they will execute an underwriting agreement with those underwriters at the time of sale of those shares of common stock. To the extent required by law, the names of the underwriters will be set forth in a prospectus supplement or, if appropriate, a post-effective

amendment to the registration statement that includes the prospectus supplement and the accompanying prospectus used by the underwriters to sell those securities. The obligations of the underwriters to purchase those shares of common stock will be subject to certain conditions precedent, and unless otherwise specified in a prospectus supplement, the underwriters will be obligated to purchase all the shares of common stock offered by such prospectus supplement if any of such shares of common stock are purchased. Any public offering price and any discounts or concessions allowed or re-allowed or paid to dealers may be changed from time to time.

Broker-dealers engaged by the selling stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with FINRA IM-2440-1.

In connection with the sale of the shares of common stock or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the shares of common stock in the course of hedging the positions they assume. The selling stockholders may also sell the shares of common stock short and deliver these securities to close out their short positions or to return borrowed shares in connection with such short sales, or loan or pledge the shares of common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares of common stock offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The selling stockholders and any broker-dealers or agents that are involved in selling the shares of common stock may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such selling stockholders, broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Selling stockholders who are “underwriters” within the meaning of Section 2(11) of the Securities Act will be subject to the prospectus delivery requirements of the Securities Act and may be subject to certain statutory liabilities of, including but not limited to, Sections 11, 12 and 17 of the Securities Act and Rule 10b-5 under the Securities Exchange Act of 1934, as amended, or the Exchange Act. Each selling stockholder has informed us that it is not a registered broker-dealer or an affiliate of a registered broker-dealer.

We are required to pay certain fees and expenses incurred by us incident to the registration of the shares of common stock of the selling stockholders. We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

The selling stockholders will be subject to the prospectus delivery requirements of the Securities Act, including Rule 172 thereunder, unless an exemption therefrom is available.

We agreed to cause the registration statement of which this prospectus is a part to remain effective until the date on which no selling stockholder owns any Warrants or common stock issuable upon exercise thereof. The shares of common stock will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the shares of common stock covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the shares of common stock may not simultaneously engage in market making activities with respect to the shares of common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the selling stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of shares of common stock by the selling stockholders or any other person. We will make copies of this prospectus available to

the selling stockholders and have informed them of the need to deliver a copy of this prospectus at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

The selling stockholders may decide not to sell any or all of the shares of common stock we registered on behalf of the selling stockholders pursuant to the registration statement of which this prospectus forms a part.

Once sold under the registration statement of which this prospectus forms a part, the shares of common stock will be freely tradable in the hands of persons other than our affiliates.

LEGAL MATTERS

The validity of the shares of common stock being offered by this prospectus will be passed upon for us by Cooley LLP, San Diego, California.

EXPERTS

Mayer Hoffman McCann P.C., our independent registered public accounting firm, has audited our balance sheets as of December 31, 2016 and 2017, and the related statements of operations and comprehensive loss, changes in shareholders' equity/(deficit) and cash flows for each of the two years in the period ended December 31, 2017, as set forth in their report. We have incorporated by reference our financial statements in this prospectus and in this registration statement in reliance on the report of Mayer Hoffman McCann P.C. given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the Securities and Exchange Commission 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 Securities and Exchange Commission filings, including the registration statement, over the Internet at the Securities and Exchange Commission's website at www.sec.gov. You may also read and copy any document we file with the Securities and Exchange Commission 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 Securities and Exchange Commission at 100 F Street N.E., Washington, D.C. 20549. Please call the Securities and Exchange Commission 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 Securities and Exchange Commission. These periodic reports, proxy statements and other information are available for inspection and copying at the public reference room and website of the Securities and Exchange Commission 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 Securities and Exchange Commission free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the Securities and Exchange Commission. 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 Securities and Exchange Commission 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 incorporate by reference, as of their respective dates of filing, the documents listed below that we have filed with the Securities and Exchange Commission and any documents that we file with the Securities and Exchange Commission pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus and prior to the termination of the offering of securities under this prospectus (except in each case the information contained in such documents to the extent “furnished” and not “filed”):

