

5,950,000 Shares of Common Stock

This prospectus relates to the disposition from time to time of up to 5,950,000 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 April 22, 2019, the last reported sale price per share of our common stock was \$0.98 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 April 22, 2019





The CEE Solution
Personalized Medicine from a Liquid Biopsy

TABLE OF CONTENTS

Special Note Regarding Forward-Looking Statements	1
<u>Summary</u>	2
Risk Factors	4
<u>Use of Proceeds</u>	5
Selling Stockholders	6
<u>Plan of Distribution</u>	9
<u>Legal Matters</u>	11
<u>Experts</u>	11
Where You Can Find More Information	11
<u>Incorporation of Certain Information by Reference</u>	12

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. Solely for convenience, trademarks and tradenames referred to in this prospectus may appear without the ® or TM 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

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 used 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-SelectorTM 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 central nervous system (CNS) tumors both primary and metastatic. 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, pleural effusions, ascitic fluid, tissue (surgical resections and/or biopsies) 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. In January 2019, we began offering Research Use Only, or RUO, liquid biopsy kits containing our patented and proprietary Target Selector testing to laboratories and researchers worldwide.

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 the research and development that led to our current assays, and continue to perform for our planned assays, at this same facility. In addition, we currently manufacture our microfluidic channels, related equipment and certain reagents, but are currently evaluating outsourcing certain manufacturing activities in the near term to reduce costs and improve efficiency. 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 requires 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, laboratories 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 in June 2018, which allow for the intact transport of liquid biopsy samples for RUO from regions around the world.

Our revenue generating efforts are focused in three areas:

- medical oncologists, surgical oncologists, urologists, 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 to partners in the United States and abroad.

We plan to grow our business by directly offering medical oncologists, surgical oncologists, pulmonologists, pathologists and other physicians our Target-Selector liquid biopsy CTC and ctDNA assays. Based on our product development data, as well as discussions with our collaborators, we believe that our planned future assays should provide important information and clinical value to physicians. In particular, CTC and ctDNA assays could deliver important, actionable information not provided by other assays. For example, the historic clinical CTC test is the United States Food and Drug Administration, or FDA, approved CellSearch® test (formerly Janssen Diagnostics, now owned by Menarini Silicon Biosystems), which provides CTC enumeration, but is not FDA approved to perform biomarker analysis. We believe our ability to rapidly translate research insights about the utility of cytogenetic, immunocytochemical and molecular biomarkers to provide information to medical oncologists, surgical oncologists, urologists, pulmonologists, pathologists and other physicians for treatment decisions in the clinical setting will improve patient treatment and management, and that these assays will become a key component of the standard of care for personalized cancer treatment.

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 5,950,000 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, 2018, which is 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 March 19, 2019, 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 5,950,000 shares of common stock, for aggregate gross proceeds of approximately \$8.2 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 B Common Stock Purchase Warrants, or the Warrants, to purchase an aggregate of 5,950,000 shares of our common stock. The Warrants have an exercise price per share equal to \$1.25 and are exercisable on the date of issuance and at any time thereafter up to 5.5 years from 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, or 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 April 1, 2019, 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.

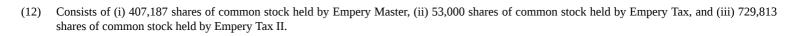
All information contained in the table below and the footnotes thereto is based upon information provided to us by the selling stockholders. The percentage of shares owned prior to and after the offering is based on 18,867,464 shares of common stock outstanding as of April 1, 2019.

			Beneficial Ownership <u>After this Offering (1)</u>	
	Shares of Common Stock Owned Prior to	Shares of Common	Number of	
<u>Name</u>	this Offering	Stock Being Offered	Shares	<u>%</u>
Anson Investments Master Fund LP (2)	990,934 (3)	1,190,000	1,261,574	4.84%
Intracoastal Capital, LLC (4)	2,094,055 (5)	1,190,000	1,549,821	5.88%

Sabby Volatility Warrant Master Fund, LTD (6)	990,934 (7)	1,190,000	1,303,432	4.99%
Hudson Bay Master Fund LTD (8)	2,094,055 (9)	1,190,000	2,306,111	8.50%
Entities affiliated with Empery Asset Management LP (10)	990,934 (11)	1,190,000 (12)	1,239,753	4.76%