- our Annual Report on Form 10-K and Amendment No.1 to our Annual Report on Form 10-K/A for the year ended December 31, 2017, filed on March 28, 2018 and April 30, 2018, respectively;
- our Quarterly Report on Form 10-Q for the quarter ended March 31, 2018, filed on May 15, 2018;
- our Quarterly Report on Form 10-Q for the quarter ended June 30, 2018, filed on August 14, 2018;
- the information specifically incorporated by reference into our Annual Report on Form 10-K for the fiscal year ended December 31, 2017 from our definitive proxy statement on Schedule 14A (other than information furnished rather than filed) filed on May 29, 2018;
- our Current Reports on Form 8-K filed on January 23, 2018, January 30, 2018, February 12, 2018, April 6, 2018, July 3, 2018, July 6, 2018, July 25, 2018, August 13, 2018 and September 24, 2018; and
- the description of our common stock, which is registered under Section 12 of the Exchange Act, contained in our registration statement on Form 8-A, filed on January 28, 2014 (File No. 001-36284) and any amendments or reports filed with the Securities and Exchange Commission for the purpose of updating the 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 on Form S-1.

This prospectus is part of a registration statement we filed with the Securities and Exchange Commission. 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.

762,438 Shares



Common Stock

PROSPECTUS

, 2018

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth the estimated costs and expenses payable by the registrant in connection with the common stock being registered. The selling stockholders will not bear any portion of such expenses. All the amounts shown are estimates, except for the Securities and Exchange Commission registration fee.

Item	Amount
SEC registration fee	\$ 237
Legal fees and expenses	20,000
Accounting fees and expenses	5,000
Printing and miscellaneous fees and expenses	4,763
<i>Total</i>	<u><u>\$ 30,000</u></u>

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 of 1933, as amended, or 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, 2015, 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.

2018 Registered Direct and Private Warrant Issuance

On September 20, 2018, the Registrant entered into a Securities Purchase Agreement with certain purchasers identified on the signature pages thereto, pursuant to which the Registrant offered pursuant to an effective shelf registration statement on Form S-3 an aggregate of 642,438 shares of common stock and pre-funded warrants to purchase 120,000 shares of common stock, for aggregate gross proceeds to the Registrant of approximately \$2.5 million, before deducting fees to the placement agents and other estimated offering expenses payable by the Registrant. In a concurrent private placement, the Registrant sold Series A Common Stock Purchase Warrants to purchase an aggregate of 762,438 shares of our common stock that are exercisable beginning on the six month anniversary of the date of issuance at an exercise price of \$3.16 per share and will expire on the five year anniversary of the initial exercise date. Maxim Group LLC acted as the lead placement agent and Dawson James Securities, Inc. acted as co-placement agent for the Registrant, each on a "reasonable best efforts" basis, in connection with the

offering, and received a cash fee of 7.0% of the gross proceeds paid to the Registrant for the securities and reimbursement of certain out-of-pocket expenses.

Ally Bridge Private Placement

On August 9, 2017, the Registrant entered into a common stock and warrant purchase agreement with Ally Bridge LB Healthcare Master Fund Limited pursuant to which the Registrant issued and sold in a private placement an aggregate of 48,889 shares of common stock, together with a warrant to purchase an additional 47,821 shares of common stock, for an aggregate purchase price of approximately \$2.2 million. The warrant has an exercise price per share equal to \$45.00, is immediately exercisable and will expire on the fifth anniversary of the original issuance date.

Pursuant to the common stock and warrant purchase agreement, the Registrant agreed to file a registration statement to cover the resale of the shares of common stock issued to Ally Bridge LB Healthcare Master Fund Limited, as well as the shares of common stock issuable upon exercise of the warrant issued to Ally Bridge LB Healthcare Master Fund Limited, and to keep such registration statement effective until the date on which all of the 96,710 shares registered for resale under the registration statement have been sold or can be sold publicly without condition or restriction under Rule 144 under the Securities Act.