(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) Anson Advisors Inc. and Anson Funds Management LP, the Co-Investment Advisers of Anson Investments Master Fund LP, or Anson, hold voting and dispositive power over the Common Shares held by Anson. Bruce Winson is the managing member of Anson Management GP LLC, which is the general partner of Anson Funds Management LP. Moez Kassam and Amin Nathoo are directors of Anson Advisors Inc. Mr. Winson, Mr. Kassam and Mr. Nathoo each disclaim beneficial ownership of these Common Shares except to the extent of their pecuniary interest therein. The principal business address of Anson is 190 Elgin Ave; George Town, Grand Cayman.
- (3) The number of shares beneficially owned by Anson is limited by beneficial ownership limitations applicable to the Warrants held by Anson, which limit the number of shares Anson can beneficially own. As a result of such limitations, the number of shares beneficially owned does not include up to an aggregate of 1,460,640 shares of common stock issuable upon the exercise of warrants beneficially owned by Anson.
- (4) Mitchell P. Kopin and Daniel B. Asher, each of whom are managers of Intracoastal Capital, LLC, or 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. The address of Intracoastal is 245 Palm Trail, Delray Beach, FL 33483.
- (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 645,766 shares of common stock issuable upon the exercise of warrants beneficially owned by Intracoastal.
- (6) Sabby Management, LLC, the investment manager of Sabby Volatility Warrant Master Fund, Ltd., or Sabby, and Hal Mintz, manager of Sabby Management, LLC, share voting and investment power with respect to these securities. Each of Sabby Management, LLC and Hal Mintz disclaims beneficial ownership over the securities listed except to the extent of their pecuniary interest therein. The address of Sabby is 10 Mountainview Road, Suite 205, U Saddle River, NJ 07458.
- (7) The number of shares beneficially owned by Sabby is limited by beneficial ownership limitations applicable to the 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 1,782,677 shares of common stock issuable upon the exercise of warrants beneficially owned by Sabby.
- (8) Hudson Bay Capital Management LP, the investment manager of Hudson Bay Master Fund Ltd., or Hudson, has voting and investment power over these securities. Sander Gerber is the managing member of Hudson Bay Capital GP LLC, which is the general partner of Hudson Bay Capital Management LP. Each of Hudson Bay Capital GP LLC and Sander Gerber disclaims beneficial ownership over these securities. The address of Hudson is 777 Third Avenue, 30th Floor, New York, NY 10017.
- (9) The number of shares beneficially owned by Hudson is limited by beneficial ownership limitations applicable to the warrants held by Hudson, which limit the number of shares Hudson can beneficially own. As a result of such limitations, the number of shares beneficially owned does not include up to an aggregate of 1,402,056 shares of common stock issuable upon the exercise of warrants beneficially owned by Hudson.
- (10) Empery Asset Management LP, the authorized agent of each of Empery Asset Master, LTD, or Empery Master, Empery Tax Efficient, LP, or Empery Tax, and Empery Tax Efficient II, LP, or Empery Tax II, collectively, the Empery Entities, has discretionary authority to vote and dispose of the shares held by the Empery Entities and may be deemed to be the beneficial owner of these shares. Martin Hoe and Ryan Lane, in their capacity as investment managers of Empery Asset Management LP, may also be deemed to have investment discretion and voting power over the shares held by the Empery Entities. Empery Asset Management LP, Mr. Hoe and Mr. Lane each disclaim any beneficial ownership of these shares. The address of Empery Asset Management LP is 1 Rockefeller Plaza, Suite 1205, New York, NY 10020.
- (11) Empery Master holds warrants to purchase 700,008 shares of common stock, (ii) Empery Tax holds warrants to purchase 217,623 shares of common stock, and (iii) Empery Tax II holds warrants to purchase 1,512,122 shares of common stock. The number of shares beneficially owned by the Empery Entities in the aggregate is limited by beneficial ownership limitations applicable to the warrants held by the Empery Entities, which limit the number of shares the Empery Entities can beneficially own to a maximum of 4.99% of the Company's outstanding common stock. As a result of such limitations, the number of shares beneficially owned does not include up to an aggregate of 1,438,819 shares of common stock issuable upon the exercise of warrants held by the Empery Entities.



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, 2017 and 2018, 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, 2018, 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 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 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 for the year ended December 31, 2018, filed on March 29, 2019;
- 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 18, 2019 and March 18, 2019; 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.

5,950,000 Shares



Common Stock

PROSPECTUS

April 22, 2019