2017 Registered Direct and Private Warrant Issuance

On March 28, 2017, the Registrant entered into a Securities Purchase Agreement with certain purchasers identified on the signature pages thereto, pursuant to which the Registrant sold, in a registered direct offering, an aggregate of 144,000 shares of common stock at a negotiated purchase price of \$64.50 per share, pursuant to an effective shelf registration statement on Form S-3. The Registrant received aggregate gross proceeds of approximately \$9.3 million, before deducting fees to the placement agent and other offering expenses payable by the Registrant. In a concurrent private placement, the Registrant also sold to the purchasers a warrant to purchase one half of a share of common stock for each share purchased for cash in the offering. The warrants sold in the offering are exercisable beginning on the six-month anniversary of the date of issuance at an exercise price of \$75.00 per share and will expire five years following the date they become exercisable. The warrants are exercisable on a “cashless” basis in certain circumstances. Roth Capital Partners, LLC acted as the lead placement agent for the offering, and WestPark Capital and Chardan Capital acted as co-placement agents and were entitled to a cash fee of 6.0% of the gross proceeds paid to the Registrant in the offering and reimbursement of certain out-of-pocket expenses.

Aspire Capital, LLC Transaction

On December 21, 2015, the Registrant issued to Aspire Capital, LLC 1,843 shares of common stock as a commitment fee and sold to Aspire Capital, LLC 6,945 shares of common stock at \$144.00 per share for gross proceeds of \$1,000,000. Subsequently, the Registrant sold to Aspire Capital, LLC an aggregate of 5,772 shares of common stock for total proceeds of \$544,051.

Compensatory Issuances

In 2015, the Registrant granted 14,709 common stock options (at a \$180.30 weighted-average exercise price per share).

In 2016, the Registrant granted 9,679 common stock options (at a \$75.30 weighted-average exercise price per share) and 5,527 common stock restricted stock units to service providers.

In 2017, the Registrant granted 58,501 common stock options (at a \$44.70 weighted average exercise price per share) and 11,666 common stock restricted stock units to service providers.

Conversions and Exercises

In February 2015:

- Warrants for an aggregate 88,889 shares of the Registrant's common stock were issued to participants, including several insiders, of the Registrant's February 2015 public offering and are exercisable at a price of \$140.40 per share, with total proceeds of \$9,760,060 received from the exercises of such warrants subsequent to February 13, 2015. Each of the members of the Registrant's Board of Directors participated in the Registrant's February 2015 public offering, purchasing an aggregate 1,575 shares of the Registrant's common stock and warrants to purchase up to an aggregate of 1,575 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—444
 - Affiliate of Edward Neff, former Director —444
 - Bruce A. Huebner, Director—133
 - Bruce E. Gerhardt, Director—222
 - Marsha A. Chandler, Director—22
 - Michael W. Nall, President and CEO, Director—133
 - M. Faye Wilson, Director—44
 - Retirement account of Ivor Royston, M.D., Director—133

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits

The following exhibits are being filed with this Registration Statement:

Exhibits:	Description
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 Registration Statement on Form S-1 (File No. 333-191323), filed with the SEC on September 23, 2013).
3.3	Certificate of Amendment of Certificate of Incorporation (incorporated by reference to Exhibit 3.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on September 29, 2016).
3.4	Amendment to Amended and Restated Bylaws (incorporated by reference to Exhibit 3.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on September 29, 2017).
3.5	Certificate of Amendment to Certificate of Incorporation (incorporated by reference to Exhibit 3.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on July 6, 2018).
3.6	Certificate of Designation of Preference, Rights and Limitations of Series A Convertible Preferred Stock (incorporated by reference to Exhibit 3.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on August 13, 2018).
4.1	Reference is made to Exhibits 3.1 , 3.2 , 3.3 , 3.4 , 3.5 and 3.6
4.2	Specimen Common Stock certificate of Biocept, Inc. (incorporated by reference to Exhibit 4.3 of the Registrant's Annual Report on Form 10-K, filed with the SEC on March 28, 2017).

- 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 20, 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 [Form of Warrant to Purchase Common Stock \(incorporated by reference to Exhibit 4.5 of the Registrant's Registration Statement on Form S-1 \(File No. 333-201437\), filed with the SEC on February 6, 2015\).](#)
- 4.6 [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\).](#)
- 4.7 [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\).](#)
- 4.8 [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\).](#)
- 4.9 [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\).](#)
- 4.10 [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\).](#)
- 4.11 [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\).](#)
- 4.12 [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\).](#)
- 4.13 [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\).](#)
- 4.14 [Form of Common Stock Purchase Warrant issued to the investors under the Securities Purchase Agreement, dated April 29, 2016, by and among Biocept, Inc. and the purchasers signatory thereto \(incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on April 29, 2016\).](#)
- 4.15 [Form of Warrant to Purchase Common Stock \(incorporated by reference to Exhibit 4.16 of the Registrant's Post-Effective Amendment to Registration Statement on Form S-1 \(File No. 333-213111\), filed with the SEC on October 14, 2016\).](#)
- 4.16 [Form of Common Stock Purchase Warrant issued to the investors under the Securities Purchase Agreement, dated March 28, 2017, by and among Biocept, Inc. and the purchasers signatory thereto \(incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on March 30, 2017\).](#)

4.17 [Common Stock Purchase Warrant issued by the Registrant in favor of Ally Bridge LB Healthcare Master Fund Limited under the Common Stock and Warrant Purchase Agreement dated August 9, 2017 \(incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on August 10, 2017\).](#)

4.18 [Common Stock Purchase Warrant issued in favor of Dawson James Securities, Inc. under the Securities Purchase Agreement dated December 5, 2017 \(incorporated by reference to Exhibit 4.18 of the Registrant's Registration Statement on Form S-1 \(File No. 333-221648\), filed with the SEC on January 22, 2018\).](#)

4.19 [Form of Warrant to Purchase Common Stock issued to the investors under the Securities Purchase Agreement, dated January 26, 2018 \(incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on January 30, 2018\).](#)

4.20 [Warrant Agency Agreement dated August 13, 2018 by and between the Registrant and Continental Stock Transfer & Trust Company \(incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on August 13, 2018\).](#)

4.21 [Form of Series 1 Common Stock Purchase Warrant \(incorporated by reference to Exhibit 3.6 of the Registrant's Registration Statement on Form S-1 \(File No. 333-225147\), filed with the SEC on July 11, 2018\).](#)

4.22 [Form of Pre-Funded Warrant \(incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K, filed with the SEC on September 24, 2018\).](#)

4.23 [Form of Series A Common Stock Purchase Warrant \(incorporated by reference to Exhibit 4.2 of the Registrant's Current Report on Form 8-K, filed with the SEC on September 24, 2018\).](#)

5.1 [Opinion of Cooley LLP.](#)

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+ [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\).](#)

10.5+ [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\).](#)

10.6+ [Employment Agreement, between the Registrant and Michael W. Nall, effective as of August 26, 2013 \(incorporated by reference to Exhibit 10.6 of the Registrant's Registration Statement on Form S-1 \(File No. 333-191323\), filed with the SEC on September 23, 2013\).](#)

10.7+ [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\).](#)

10.8 [Lease, between the Registrant and Nexus Equity VIII LLC, dated March 31, 2004 \(incorporated by reference to Exhibit 10.11 of the Registrant's Registration Statement on Form S-1 \(File No. 333-191323\), as amended, filed with the SEC on November 5, 2013\).](#)

10.9 [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\).](#)

10.10 [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\).](#)

10.11	<u>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).</u>
10.12	<u>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).</u>
10.13	<u>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).</u>
10.14	<u>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).</u>
10.15+	<u>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).</u>
10.16+	<u>First Amendment to Employment Agreement by and 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, filed with the SEC on November 9, 2015).</u>
10.17+	<u>Employment Agreement between the Registrant and Timothy Kennedy, dated July 25, 2016 (incorporated by reference to Exhibit 99.2 to the Registrant's Current Report on Form 8-K, filed with the SEC on July 27, 2016).</u>
10.18	<u>Second Amendment to 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 June 30, 2016 (incorporated by reference to Exhibit 10.3 to the Registrant's quarterly report on Form 10-Q, filed with the SEC on August 5, 2016).</u>
10.19	<u>Third Amendment to 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 June 28, 2017 (incorporated by reference to Exhibit 10.2 of the Registrant's Quarterly Report on Form 10-Q, filed with the SEC on August 14, 2017).</u>
10.20+	<u>Second Amendment to Employment Agreement by and between the Registrant and Michael W. Nall dated November 1, 2017 (incorporated by reference to Exhibit 10.22 of the Registrant's Registration Statement on Form S-1 (File no. 333-21648), filed with the SEC on January 22, 2018).</u>
10.21+	<u>Biocept, Inc. Amended and Restated 2013 Equity Incentive Plan, Form of Stock Option Grant Notice, Option Agreement, Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit agreement for use thereunder (incorporated by reference to Exhibit 99.1 of the Registrant's Registration Statement on Form S-8, filed with the SEC on October 19, 2018).</u>
21.1	<u>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).</u>
23.1	<u>Consent of Mayer Hoffman McCann P.C.</u>
23.2	Consent of Cooley LLP (included in Exhibit 5.1).
24.1	<u>Power of Attorney (included on the signature page hereto).</u>

+ Indicates management contract or compensatory plan.

(b) Financial Statement Schedules

All schedules have been omitted because either they are not required, are not applicable or the information is otherwise set forth in the financial statements and related 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 Securities and Exchange Commission 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.

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 19th day of October, 2018.

BIOCEPT, INC.

By: /s/ Michael W. Nall

Michael W. Nall

Chief Executive Officer and President

POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Michael W. Nall and Timothy C. Kennedy, and each and either of them, his or her true and lawful agent, proxy and attorney-in-fact, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to (i) act on, sign and file with the Securities and Exchange Commission any and all amendments (including post-effective amendments) to this registration statement together with all schedules and exhibits thereto and any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act, together with all schedules and exhibits thereto, (ii) act on, sign and file such certificates, instruments, agreements and other documents as may be necessary or appropriate in connection therewith, (iii) act on and file any supplement to any prospectus included in this registration statement or any such amendment or any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act and (iv) take any and all actions which may be necessary or appropriate to be done, as fully for all intents and purposes as he or she might or could do in person, hereby approving, ratifying and confirming all that such agent, proxy and attorney-in-fact or any of his substitutes may lawfully do or cause to be done by virtue thereof.

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)	October 19, 2018
<u>/s/ Timothy C. Kennedy</u> Timothy C. Kennedy	Chief Financial Officer, Senior VP of Operations and Secretary (Principal Financial Officer and Principal Accounting Officer)	October 19, 2018
<u>/s/ David F. Hale</u> David F. Hale	Chairman and Director	October 19, 2018
<u>/s/ Marsha A. Chandler</u> Marsha A. Chandler	Director	October 19, 2018
<u>/s/ Bruce E. Gerhardt</u> Bruce E. Gerhardt	Director	October 19, 2018
<u>/s/ Bruce A. Huebner</u> Bruce A. Huebner	Director	October 19, 2018
<u>/s/ Ivor Royston</u> Ivor Royston	Director	October 19, 2018
<u>/s/ M. Faye Wilson</u> M. Faye Wilson	Director	October 19, 2018

Charles J. Bair
T: +1 858 550 6142
cbair@cooley.com

October 19, 2018

Biocept, Inc.
5810 Nancy Ridge Drive
San Diego, CA 92121

Ladies and Gentlemen:

We have acted as counsel to Biocept, Inc., a Delaware corporation (the "**Company**"), and you have requested our opinion in connection with the filing of a Registration Statement on Form S-1 (the "**Registration Statement**") with the Securities and Exchange Commission, including a related prospectus filed with the Registration Statement (the "**Prospectus**"), covering the registration for resale of up to 762,438 shares (the "**Shares**") of the Common Stock, \$0.0001 par value, of the Company on behalf of certain selling stockholders issuable upon the exercise of certain warrants held by such selling stockholders (the "**Warrants**").

In connection with this opinion, we have examined and relied upon the Registration Statement, the Prospectus, the Warrants, the Company's certificate of incorporation and bylaws, as currently in effect, and the originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. We have assumed the genuineness and authenticity of all documents submitted to us as originals and the conformity to originals of all documents submitted to us as copies thereof.

Our opinion is expressed only with respect to the federal laws of the United States of America and the General Corporation Law of the State of Delaware.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when issued and paid for upon exercise of the Warrants in accordance with the terms of the Warrants, will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to the reference to our firm under the caption "Legal Matters" in the Prospectus.

Sincerely,

Cooley LLP

By: /s/ Charles J. Bair
Charles J. Bair

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

As independent registered public accountants, we hereby consent to the incorporation by reference in this Registration Statement on Form S-1, of our report dated March 28, 2018, relating to the financial statements of Biocept, Inc., as of and for the years ended December 31, 2017 and 2016 (which report includes an explanatory paragraph relating to the uncertainty of the Company's ability to continue as a going concern) and to the reference to us under the heading "Experts" in the Prospectus which is part of this Registration Statement.

/s/ Mayer Hoffman McCann P.C.

San Diego, California
October 19, 2018